INFLATION REPORT / IV

2019

CZECH NATIONAL BANK

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This Inflation Report was approved by the CNB Bank Board on 14 November 2019 and – with some exceptions – contains the information available as of 25 October 2019. Unless stated otherwise, the sources of the data contained in this Inflation Report are the CZSO or the CNB. All the Inflation Reports published to date are available on our website. Underlying data for the tables and charts presented in the text of this Inflation Report, minutes of Bank Board meetings, and time series of selected economic and monetary indicators (available in the ARAD database) are also published there.

Dear Readers,

The Inflation Report is our key monetary policy publication. We have been publishing it since 1998 and have gradually developed it over the years. It gained its current form at the start of 2017. Section I of the Report presents the message of our new quarterly forecast and the reasons behind the monetary policy decision adopted by the CNB Bank Board. In section II you will find a detailed description of the new forecast and its risks. Section III contains our assessment of past economic and monetary developments.

According to the Czech Constitution and the Act on the CNB, our primary objective is to maintain price stability. In addition, we maintain financial stability and see to the sound and smooth operation of the financial system in the Czech Republic. Without prejudice to our primary objective, we also aim to support the general economic policies of the Government leading to sustainable economic growth. By maintaining price stability, we assist Czech firms and households in their decision-making and planning, which ultimately results in greater stability of the entire Czech economy. Our independence is a necessary condition for successful implementation of monetary policy focused on price stability. For that reason, we are not allowed to seek or take instructions from the President of the Republic, from the Government, from Parliament, from administrative authorities or from any other body.

We have been maintaining price stability in the inflation targeting regime since 1998. The main features of this regime are a publicly announced inflation target, a focus on forecasts of the future path of inflation, and open communication with the public. We set the inflation target as year-on-year growth in consumer prices of 2% starting from 2010. We endeavour to ensure that actual inflation does not differ from this target by more than one percentage point on either side. Most advanced economies have similar inflation targets. There are several reasons why we define price stability as slight growth in prices rather than zero inflation. Inflation measures tend to be distorted upward because of imperfect adjustment for the impacts of changes in the quality of goods and services, where growth in quality is sometimes statistically captured as growth in prices. This distortion is also due to an assumption of constant weights in the consumer basket, whereas in reality people have a natural tendency to move away from goods and services whose prices are rising faster to those which are recording below-average growth or even falling. Last but not least, if we were to target an inflation rate that was too low or even zero, there would often be a threat of deflation, which has very harmful consequences for society as a whole. In such situations, moreover, the central bank would repeatedly hit the zero lower bound on interest rates and would often have to use other, less conventional instruments.

Changes in the monetary policy settings manifest themselves in the economy with a lag. Therefore, it is the future evolution of the Czech economy, rather than its current situation, that is of prime importance for the CNB Bank Board's decisions. The forecast for inflation at the "monetary policy horizon" (about 12–18 months ahead) is of greatest relevance to our decision-making. Our forecast tells us the most likely future course of the economy. It is drawn up by experts from the Monetary Department using a structural macroeconomic model. The g3+ core model provides a comprehensive and consistent view of the relationships between nominal variables and the real economy. It captures the basic characteristics of the Czech economy as described by key variables such as prices, wages, GDP components in both nominal and real terms, the koruna exchange rate and nominal interest rates. Given the openness of the Czech economy, the structural linkages in the external economy affecting foreign trade and the koruna-euro exchange rate play an important role in the new model. Forward-looking expectations gradually reflecting outlooks for exogenous variables and their interaction with monetary policy, which reacts to economic shocks through changes in interest rates in an effort to stabilise inflation close to 2% at the monetary policy horizon, are an important feature of the model. The main forecasting inputs are an assessment of the current state of the economy (the initial state), projected developments abroad, and the outlook for administered prices and domestic fiscal policy. Based on this input information, and using the model and additional detailed analyses drawn up by economists from the Monetary Department, a forecast of the most likely course of the Czech economy is then compiled. In addition to the baseline scenario of the forecast, alternative or sensitivity scenarios are prepared as needed using the core projection model.

The forecast is the key, but not the only, input to our monetary policy decision-making. Unless the economic situation requires an extraordinary monetary policy meeting, the Bank Board meets eight times a year to discuss monetary policy issues. At four of the meetings (in February, May, August and November) we discuss a new forecast, while at the other four (in March, June, September and December) we discuss the risks and uncertainties of the most recent forecast in the light of newly available information on domestic and foreign economic developments. The arrival of new information since the forecast was drawn up and the possibility of the Bank Board members assessing its risks differently mean that the decision we adopt may not fully match the message of the forecast prepared by our experts.

The CNB's main monetary policy instrument is the two-week repo rate. We also set the discount rate and the Lombard rate. By changing these monetary policy rates, we influence financial market interest rates from which commercial banks derive their loan and deposit rates for their customers. A rate increase leads – via the "transmission mechanism" – to slower demand growth in the economy, which, in turn, causes inflation to go down. Lowering the repo rate has the opposite effect. If the forecast indicates growing inflation pressures which might cause inflation to exceed the 2% target, this is a signal that our monetary policy should be more restrictive, i.e. that interest rates should be raised. The opposite applies, of course, if inflationary tendencies decrease, as monetary policy in the (future) inflation-targeting regime is symmetrical in both directions. The exception is a situation where inflation is affected by extraordinary supply-side shocks which we cannot influence and which will cause it to deviate from the target only temporarily. Changes to indirect taxes and sharp swings in oil prices are typical examples of such shocks. Attempts to keep inflation on target despite such shocks would lead to unnecessary volatility in economic growth and employment. We therefore look past the first-round effects of such factors in our decision-making and tolerate a temporary deviation of inflation from the target due to such price shocks. Inflation then returns to the target after the shocks fade away.

We have a whole range of other instruments besides the monetary policy rates described above. These we can use in situations where the use of interest rates is not enough to reach the inflation target. One such situation was the adoption of the exchange rate commitment in autumn 2013, which we did after monetary policy rates had been lowered to "technical zero" in November 2012 and the situation called for a further easing of the monetary conditions. The exchange rate commitment was used until April 2017, when the Bank Board decided to discontinue it. In the standard managed float exchange rate regime to which we have returned, we can moreover respond to potential excessive fluctuations of the koruna exchange rate by intervening in the foreign exchange market. We use these instruments primarily to deliver price stability; to maintain financial stability we use a separate set of instruments called macroprudential tools. However, monetary policy and macroprudential policy affect one another, as monetary policy decisions have an impact on the financial sector and, conversely, macroprudential policy decisions influence the economy and inflation. We therefore take the interactions between the two policies into account.

We are proud of the fact that the CNB is one of the most transparent central banks in the world according to renowned international analyses. We publish our forecast and its risks and an explanation of the reasons for the Bank Board's decision in order to make our monetary policy as transparent, comprehensible, predictable and therefore credible as possible. We are convinced that credible monetary policy effectively anchors inflation expectations and thereby significantly helps to maintain price stability and overall macroeconomic stability in the Czech Republic.

On behalf of the Czech National Bank

Jiří Rusnok

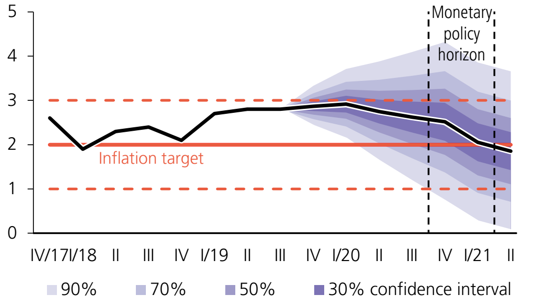
Governor

I. SUMMARY

Chart I.1

HEADLINE INFLATION FORECAST

Inflation will be in the upper half of the tolerance band in the quarters ahead and will converge towards the CNB's 2% target over the monetary policy horizon
(year on year in %)

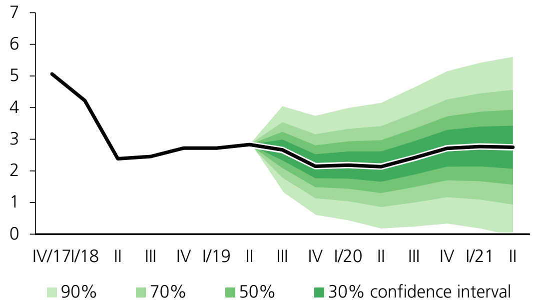


Note: The confidence intervals of the headline inflation forecast reflect the predictive power of past forecasts and are symmetric. They are widening only for the first five quarters and then stay constant. This is consistent with both the past predictive power and the stabilising role of monetary policy.

Chart I.2

GDP GROWTH FORECAST

The growth of the Czech economy will slow further next year and accelerate towards 3% again in 2021
(annual percentage changes; seasonally adjusted)



Note: The confidence intervals of the GDP growth forecast reflect the predictive power of past forecasts. They are symmetric and linearly widening.

Inflation will remain in the upper half of the tolerance band in the period ahead and will converge towards the CNB's 2% target over the monetary policy horizon (see Chart I.1). In 2019 Q3, inflation stayed just below 3%. The brisk growth in prices in recent months has been due mainly to core inflation. Inflation has also been supported by high growth in administered prices and food prices. Nevertheless, the overall inflation pressures are easing somewhat, due mainly to a decline in import prices. At the same time, growth in domestic costs will continue to moderate gradually as a result of slowing wage growth and a renewed acceleration of labour efficiency growth. Core import prices will also start to have a temporary anti-inflationary effect on the back of an expected slight appreciation of the koruna amid subdued inflation abroad. Inflation will thus decrease in the course of next year, owing partly to a fading-out of high administered price inflation and monetary policy tightening. However, the decrease in inflation will be slowed by the price impacts of changes to indirect taxes. These impacts will abate in 2021 and inflation will be close to the target. As regards the structure of inflation, growth in market prices will continue to be driven above all by core inflation. Food price inflation will remain elevated for a short time and then decline as a result of movements in food commodity prices. A continued decline in fuel prices will reflect falling koruna prices of oil.

The growth of the Czech economy will slow due to weakening external demand and will return close to the pace of potential output growth in 2021 (see Chart I.2). GDP growth will continue to be driven mainly by consumption expenditure. The solid growth in household consumption will reflect continued, albeit gradually slowing, growth in household income. Fiscal policy will contribute to domestic demand growth mainly via a rise in public sector pay, pensions and social benefits. Government investment expenditure will also increase, supported by drawdown of EU funds. By contrast, private investment is undergoing a downturn reflecting the slowdown in euro area economic growth. This factor will drop out next year and total investment growth will recover despite a tightening of the domestic monetary conditions. The positive contribution of net exports to GDP growth will temporarily disappear during next year as a result of a transitory slowdown in external demand growth. Net exports will return to growth as external demand recovers. Together with the contribution of investment, this will cause economic growth to accelerate slightly and return close to its long-term rate at the end of next year. The tightness in the labour market peaked in previous quarters. The unemployment rate is at a record low and will not fall any further. Amid persisting labour shortages on the one hand and weakening demand for labour on the other, total employment growth will remain subdued. Wage growth will decrease gradually towards its steady-state level, but its slowdown will be dampened by a further increase in the minimum wage and growth in salaries in the non-market part of the economy.

II. THE FORECAST, ITS CHANGES AND RISKS

II.1 DEVELOPMENTS ABROAD AND EXTERNAL ASSUMPTIONS OF THE FORECAST

The growth of the world economy is slackening this year. This primarily reflects foreign trade tensions due to the US-China trade disputes and Brexit. Economic growth in the euro area will continue to slow, but will gradually accelerate next year. The economic slowdown and decline in oil prices are reflected in subdued producer and consumer price inflation. The ECB eased monetary policy further, a move that caused yields to drop on the financial market. In a context of a further easing of Fed monetary policy expected by the markets, US money market rates are expected to be gradually lowered. This will foster a narrowing of the spread between three-month dollar and euro rates and bring about an expected modest appreciation of the euro against the dollar.

II.1.1 Economic developments abroad

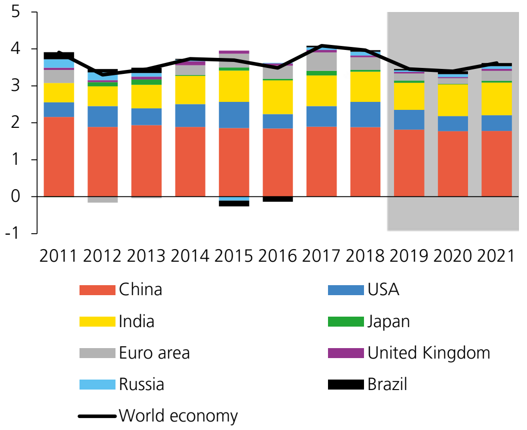
The growth of the world economy is slackening this year, with all major countries slowing.[1] The long period of increased uncertainty is weighing on the global economy as rising protectionist tendencies manifest themselves in international trade. China remains the main driver of global growth. However, its year-on-year growth is slowing further (to 6% in Q3), owing largely to its trade disputes with the USA. The US economy is also starting to slow, due partly to the fade-out of the effects of previous fiscal stimuli. The Fed has already responded by lowering the target range for key interest rates three times this year. Overall, the weighted growth of the economies monitored is expected to reach around 3.5% this year and in the next two years (see Chart II.1.1).[2] The risks to the forecast, stemming above all from trade barriers and negotiations on the form of Brexit, are sizeable and tilted towards lower economic growth.

Economic growth in the euro area slowed slightly to 1.2% in 2019 Q2 (see Chart II.1.2). It continued to be driven by domestic demand, especially household consumption and investment, while the contribution of net exports remained negligible. In quarter-on-quarter terms, GDP growth slowed to 0.2% due to the fade-out of positive one-off factors seen at the start of the year and a deeper decline in the volume of global trade. Moreover, Brexit-related events made the euro area's foreign trade highly volatile in the first half of this year. These factors affected manufacturing above all in Germany, which recorded a quarterly decrease in GDP of 0.1% in Q2, and Italy, which saw growth of just 0.1%. By contrast, the Spanish and French economies grew at a still solid pace (0.4% and 0.3% respectively).

CHART II.1.1

WORLD ECONOMY GROWTH OUTLOOK

The growth of the world economy will slow this year and remain at similar levels next year
(annual percentage changes in real GDP; contributions in percentage points; source: EIU, CF, CNB calculation)

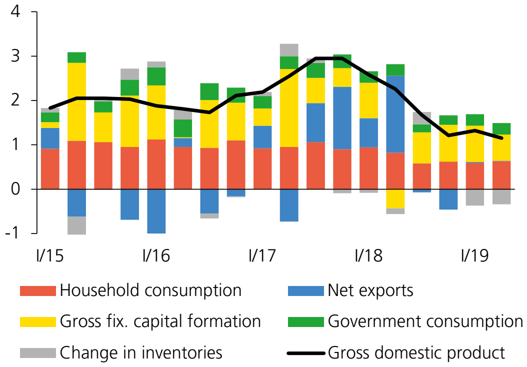


Note: World economy growth is proxied by the growth of the eight largest economies, which account for around 75% of global GDP. The weights of the individual economies are calculated on the basis of nominal GDP at purchasing power parity. The sources of the outlooks are CF and EIU.

CHART II.1.2

STRUCTURE OF ANNUAL GDP GROWTH IN THE EURO AREA

Euro area GDP growth remained subdued in 2019 Q2 and continued to be driven by all components of final domestic demand amid a broadly neutral contribution of net exports
(annual percentage changes; contributions in percentage points; seasonally adjusted; source: Datastream, CNB calculation)



1 A more detailed description of expected developments abroad, updated every month, is available in Global Economic Outlook.
2 The outlook is indicated by the grey areas in the chart. This convention is used throughout this Report.

The available business indicators are signalling continued low economic growth in the euro area for the next few quarters. Manufacturing in particular continues to be affected by negative external factors. Industrial production fell by 2.8% year on year in August, declining for the tenth consecutive month. However, the downturn in automotive industry output moderated. Nevertheless, the manufacturing Purchasing Managers' Index (PMI) declined further (see Chart II.1.3), with its new orders component still falling. By contrast, the labour market situation remains positive. Annual wage growth picked up slightly further in Q2 (to 2.7%[3]) amid continued employment growth (1.2%). The unemployment rate (7.4% in August) is falling gradually and is now at an 11-year low. The increased wage dynamics are fostering growth in retail sales, which remains solid (2.1% in August).

GDP growth in the effective euro area[4] is slowing this year but will start to accelerate gradually next year (see Chart II.1.4).[5] Overall, GDP will grow by 1.1% this year, 1% next year and 1.4% in 2021. Growth in the effective euro area is being hampered mainly by the German economy, whose industry is being strongly affected by the drop in international trade. Economic growth in Slovakia is also slowing markedly. Growth in economic activity in these two countries and, in turn, growth in the effective indicator of external demand will gradually recover next year. The latter will be slightly below its steady-state rate in 2021. Nonetheless, the risks to this outlook are tilted towards lower growth. A further deterioration in the international trade conditions would result in a longer-lasting decline in German industrial production. This would subsequently pass through to the other sectors of the economy and to other euro area countries.[6]

II.1.2 Price developments abroad

The price of oil, including its falling outlook, reflects the worsening forecast for the global economy (see Chart II.1.5). The Brent crude oil price was mostly below USD 60 a barrel in 2019 Q3. An attack on Saudi Arabian oil facilities caused a short-lived sharp increase in the oil price in mid-September, but the oil price stabilised in a few days and was even lower than before the attacks at the end of September.

3 Among the large euro area economies, nominal wages grew significantly in Germany and Spain (by 3.2% in both countries). Slovakia recorded double-digit wage growth (10.6%). In most euro area countries, wages rose faster in the non-market sector of the economy.

4 For the purposes of the forecast, external real and price developments are proxied by effective euro area indicators (see the Glossary). The outlooks for GDP, PPI and the HICP in the individual euro area countries are based on the CNB's model calculations and the October Consensus Forecasts (CF). The outlooks for government bond yields, the euro-dollar exchange rate and the NEER of the euro are constructed on the same basis. The scenarios for the future paths of the 3M EURIBOR and 3M USD LIBOR and the Brent crude oil price are derived from market contracts as of 14 October 2019.

5 The forecast for GDP growth in the effective euro area this year is based on the CNB's short-term forecasting models. The forecast for 2020 has undergone a downward expert adjustment of 0.1 percentage point compared with the October CF outlook, as the CF analysts probably did not take sufficient account of the persisting adverse trend in global trade. The downward expert adjustment was 0.2 percentage point for Germany and Slovakia and 0.1 percentage point for France and Italy.

6 The risk of lower external demand was described by a sensitivity scenario in IR III/2019.

CHART II.1.3

PMI IN MANUFACTURING

Industrial production can be expected to decline further both in Germany and in the euro area as a whole

(Purchasing Managers' Index; source: Bloomberg)

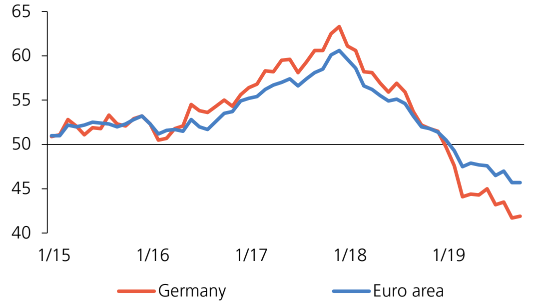
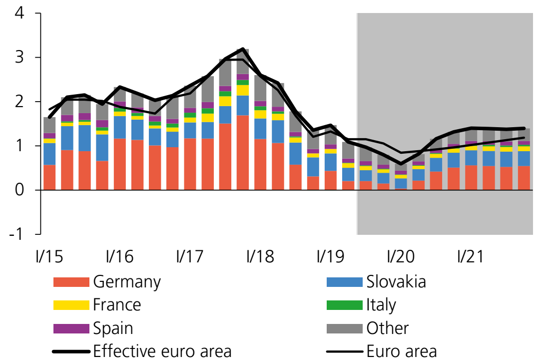


CHART II.1.4

EURO AREA GDP GROWTH OUTLOOK

Growth in economic activity will continue to slow until early 2020 and then recover gradually

(annual percentage changes; contributions in percentage points to growth in the effective euro area; seasonally adjusted; CNB calculation)



Note: Other comprises the remaining 12 euro area member countries. Its forecasted growth corresponds to the average growth of the five countries shown in the chart.

CHART II.1.5

PRICES OF CRUDE OIL AND OTHER COMMODITIES

The Brent crude oil price outlook is slightly below USD 60 a barrel; the natural gas price in Europe has reached a local low and its outlook is rising slightly

(oil in USD/barrel; other commodities: index [January 2015 = 100]; average price of natural gas in Europe; source: Bloomberg, World Bank, CNB calculation)

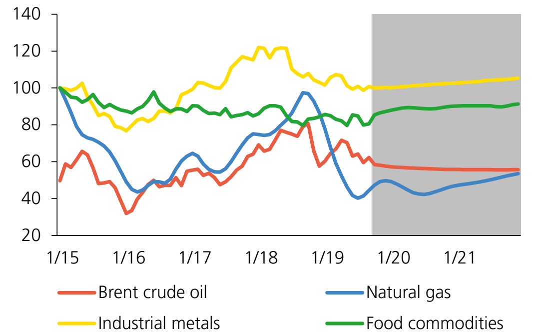
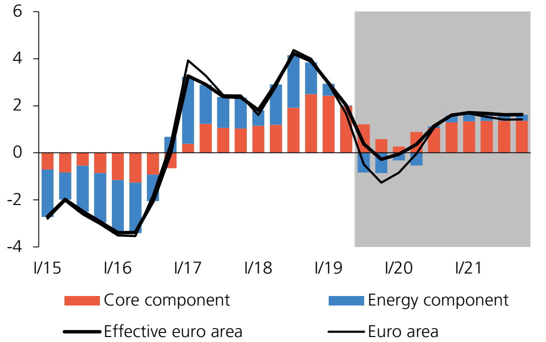


CHART II.1.6

INDUSTRIAL PRODUCER PRICES IN THE EURO AREA

Industrial producer prices will decline at the close of this year but gradually return to growth thereafter

(annual percentage changes; contributions in percentage points to growth in the effective euro area; seasonally adjusted; CNB calculation)



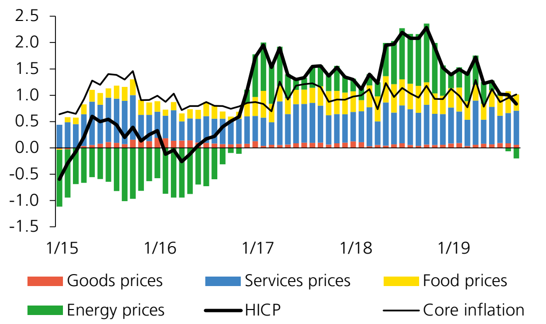
Note: The energy component is determined by developments in industries strongly linked to the oil price. The rest of the PPI index in effective terms is the core component.

CHART II.1.7

INFLATION IN THE EURO AREA

Consumer price inflation fell in September owing to a larger negative contribution of energy prices

(annual percentage changes; contributions in percentage points; source: Eurostat, CNB calculation)



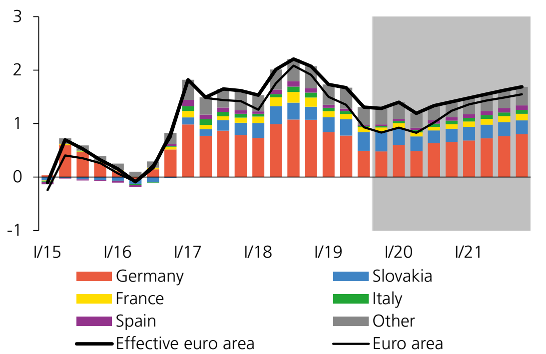
Note: Core inflation is calculated on the basis of the HICP excluding prices of energy, food, alcohol and tobacco.

CHART II.1.8

CONSUMER PRICE INFLATION OUTLOOK IN THE EURO AREA

Inflation will decrease further until mid-2020 and gradually return to higher levels later

(HICP; annual percentage changes; contributions in percentage points to growth in the effective euro area; seasonally adjusted; CNB calculation)



Note: Other comprises the remaining 12 euro area member countries. Its forecasted growth corresponds to the average growth of the five countries shown in the chart.

The price of oil is being pushed down by weak economic data from China, the USA and Germany and by the strengthening dollar. Analysts are continually lowering their growth outlooks for oil demand and average prices. The market price curve for future oil supplies is signalling average prices of just below USD 60 a barrel at the close of this year and the next. The EIA prediction is slightly higher.

The outlook for the two non-energy commodity price sub-indices is slightly rising (see Chart II.1.5). The food commodity price index has been volatile recently, owing mainly to grain prices. The industrial metals price index continues to be pushed down by the adverse outlook for global manufacturing. The aluminium price is decreasing, whereas the nickel price and – despite a recent correction – the iron ore price remain high.

The overall inflation pressures from the production sector will weaken further at the end of this year, mainly due to a slowdown in the core component (see Chart II.1.6). This is closely linked with the observed economic slowdown in the euro area. Moreover, the contribution of the energy component to industrial producer price inflation will be negative owing to the year-on-year decline in oil prices. According to the latest data for August, euro area industrial producer prices fell by 0.8% year on year on account of the negative contribution of energy prices. However, falling prices of intermediate goods also contributed to the overall decline in industrial producer prices to a lesser extent. Among the large countries, the largest price decrease was recorded in Italy (2.1%), whereas modest growth continued in Germany (0.6%).

Annual industrial producer price inflation in the effective euro area will start to go up gradually next year (see Chart II.1.6). The fading year-on-year drop in oil prices will be joined in Q2 by gradually rising growth in the core component of the PPI. For the year as a whole, however, producer price inflation is expected to slow from 1.3% this year to 0.8% next year.[7] A figure of 1.7% is expected in 2021 as economic growth accelerates. The effective indicator is higher than that for the euro area proper this year and the next. This is due to higher inflation in Slovakia than in large euro area countries.

A subdued inflation environment persists in the euro area. Consumer price inflation slowed to 0.8% in September due a negative contribution of energy prices and a lower contribution of food prices (see Chart II.1.7). By contrast, core inflation increased slightly to 1%. Annual inflation stood at 1% in Q3 as a whole, down by 0.4 percentage point from the previous quarter.

7 The forecast for industrial producer price inflation in the effective euro area has undergone a downward expert adjustment of 0.1 and 0.3 percentage point this year and the next respectively because analysts had most probably taken insufficient account of persisting risks to the global economy in the October CF and EIU forecasts. For Germany, the expert adjustment is 0.5 percentage point for 2020.

Consumer price inflation in the effective euro area will fluctuate below 2% over the forecast horizon (see Chart II.1.8). This will be due to long-running muted fundamental inflation pressures coupled with the current year-on-year decline in energy prices. Inflation is therefore expected to fall to 1.3% on average next year.[8] In 2021, it will go up to 1.6%. Inflation according to the effective indicator is expected to be above that in the euro area proper as a result of higher inflation in the Czech Republic's second-biggest trading partner country (Slovakia), where inflation is expected at 2.3% next year.

II.1.3 Financial developments abroad

According to the market outlook, the 3M EURIBOR will remain at -0.5% until the end of 2021 (see Chart II.1.9). The October CF survey expects the 3M EURIBOR to stand slightly higher at the one-year horizon. In line with previous expectations, the ECB eased monetary policy at its September meeting. The deposit rate was lowered by 10 basis points to -0.5%. According to the ECB, the key interest rates will remain at present or lower levels for an extended period. Net asset purchases were restarted at a monthly pace of EUR 20 billion on 1 November 2019.[9] The ECB also adjusted the conditions (reduced the rate and extended the maturity) of its targeted long-term refinancing operations with the financial sector (TLTRO III). At the same time, it introduced a two-tier reserve remuneration system in which part of the excess liquidity held by banks at the ECB will be exempt from the negative deposit facility rate. The ECB's actions fostered a decline in yields on financial markets. According to the market outlook, the ten-year German government bond yield will be negative almost until the end of 2021 (see Chart II.1.10).

According to the market outlook, the 3M USD LIBOR will decrease on the back of an expected easing of US monetary policy (see Chart II.1.9). The Fed lowered the target range for its benchmark rate at the meetings in July, September and October, to a current level of 1.50%–1.75%. The current market outlook thus expects the 3M USD LIBOR to decline gradually. This will foster a decrease in the differential vis-à-vis the euro rate with the same maturity. By contrast, the ten-year US government bond yield is expected to rise slightly.

The October CF outlook expects the euro to strengthen only slightly against the dollar (see Chart II.1.11). The euro depreciated against the dollar to its weakest level in two and a half years in 2019 Q3. This was due mainly to ever increasing signs of a slowdown of the euro area economy, which, according to financial markets, cannot be reversed by more accommodative ECB monetary policy. According to the outlook,

8 The HICP growth forecast has undergone a downward expert adjustment of 0.2 percentage point for next year (similarly to that for GDP and the PPI) for the euro area in both effective and standard terms.

9 This prediction takes into account the impacts of the ECB's asset purchase programme through expert adjustments using shadow interest rates, which are 0.3 percentage point lower than market rates over the entire forecast horizon.

CHART II.1.9

3M EURIBOR AND 3M USD LIBOR

A reduction in monetary policy interest rates in the USA will foster a decline in the spread between 3M rates in the United States and the euro area
(percentages; differences in percentage points)

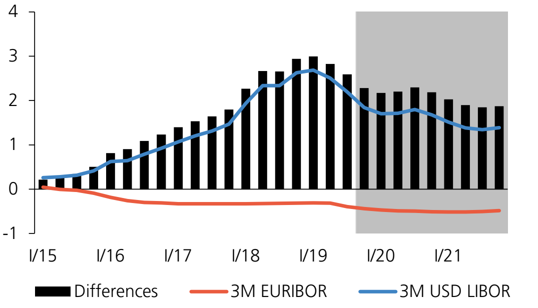


CHART II.1.10

10Y GOVERNMENT BOND YIELDS

A slight increase in ten-year government bond yields is expected in both the USA and Germany; their differential will thus be flat until the end of 2021
(percentages; differences in percentage points)

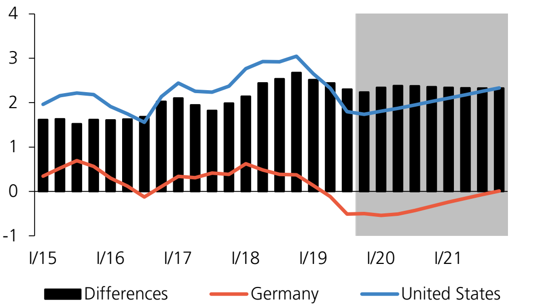
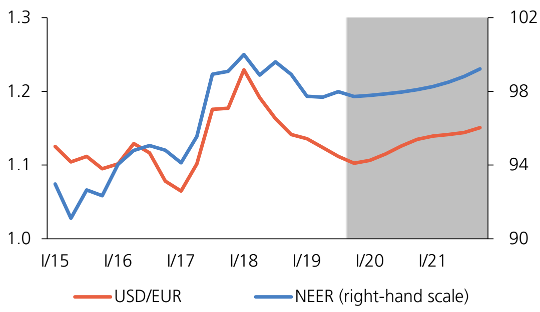


CHART II.1.11

EURO EXCHANGE RATE

The appreciation of the euro against the dollar and the currencies of other trading partners will be only modest
(USD/EUR; NEER of euro against currencies of euro area countries' 18 main partners; 2012 Q1 = 100; right-hand scale)



however, the euro will gradually appreciate from its current weak levels. The outlook is still surrounded by uncertainty caused by Brexit and the threat of a trade war between the USA and the EU after the USA imposed tariffs on numerous European products after winning a dispute before the World Trade Organisation. The euro is also expected to appreciate in effective terms against the Chinese and British currencies among others.

II.2 THE FORECAST

Inflation will be just below the upper boundary of the tolerance band around the inflation target in the next few quarters, due to only gradually abating overall inflation pressures, rapid growth in administered prices and the impacts of changes to indirect taxes. Growth in domestic costs will slow gradually further over the forecast horizon due to slower wage growth and faster growth in labour efficiency. A temporary anti-inflationary effect of core and energy import prices will act in the same direction. Inflation will thus gradually decrease during 2020 and converge towards the CNB's 2% target over the monetary policy horizon. Domestic economic growth will slow slightly this year and the next due to weaker external demand. It will return to its long-term rate during 2021. Slight appreciation of the koruna will reflect continued real convergence of the Czech economy and a temporary further widening of the interest rate differential vis-à-vis the euro area amid an offsetting effect of deteriorating developments abroad. Consistent with the forecast is a rise in domestic market interest rates in this quarter and the next, followed by a decline from mid-2020.

II.2.1 Inflation and monetary policy

Headline inflation will stay in the upper half of the tolerance band in the coming quarters and return to the target in early 2021 (see Chart II.2.1). Inflation will remain at its current elevated level in late 2019 and early 2020, only just below the upper boundary of the tolerance band. This will reflect only gradually abating strong domestic inflation pressures and, at the end of this year, further accelerating administered price inflation (see Chart II.2.2). Inflation will moderate during 2020 due to the unwinding of a large increase in administered prices, easing domestic price pressures and monetary policy tightening. However, the decrease in inflation will be slowed next year by the price impacts of expected changes to indirect taxes.[10] They will fade out in 2021 and inflation will thus be close to the target.

Monetary policy-relevant inflation[11] will be below headline inflation in 2020 and close to it in 2021 (see Chart II.2.1). The first-round impacts of changes to indirect taxes are distinctly positive in 2020 and close to zero in 2021. The forecast assumes that excise duty on cigarettes and alcohol will be increased significantly in January 2020, with a contribution to headline inflation of 0.69 percentage point.[12] The third and fourth phases of ESR will be launched in May 2020. This will be associated with a decline in the VAT rate on certain consumer basket items (with a first-round impact on headline inflation of -0.34 percentage

10 The effect of changes to indirect taxes on the inflation forecast was described in detail in a box in IR III/2019.
11 Monetary policy-relevant inflation is inflation adjusted for the first-round effects of changes to indirect taxes. The difference between headline and monetary policy-relevant inflation is equal to the size of the first-round tax effect.
12 The date of effect of the excise duty increases may be postponed due to a possible delay in the legislative process.

Table II.2.1

FORECASTS OF SELECTED VARIABLES

GDP growth will slow further next year and accelerate again to slightly below 3% in 2021
(annual percentage changes unless otherwise indicated)

	2018 actual	2019 forecast	2020 forecast	2021 forecast
Headline inflation	2.1	2.8	2.7	1.9
GDP	2.9	2.6	2.4	2.8
Average nominal wage	7.6	7.4	5.7	5.0
Exchange rate (CZK/EUR)	25.6	25.7	25.4	25.1
3M PRIBOR (in %)	1.3	2.2	2.3	2.0

Chart II.2.1

HEADLINE INFLATION AND MONETARY POLICY-RELEVANT INFLATION

Inflation will be in the upper half of the tolerance band in the quarters ahead and will converge towards the CNB's 2% target over the monetary policy horizon
(annual percentage changes)

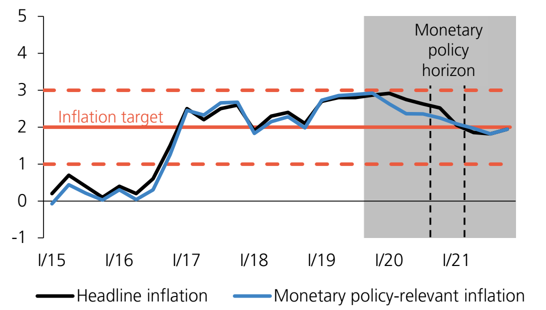
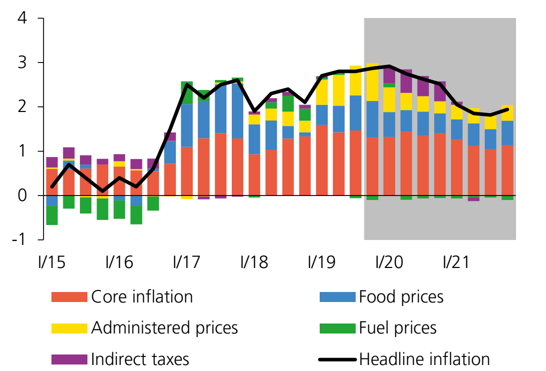


Chart II.2.2

STRUCTURE OF INFLATION AND THE INFLATION FORECAST

Inflation will continue to be driven mainly by core inflation and, at the start of next year, also by the effect of increases in indirect taxes
(annual percentage changes; contributions in percentage points)



Note: Food prices also include prices of alcoholic beverages and tobacco. The contribution of the first-round effects of changes to indirect taxes relates to non-administered prices.

point). The forecast assumes only limited pass-through of the VAT rate cut to consumer prices. The (immediate) second-round effects of these changes are therefore positive and will affect both headline and monetary policy-relevant inflation in 2020 and early 2021.

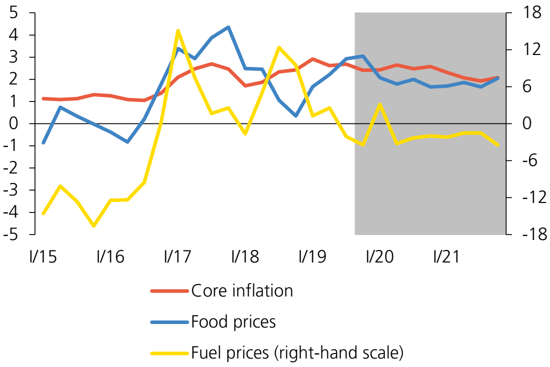
Core inflation will fluctuate around 2.5% in the quarters ahead and moderate during 2021. Continuing high core inflation (see Chart II.2.3) will be fostered by persisting domestic inflation pressures, which are affecting inflation mainly in the services sector. Positive second-round impacts of the lower VAT in services will also increase core inflation from May 2020 onwards. Tighter monetary policy will act in the opposite direction. Core inflation will return to 2% in 2021 Q2 as the effects of these secondary impacts fade away and domestic inflation pressures gradually lessen. It will then fluctuate close to this level until the end of 2021.

CHART II.2.3

COMPONENTS OF INFLATION

The previously sharp growth in food prices will slow somewhat in early 2020, but core inflation will decrease more significantly in 2021, while fuel prices will mostly decline year on year

(annual percentage changes)



Food price inflation will remain elevated at the end of this year and slow next year. The continued rapid growth in food prices is due to persisting domestic inflation pressures combined with the until recently high prices of some agricultural commodities. Food price inflation will thus amount to 3% at the end of this year (see Chart II.2.3). Domestic food price inflation will later moderate to 2% due to a temporary decline in agricultural producer prices and prices of imported food.

The year-on-year decline in fuel prices will deepen at the end of this year. The decline started in June, and according to short-term indicators[13] the decrease in fuel prices at filling stations intensified further in October. Except at the start of 2020, the year-on-year decline in prices in this segment will last until the end of the forecast horizon (see Chart II.2.3). This will initially reflect an assumed slight year-on-year decline in global oil prices, which will subsequently be joined by gradual appreciation of the koruna against the dollar.

TABLE II.2.2

FORECAST OF ADMINISTRATIVE EFFECTS

Administered price inflation will be affected mainly by increasing electricity prices

(annual average percentage changes; contributions to headline inflation in percentage points)

	2018 actual		2019 forecast		2020 forecast		2021 forecast	
ADMINISTERED PRICES[a)]	1.8	0.27	4.5	0.70	2.5	0.39	2.2	0.35
of which (main changes):								
electricity	4.4	0.19	10.7	0.46	5.2	0.22	2.8	0.12
natural gas	-0.7	-0.02	3.3	0.08	-2.6	-0.06	1.3	0.03
heat	-0.1	0.00	4.8	0.09	2.3	0.04	2.1	0.04
water	1.7	0.01	2.6	0.02	2.2	0.02	2.1	0.02
health care	5.0	0.06	2.7	0.04	3.6	0.05	2.7	0.04
transport	-1.9	-0.03	-5.0	-0.08	1.7	0.03	2.1	0.03

a) including effects of indirect tax changes

The already high growth in administered prices will temporarily pick up further and then slow next year. Administered price inflation will accelerate at the end of this year as a result of the already announced further increase in electricity prices. The unwinding of the effect of bus and train fare discounts for students and senior citizens introduced at the start of the 2018 school year will affect annual administered price inflation in the same direction. Growth in heat and gas prices for households will remain strong. The current fall in gas prices on global markets will be reflected in a year-on-year decline in retail prices for households next year. Combined with a drop in this year's high growth in electricity prices, this will cause overall administered price inflation to fall to 2%. Administered prices will also rise at a pace slightly exceeding 2% in 2021 (see Table II.2.2).

13 CCS payment cards portal data.

Appreciation of the koruna will be hampered by deteriorating economic and price developments abroad (see Chart II.2.4). The exchange rate forecast for 2019 Q4 is set at CZK 25.7 to the euro. The subsequent slight appreciation will reflect continued real convergence of the Czech economy linked with labour efficiency growth. A further widening of the interest rate differential will temporarily act in the same direction, partly reflecting the renewed unconventional monetary policy of the ECB. However, these factors will be largely offset by the reaction of the koruna to deteriorating economic and price developments abroad. As a result, the exchange rate will appreciate only gradually to CZK 25 to the euro at the end of 2021.

Consistent with the forecast is a rise in domestic market interest rates in this quarter and the next, followed by a decline from mid-2020 (see Chart II.2.5). The rise in domestic rates at the start of the forecast primarily reflects persisting domestic cost pressures due to the current slowdown in labour efficiency growth and only gradually decreasing wage growth in market sectors. To a lesser extent, the increase in rates is a forward-looking reaction of monetary policy to the second-round effects of changes to indirect taxes next year and at the start of 2021. The subsequent decline in domestic interest rates from mid-2020 will be due mainly to persisting negative interest rates in the euro area, accompanied by continued quantitative easing of monetary policy by the ECB.

II.2.2 Costs and the labour market

Growth in total nominal costs will slow further at the start of next year and stabilise around 2% later on (see Chart II.2.6). Growth in total costs in the consumer sector slowed slightly further in 2019 Q3, due mainly to a decrease in energy import prices. This reflected a previous decline in oil prices amid a broadly stable exchange rate of the koruna. The contribution of core import prices remained only marginally positive amid subdued growth in foreign core prices. Owing to the assumed slight appreciation of the koruna, core import prices will have a modest anti-inflationary effect in the first half of 2020. Their contribution will then turn positive again due to a decline in the pace of appreciation of the koruna amid renewed growth in foreign prices. Energy import prices will for the most part slightly dampen growth in costs due to modestly falling prices in the energy component of foreign industrial producer prices. Domestic cost pressures will gradually ease initially, due mainly to falling wage growth. Growth in prices of domestic intermediate goods will later stabilise around its steady-state level. The contribution of price convergence will be positive over the entire forecast horizon.

The up until now pronounced domestic cost pressures will gradually ease due to slowing wage growth and an increasing contribution of labour efficiency (see Chart II.2.7). Domestic nominal marginal costs in the intermediate goods sector grew at a still relatively fast pace in 2019 Q3, so their growth slowed only slightly compared with the start of the year. This reflected the still tight labour market situation and subdued growth in labour efficiency connected with the observed

CHART II.2.4

EXCHANGE RATE FORECAST

The koruna will appreciate slightly over the forecast horizon, with the effect of domestic fundamentals being offset by worse developments abroad
(CZK/EUR and CZK/USD)

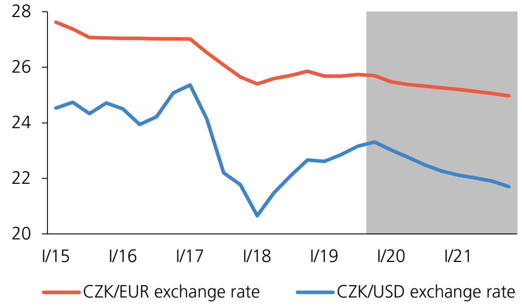


CHART II.2.5

INTEREST RATE FORECAST

Consistent with the forecast is a rise in domestic market interest rates in this quarter and the next, followed by a decline from mid-2020
(percentages)

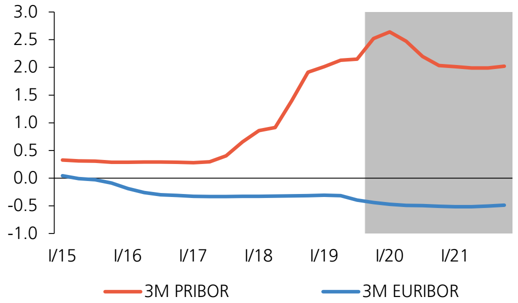


CHART II.2.6

COSTS IN THE CONSUMER SECTOR

The overall inflation pressures will gradually ease further in the quarters ahead owing to slowing growth in domestic costs and briefly also a negative contribution of import prices
(nominal quarterly percentage changes; contributions in percentage points; annualised)

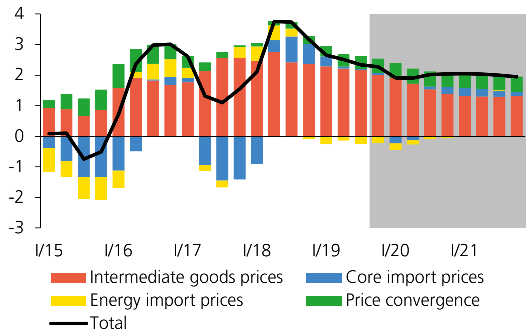


CHART II.2.7

COSTS IN THE INTERMEDIATE GOODS SECTOR

Growth in domestic costs will gradually moderate further as a result of falling wage growth, gradually joined by an increasing contribution of labour efficiency

(nominal quarterly percentage changes; contributions in percentage points; annualised)

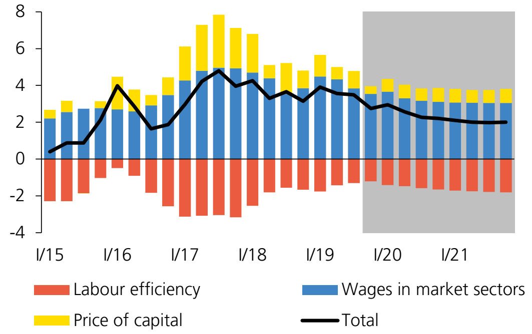


CHART II.2.8

LABOUR MARKET FORECAST

Total employment will temporarily decrease slightly and then go up at only a weak pace; the unemployment rate will remain broadly stable

(annual percentage changes in employment; general unemployment rate in percentages; seasonally adjusted)

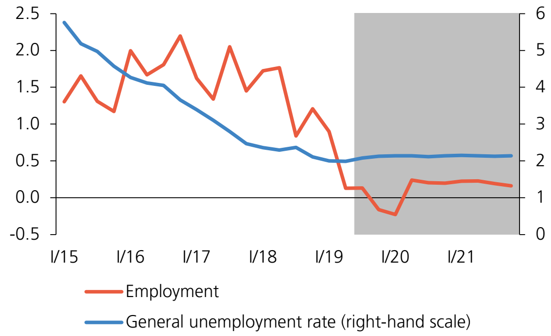
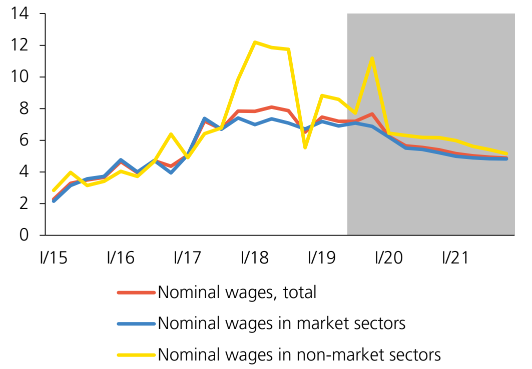


CHART II.2.9

AVERAGE NOMINAL WAGES

Wage growth in market sectors will slow, while that in non-market sectors will remain volatile with a gradual downward trend in the coming quarters

(annual percentage changes; total wages – source: CZSO; wages in market and non-market sectors – source: CNB calculation)



evolution of private investment this year. Growth in domestic costs will gradually weaken further over the forecast horizon, due mainly to steadily slowing wage growth. The exception will be a temporary slight increase in domestic costs at the start of next year, mainly as a result of an expected rise in the minimum wage. Domestic cost pressures will be dampened over the entire forecast horizon by increasing labour efficiency. Its currently reduced contribution will gradually increase to its steady-state level on the back of renewed growth in private investment activity. By contrast, a positive contribution of the price of capital, reflecting continued growth in domestic demand, will have an upward effect on costs over the entire forecast horizon. This will result in stable growth in domestic costs of around 2% in 2021.

Employment growth will remain muted due to persisting labour shortages amid weakening demand for labour (see Chart II.2.8). Labour shortages, linked with a record-low unemployment rate, will continue to be reduced slightly by growth in the labour force (due, among other factors, to a gradual increase in the statutory retirement age). Nevertheless, growth in the number of employees converted into full-time equivalents will slow further at the end of the year. The rise in the converted number of employees will be aided mainly by an increase in the number of employees amid broadly stable average hours worked. From the sectoral perspective, this increase will be driven mainly by the services sector, which is benefiting from continued growth in domestic consumption. By contrast, industry will record a slight decline in employment, as demand for labour in industrial firms is being negatively affected by slower economic growth abroad.

The current record-low unemployment rate is no longer creating room for unemployment to fall any further. The general unemployment rate will be close to its current level of 2.1% (see Chart II.2.8), despite slightly weakening – yet still relatively strong – demand for labour. The share of unemployed persons will follow a similar path as the general unemployment rate. This will reflect an only marginal decrease in the number of registered job applicants amid a continued slight decline in the population aged 15–64.

Wage growth will start to slow next year due to gradually easing labour market tightness. Wage growth in the market segment of the economy picked up slightly to 7.1% in 2019 Q3 (see Chart II.2.9). In addition to persisting labour market tightness, wage growth will continue to be affected for the rest of this year by the January increase in the minimum wage. Its further expected increase[14] will be dampened by slowing wage growth next year. On the other hand, the slowing wage growth will reflect firms' efforts to maintain their price competitiveness and profitability. Market wage growth will thus stay close to 7% for 2019 as a whole. It will converge to its steady-state level of 5% at the

14 The estimated impact of this measure on average wage growth in market sectors is 0.15 percentage point.

end of next year and fluctuate around that level in 2021. Volatile (due to base effects) and generally pronounced wage growth, albeit lower than last year, will continue in non-market sectors. It will mainly reflect an increase in the wages of teachers and other public employees over the entire forecast horizon.

II.2.3 Economic activity

GDP growth will slow in the quarters ahead due to weakening external demand (see Chart II.2.10). Solid growth rates of household and government consumption will contribute constantly to growth in economic activity. Growth in gross fixed capital formation will initially stay at the low rates observed in mid-2019 due to deteriorating economic growth in the euro area. Renewed growth in private investment will later be reflected in an upswing in gross fixed capital formation. The positive contribution of net exports to GDP growth, due to the current investment downturn, will temporarily disappear next year. It will return as growth in external demand picks up. Together with the contribution of investment, this will cause economic growth to accelerate at the end of next year. GDP growth will thus return close to its long-term rate.

The still solid household consumption growth will be driven by continued rapid, albeit slowing, growth in wages, salaries and other income. Nominal disposable household income will continue to grow at a solid rate, owing to robust growth in wages and salaries together with a large contribution of income of entrepreneurs and social benefits (see Chart II.2.11). In addition, private consumption will be supported next year – like this year – by an increase in old-age pensions going beyond the usual indexation and a further increase in the minimum wage. The households concerned have an above-average propensity to consume in both cases. At the beginning of next year, consumption growth will slow as a result of, among other things, increases in indirect taxes and the previous rise in domestic interest rates. At the same time, however, the growth of the deflator will slow next year, so real household consumption growth will be only slightly below 3% in the coming two years (see Chart II.2.12), amid approximate stability of the saving rate.

Government consumption will continue to rise on the back of growth in non-wage expenditure and wage growth in the government sector. Growth in real government consumption will amount to just under 3% this year and slow slightly in the next two years (see Chart II.2.12). Government consumption expenditure in nominal terms will be significantly affected by rapidly increasing compensation of employees, especially this year. Current (non-investment) expenditure and social transfers in kind will continue to rise.

Gross capital formation will decrease over the next few quarters (see Chart II.2.13). Growth in fixed investment will come to a virtual halt this year, despite continuing solid investment activity in the government sector. This will be due in particular to private investment, which reflects the slowdown in external demand growth and the uncertainty about

CHART II.2.10

ANNUAL GDP GROWTH STRUCTURE

Household and government consumption will contribute to GDP growth constantly over the entire forecast horizon, while the contributions of other components will fluctuate
(annual percentage changes; contributions in percentage points; seasonally adjusted)

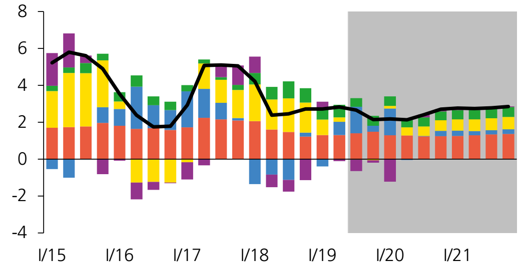
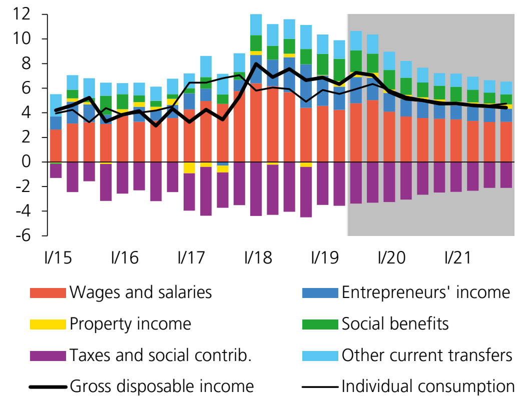


CHART II.2.11

NOMINAL DISPOSABLE INCOME

The still solid growth in disposable income will be a result mainly of continued, albeit gradually slowing, growth in wages and salaries, but other income will also increase
(annual percentage changes; contributions in percentage points)



Note: Entrepreneurs' income comprises gross operating surplus and mixed income.

CHART II.2.12

REAL HOUSEHOLD AND GOVERNMENT CONSUMPTION

Household consumption will grow at a stable pace, while government consumption will show only slightly slower growth
(annual percentage changes; seasonally adjusted)

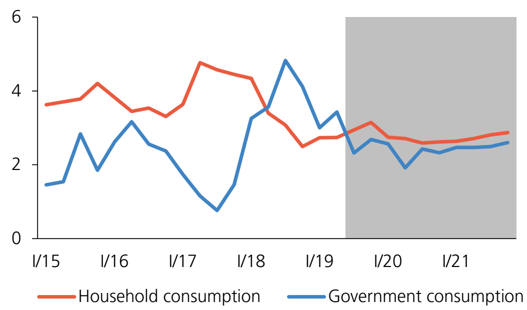


Chart II.2.13

INVESTMENT DECOMPOSITION

The downturn in gross capital formation will fade away next year, with a renewed contribution of private investment
(annual percentage changes; contributions in percentage points; constant prices; seasonally adjusted; source: CZSO; contributions of private and government investment: CNB calculation)

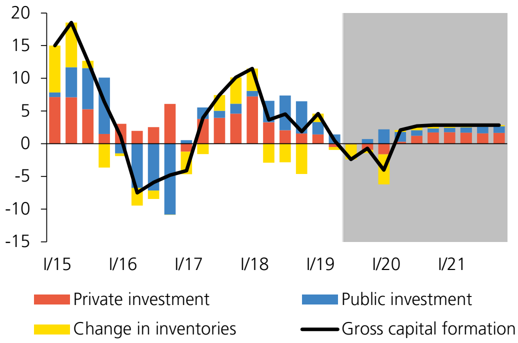


Chart II.2.14

REAL EXPORTS AND IMPORTS

The currently subdued growth in exports and imports will gradually increase, reflecting a recovery of growth in external demand
(year-on-year changes in per cent and CZK billions; seasonally adjusted)

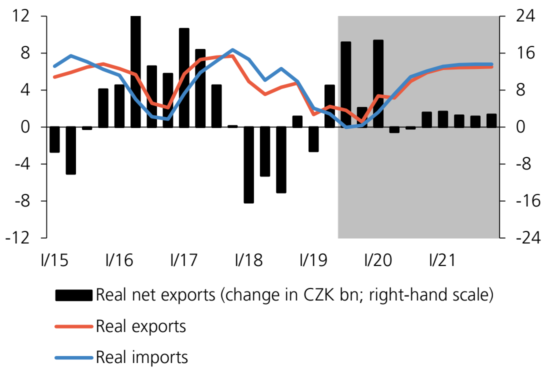
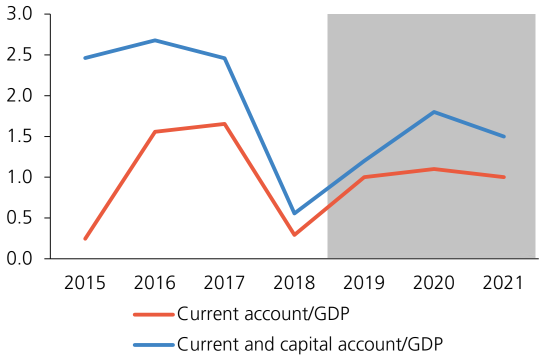


Chart II.2.15

RATIOS OF THE BALANCE OF PAYMENTS ACCOUNTS TO GDP

The current and capital account surpluses will rise considerably relative to GDP in the coming years compared with 2018
(percentages)



future global developments. Next year, these factors are forecasted to fade away and private investment will recover again, despite tightening domestic monetary conditions. Private investment will continue to be motivated by still high capacity utilisation in an environment of persisting labour market tightness. Government investment, with a significant share of investment co-financed from EU funds, will also contribute significantly to fixed investment growth over the entire forecast horizon. The negative contribution of inventories will gradually fade.

The currently subdued export growth will recover next year as external demand picks up (see Chart II.2.14). The sluggish export growth in the second half of this year is due to falling external economic growth. At the same time, slowing growth of the core component of external prices, together with continued high growth in labour costs, is worsening the price competitiveness of domestic producers. Exports of goods and services will increase by a mere 1.5% this year. Next year, external demand growth will pick up and export growth will rise by more than 4%, amid only a gradual strengthening of the koruna. Export growth will accelerate in 2021.

Import growth will mainly reflect domestic investment activity and export growth. This year, growth in imports will be adversely affected by subdued growth in exports, import-intensive private investment and inventories. Imports of goods and services will thus rise by less than 1%, while being positively influenced by steady growth in domestic consumer demand. Next year, increased export and investment growth will be reflected in a pick-up in import growth to more than 4%. In 2021, the pace of imports will increase further.

The contribution of net exports to GDP growth will be positive this year. Exports will outpace imports. In 2020 and 2021, the growth rates of exports and imports will converge and the contribution of net exports to GDP growth will decrease.

II.2.4 The balance of payments

The forecast for 2019 assumes a marked increase in the current account surplus to 1% of GDP (see Chart II.2.15). This is due to a rise in the goods and services surplus (see Table II.2.3) linked mainly with a slowdown in domestic demand and a year-on-year decline in gas and oil prices.[15] Their effect on the surplus is partly offset by slower growth in external demand. The current account surplus is also being increased by a slightly smaller secondary income deficit associated with expected year-on-year growth in income from the EU. The increase in the primary income deficit is due to increasing compensation of foreign employees.

15 Goods imports are being depressed by the slowdown in domestic investment. Growth in exports of more expensive Škoda Auto models is having a positive effect on the other side of the balance. The services surplus is being positively affected by growth in income from telecommunications and computer services.

The current account surplus will slightly exceed 1% of GDP in 2020. The still rising goods and services surplus will mainly reflect a continued slight year-on-year decline in fuel prices. The primary income deficit will increase slightly due to a widening investment income deficit and a further increase in compensation of foreign employees. Secondary income is expected to record a stable deficit amid the contrary effects of higher drawdown of EU funds and growth in private transfers abroad.

The ratio of the current account surplus to GDP will remain broadly stable in 2021. The goods and services balance will record a very slight improvement due to the opposite effects of a recovery in external demand growth and a slight decline in oil prices on the one hand and an acceleration in domestic demand growth on the other. Primary income will see a further increase in non-residents' direct investment earnings. The secondary income deficit will remain stable at the 2020 level.

The capital account surplus will decrease slightly this year due to lower drawdown of EU funds and a widening emission allowances deficit. However, the EU funds drawdown surplus is forecasted to increase. Moreover, a year-on-year increase in the surplus in 2020 will be associated with expected one-off income from the planned auction of 5G frequencies. There is still uncertainty regarding trading in emission permits. The size of such trading and the direction of the flows are hard to estimate, so the forecast for 2020 and 2021 assumes zero net trades.

The financial account (excluding banking sector operations) will be in approximate balance this year. The net inflow of direct investment capital (see Chart II.2.16) into the Czech Republic will decrease compared with 2018. This will be due mainly to a lower balance of reinvested earnings and, to a lesser extent, to a renewed outflow of debt capital from domestic subsidiaries to foreign parent companies. The forecast for direct investment also includes a one-off operation (the sale of a ČEZ subsidiary in Bulgaria[16]). Turning to portfolio investment (see Chart II.2.17), residents' holdings of foreign securities (mainly bonds) will decline slightly on the asset side due to a highly positive koruna-euro interest rate differential. On the liabilities side, non-residents' interest in Czech government koruna bonds will increase as a result of a gradual decrease in dollar and partly also euro interest rates. Under other investment (excluding the banking sector), a year-on-year increase in the net outflow of capital, associated with activities of the corporate sector (export loans and transfers of free funds to foreign accounts), is expected. In the government sector, the forecast includes only a partial revolving of the short-term foreign loan taken out last year. The forecasted higher growth in reserve assets than in 2018 is associated with an increase in returns on the CNB's international reserves and a slight

16 The Bulgarian anti-trust authority has temporarily halted this operation, so a risk of financial account forecast is that the sale will not take place this year.

TABLE II.2.3

BALANCE OF PAYMENTS FORECAST

The current account surplus will increase significantly this year and the next due to growth in the good and services surplus
(CZK billions)

	2018 actual	2019 forecast	2020 forecast	2021 forecast
A. CURRENT ACCOUNT	15.5	55.0	65.0	60.0
Goods	217.2	245.0	260.0	260.0
Services	120.7	135.0	140.0	145.0
Primary income	-282.5	-290.0	-300.0	-310.0
Secondary income	-39.9	-35.0	-35.0	-35.0
B. CAPITAL ACCOUNT	14.0	10.0	40.0	30.0
C. FINANCIAL ACCOUNT[a)]	12.2	0.0	-30.0	10.0
Direct investment	-91.3	-70.0	-90.0	-60.0
Portfolio investment	22.5	-95.0	-100.0	-80.0
Financial derivatives	-15.3	-	-	-
Other investment	46.3	90.0	70.0	60.0
Reserve assets	50.0	75.0	90.0	90.0

a) forecast excluding operations of banking sector and financial derivatives

CHART II.2.16

DIRECT INVESTMENT STRUCTURE

Both the net inflow of direct investment into the Czech Republic and the net outflow of direct investment abroad will increase compared with last year
(CZK billions)

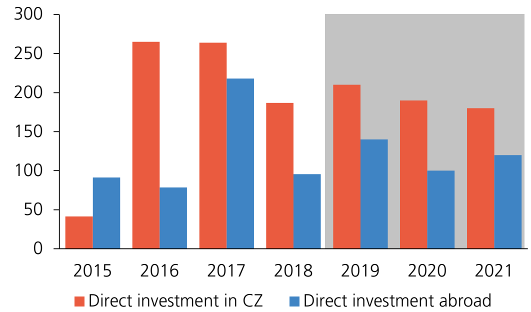
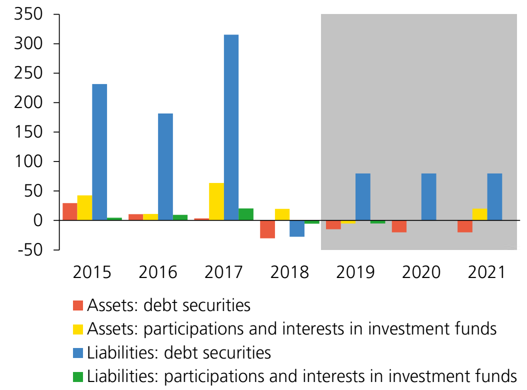


CHART II.2.17

PORTFOLIO INVESTMENT STRUCTURE

A positive interest rate differential of the koruna vis-à-vis the euro will continue to make foreign bonds less attractive to residents
(CZK billions)



year-on-year increase in the overall balance on operations vis-à-vis the EU.

The net inflow of capital will be renewed next year due to one-off revenues from the sale of assets abroad. The relatively high income from the sale of ČEZ's assets in Romania will help the net inflow of direct investment to exceed reinvested earnings for the first time in three years. As regards portfolio investment, a positive difference between domestic and foreign interest rate income will continue to ensure a high net capital inflow. The growth in reserve assets will reflect the expected increase in net income from the EU. The capital inflow will halt in 2021 as one-off asset sales fade out. The other financial account items will not deviate significantly from the previous trend and the financial account as a whole (excluding banking sector operations) is forecasted to record a very slight outflow of capital.

According to the forecast, the domestic real economy will generate foreign currency surpluses and will thus foster a strengthening of the koruna. The bulk of the forecasted surplus is due to an expected fall in oil and gas prices on world markets, the inclusion of one-off revenues from sales of assets to non-residents (ČEZ's foreign assets and 5G frequencies) and a gradual moderate recovery in external demand growth. Another significant factor affecting the exchange rate may be movements of short-term capital.[17]

II.2.5 Fiscal developments

Public budgets will remain in surplus over the forecast horizon, but the surplus will decrease gradually. The general government surplus will amount to just under 1% of GDP this year and the next and drop to 0.5% of GDP in 2021 (see Table II.2.4). The general government revenue side continues to be bolstered by tax revenues stemming from the solid growth in the total volume of wages and salaries in the economy. This year, however, discretionary measures (the shifting of public transport fares to the second reduced VAT rate, an increase in the limits on lump-sum expense deduction for entrepreneurs and a reduction in the rate on employers' social security contributions) are negatively affecting the revenue side of public budgets. In 2020, by contrast, general government revenues will be bolstered overall by tax measures, due to the planned increase in excise duty on cigarettes and alcohol, restrictions on the exemption of winnings in games of chance from income tax, an increase in tax rates on lotteries and gaming[18] and the

TABLE II.2.4

FISCAL FORECAST

The general government surpluses will gradually decrease and the government debt-to-GDP ratio will continue to fall
(% of nominal GDP)

	2018 actual	2019 forecast	2020 forecast	2021 forecast
Government revenue	41.7	42.0	42.2	42.1
Government expenditure	40.7	41.1	41.5	41.6
of which: interest payments	0.8	0.7	0.6	0.6
GOVERNMENT BUDGET BALANCE	1.1	0.9	0.8	0.5
of which:				
primary balance[a)]	1.8	1.6	1.4	1.1
one-off measures[b)]	0.2	0.2	0.2	0.2
ADJUSTED BUDGET BALANCE[c)]	0.9	0.7	0.5	0.3
Cyclical component (disaggregated method)[d)]	0.6	0.4	0.2	0.0
Structural balance (disaggregated method)[d)]	0.3	0.2	0.3	0.2
Fiscal stance in pp (disaggregated method)[e)]	-0.8	-0.1	0.1	-0.1
Cyclical component (aggregated method)[d)]	0.1	0.0	-0.1	-0.1
Structural balance (aggregated method)[d)]	0.8	0.7	0.6	0.3
Fiscal stance in pp (aggregated method)[e)]	-0.4	-0.1	0.0	-0.3
GOVERNMENT DEBT	32.6	30.3	28.5	27.0

a) government budget balance minus interest payments
b) This item consists of expected revenue from primary sales of emission permits, expenditure on the (New) Green Savings Programme, guarantees and revenue from the sale of frequency bands to mobile operators.
c) adjusted for one-off measures; CNB estimate
d) CNB estimate; the disaggregated method is based on the evolution of the individual tax bases in the business cycle; the aggregated method defines the position of the cycle on the basis of the output gap only.
e) year-on-year change in structural balance

17 Any significant drop in dollar rates could raise the interest of foreign investors in koruna assets in the form of short-term koruna deposits at domestic banks. Conversely, a large outflow of foreign short-term capital – in addition to a deterioration in the goods and services balance – could occur in the case of significantly more unfavourable than forecasted external demand developments. These considerations, however, are not part of the forecast and thus rank as general uncertainties.

18 These proposed tax changes form part of the "rate package" that is currently in its third reading in the Chamber of Deputies. The most important change in terms of budgetary impact is the increase in excise duty on cigarettes (0.13% of GDP). This increase responds

launch of the third and fourth phases of electronic sales registration (ESR).[19] Persisting strong wage growth in the public sector, continued growth in government investment and growth in social transfers will lift government expenditure. This year's more generous pension indexation,[20] which will be further raised next year,[21] an increase in the care allowance and the introduction of fare discounts for students and senior citizens in September 2018 will be reflected in rapid growth in social transfers.

Fiscal policy is expansionary this year and will be neutral over the next two years (see Table II.2.5). The expansionary effect of fiscal policy this year is linked mainly with the above-mentioned measures to support household consumption, including rapid wage growth in the government sector and continued growth in government investment. The neutral effect of fiscal policy in 2020 reflects the fact that the impacts of the discretionary fiscal measures expected by the forecast offset each other overall. No further discretionary measures have been announced for 2021, and a neutral fiscal impulse is assumed.

Government sector finances in structural terms will also remain in surplus, and the ratio of government debt to GDP will decrease further. The structural surpluses will amount to around 0.3% of GDP. The medium-term objective – namely a structural deficit of 0.75% of GDP from 2020 – will thus also be comfortably met at the forecast horizon. Government debt will gradually drop to 27% of GDP in 2021, due both to nominal GDP growth and to a decrease in nominal government debt.

TABLE II.2.5

FISCAL IMPULSE

The fiscal impulse is positive this year due to the support of household consumption and growth in government investment; in the next two years fiscal policy will be neutral
(contributions to GDP growth in percentage points)

	2018 actual	2019 forecast	2020 forecast	2021 forecast
FISCAL IMPULSE	0.7	0.5	0.0	0.0
of which impact through:				
private consumption	0.4	0.3	0.0	0.0
private investment	0.0	0.0	0.0	0.0
government investment, domestic	0.2	0.1	0.0	0.0
government investment, EU funded	0.2	0.1	0.0	0.0

to the requirement set out in the directive on the structure and rates of excise duty applied to tobacco products in the EU and must be implemented on 1 January 2020 at the latest.

19 The third and fourth phases of ESR should contribute about 0.1% of GDP to the growth in tax revenues. However, this impact will be largely offset by the reassignment of selected goods and some services to the reduced VAT rate, which is tied to the launch of the third and fourth phases of ESR. Both measures will take effect on 1 May 2020.

20 In 2019, the flat-rate component of pensions was increased from 9% to 10% of the average wage and senior citizens aged over 85 received an extra CZK 1,000 a month. This will increase overall pension spending by 0.3% of GDP.

21 In addition to the regular increase in pensions, an extraordinary increase is proposed for January 2020. The average old-age pension would rise by CZK 900 overall.

CHART II.3.1

CHANGE IN THE FORECAST FOR EFFECTIVE PPI IN THE EURO AREA

A markedly lower outlook for producer price inflation in the euro area over the entire forecast horizon reflects slower growth in economic activity and a lower Brent crude oil price

(annual percentage changes; differences in percentage points – right-hand scale; seasonally adjusted)

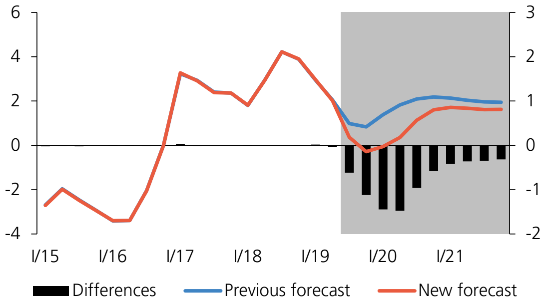


CHART II.3.2

CHANGE IN THE GDP FORECAST

The forecast for domestic economic growth is lower due to a worse external outlook

(annual percentage changes; differences in percentage points – right-hand scale; seasonally adjusted)

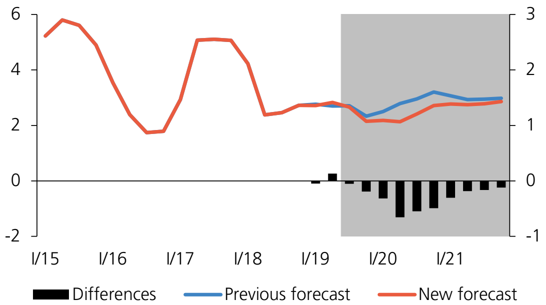
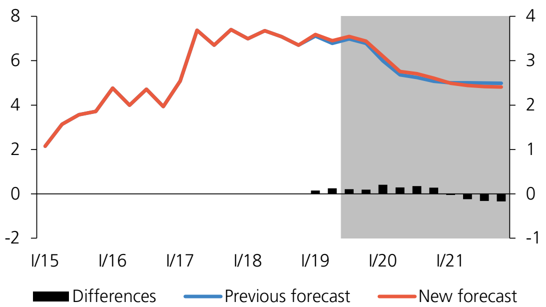


CHART II.3.3

CHANGE IN THE FORECAST FOR NOMINAL WAGES IN MARKET SECTORS

The wage growth forecast for this year and the next has been revised slightly upwards

(annual percentage changes; differences in percentage points – right-hand scale; seasonally adjusted)



II.3 COMPARISON WITH THE PREVIOUS FORECAST

The changes by comparison with the previous forecast stem mainly from a significant deterioration of the external outlook. The cyclical slowdown and persisting uncertainty in global trade are reflected in a lower outlook for demand and producer prices abroad. The additional easing of ECB monetary policy is reflected in a lower path of foreign interest rates. Newly observed data from the domestic economy, a less anti-inflationary effect of import prices reflecting a weaker exchange rate, and lower labour efficiency growth have led to a slight upward revision of the total cost pressures at the shorter end of the forecast. Together with changes in the area of indirect taxes, these factors have shifted the inflation forecast upwards. The koruna will appreciate appreciably more gradually than in the previous projection. Consistent with the new forecast is a higher interest rate path, especially in 2020.

The foreign outlook contains a sizeable downward revision of producer price inflation and economic activity in the effective euro area. By comparison with the previous forecast, the outlook for foreign producer price inflation is lower, especially for next year (see Chart II.3.1). This mainly reflects weaker demand pressures stemming from slower expected growth in economic activity in the euro area. The latter is reflected in lower growth in the core component of PPI. This is accompanied by weaker cost pressures arising from a lower outlook for the Brent crude oil price, the revision of which is partly offset by a somewhat weaker exchange rate of the euro against the dollar. The 3M EURIBOR outlook is slightly lower only at the more distant horizon, as the market outlook in the previous forecast had to some extent expected the decrease in the ECB's deposit rate of 10 basis points on 12 September. In addition, the ECB has resumed its asset purchase programme at a monthly pace of EUR 20 billion (from November 2019), which the new forecast captures using shadow foreign interest rates.[22]

The forecast for domestic economic growth has been revised downwards as a result of the worse external outlook (see Chart II.3.2). GDP growth in 2019 Q2 was in line with the previous forecast, but had a slightly different structure. The contributions of net exports and government consumption fostered higher growth, while a drop in gross capital formation due to lower growth in private investment had the opposite effect. The lowered GDP growth forecast for 2020 and 2021 reflects the worse external outlook, which will result in lower contributions of net exports and investment. The household consumption forecast has shifted slightly lower, while government consumption is almost unchanged.

22 In connection with the renewal of the ECB's asset purchase programme, a foreign shadow interest rate has been included in the g3+ model. The rate directly enters the external block of g3+. However, it has a limited effect on the domestic economy, the koruna exchange rate and monetary policy, as cross-border capital flows are primarily affected by the interest rate differential between Czech rates and the 3M EURIBOR. The shadow rate thus fosters appreciation of the koruna to only a limited extent.

Wage growth will be slightly higher in 2019 and 2020 than in the previous forecast (see Chart II.3.3). Wage growth in Q2 was driven by a higher contribution of the basic pay component than assumed by the previous forecast, at the expense of one-off bonuses. The basic pay component is assumed to be more persistent. Slightly higher growth next year will also be fostered by a further increase in the minimum wage in January 2020, which has been newly incorporated into the forecast. The wage growth will lead to slightly stronger domestic cost pressures than in the previous forecast, especially next year.

The inflation forecast for next year is higher due to stronger domestic pressures, a weaker exchange rate and greater effects of tax changes. The slightly stronger domestic fundamental inflation pressures are due to lower labour efficiency growth coupled with somewhat higher wage growth than in the previous forecast. This, together with a weaker koruna, will be reflected in slightly stronger overall inflation pressures. The estimated impact of the increase in excise duty on cigarettes on headline inflation next year has been revised. This estimate is 0.24 percentage point higher compared with the previous forecast. The launch of the third and fourth phases of ESR and the related cut in the VAT rate on selected items of the consumer basket has been postponed from January to May 2020, which also delays the second-round impacts of these changes.[23] The outlook for administered price inflation is higher at the end of this year and in 2020 due to a more marked increase in electricity prices. Overall, the headline inflation forecast is thus higher next year (see Chart II.3.4).

The koruna will appreciate noticeably more gradually than in the previous forecast due to the worse external outlook (see Chart II.3.5). In the short run, this is due to the weaker initial exchange rate. The longer-term forecast reflects the worse external outlook. The koruna will respond with its slower appreciation to both weaker external demand and lower core foreign price inflation, which fosters worse price competitiveness of exporters than in the previous forecast. The above deterioration of the external outlook is not accompanied by a commensurate reduction of expected interest rates in the euro area compared with the previous forecast. This will magnify the koruna's response described above. The forecast also incorporates the observed path of the koruna exchange rate over the past year. However, this effect on the exchange rate is lower than in the previous forecast at the start of the horizon.

The new forecast implies a higher domestic interest rate path, especially in 2020 (see Chart II.3.6). A more inflationary initial state has the dominant upward effect on rates. It reflects slightly stronger overall inflation pressures stemming from a smaller contribution of labour

23 These changes are also reflected in the forecast for monetary policy-relevant inflation. A detailed account of the changes to indirect taxes incorporated in the previous forecast was presented in a box in IR III/2019.

CHART II.3.4

CHANGE IN THE HEADLINE INFLATION FORECAST

The inflation forecast is higher next year due to stronger domestic price pressures, a weaker exchange rate and greater impacts of changes to indirect taxes
(year on year in %; differences in percentage points – right-hand scale)

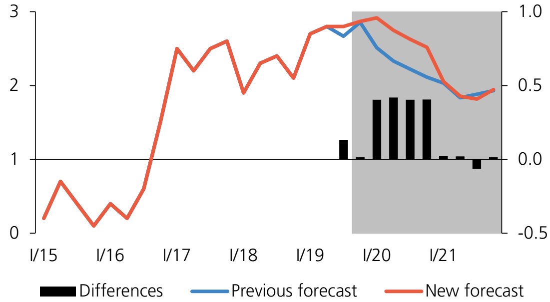


CHART II.3.5

CHANGE IN THE EXCHANGE RATE FORECAST

The koruna will appreciate noticeably more gradually against the euro due to a worse external outlook
(CZK/EUR; differences in CZK – right-hand scale)

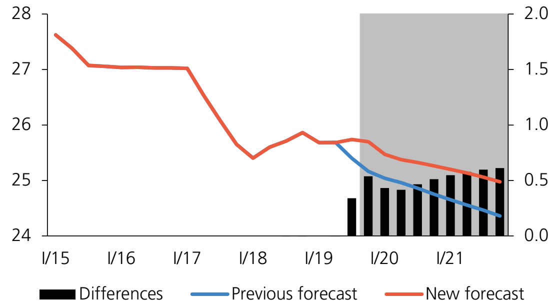
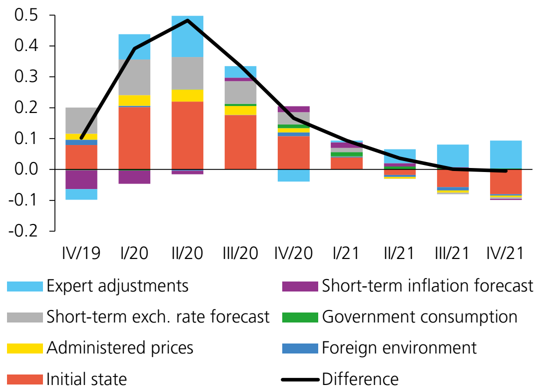


CHART II.3.6

DECOMPOSITION OF CHANGES IN THE INTEREST RATE FORECAST

The interest rate outlook is higher mainly for next year due to stronger overall inflation pressures
(3M PRIBOR; percentage points)



efficiency and a larger share of the basic pay component in wage growth in 2019 Q2 than assumed by the previous forecast. A shift of the short-term koruna exchange rate forecast to a weaker level and the overall impact of expert adjustments also foster an upward revision of the interest rate path in the new forecast. The effect of expert adjustments includes the postponement of the impact of VAT changes linked with the third and fourth phases of ESR from January to May 2020, the incorporation of a further increase in the minimum wage in January 2020 and the taking into account of the volatility of package holiday prices in the past two years in the inflation expected in 2020 and 2021. In 2021, the positive contribution of expert adjustments reflects an assumption of greater wage rigidity taking into account this year's wage growth. Next year, the contribution of administered prices will also foster higher domestic rates to a minor extent, due to stronger growth in electricity prices at the end of this year. The contribution of developments abroad is roughly neutral overall.[24]

24 Worse economic and price developments abroad have an anti-inflationary effect. However, this effect is roughly offset by the koruna appreciating more slowly against the euro than in the previous forecast. This is due to the negative impact of developments abroad on net exports and by the forward-looking exchange rate response to the potential deterioration in Czech exporters' price competitiveness.

II.4 RISKS AND UNCERTAINTIES OF THE FORECAST

The Bank Board assessed the balance of risks to the inflation forecast at the monetary policy horizon as being anti-inflationary. The risks stem primarily from the situation abroad, which may be negatively reflected in the open Czech economy with a lag. In addition, uncertainties persist regarding the impacts of protectionist measures in global trade. The impacts of a potential disorderly Brexit, the likelihood of which, however, has recently decreased somewhat, are quantified in a scenario.

II.4.1 Risks perceived by the CNB

The impacts of a potential disorderly Brexit, the likelihood of which, however, has recently decreased somewhat, are quantified in a scenario. This scenario describes the hypothetical situation where the UK leaves the EU on 31 October 2019 with no withdrawal agreement. This damages relations between the UK and its main trading partners in the euro area. The scenario quantifies both the impact of a disorderly Brexit on Czech exports to the euro area and the impact in the form of weaker demand for domestic production intended for direct export to the UK. The risk of a disorderly Brexit was first described in a sensitivity scenario in IR I/2019.

The updated scenario captures in more detail the economic links between the UK and its trading partners in the euro area. The evolution of foreign variables was simulated using an extended version of the NiGEM model, which also contains some other assumptions. The quantification of the impacts of a disorderly Brexit on foreign and domestic variables is relatively independent of when the scenario materialises.

A disorderly Brexit would be reflected not only in a fall in trade between the UK and the euro area, but also in a deterioration in sentiment. In the scenario, trade between the UK and the euro area falls sharply (by 50%) in 2019 Q4. This assumption is based on the absence of mutual contractual trade arrangements and simulates the effect of the initial chaos at borders and the related complications for foreign trade in goods and services. The drop in total exports is about six times larger for the UK than it is for the euro area, for which the UK represents a much less significant export market than the euro area does for the UK.[25] The scenario also assumes a deterioration in labour productivity in the UK and, to a lesser extent, in the euro area, and an increase in the investment risk premium. Companies' negative sentiment leads to cuts in corporate investment. The stock market risk premium also rises in the scenario due to worse investor sentiment. The result is a sharp drop in the UK FTSE 100 stock index of 7%. The German DAX 30 stock index declines by about 3.5%. Given the statements made by the UK

25 The share of the euro area in total UK exports is 42%, whereas the euro area exports just 7% of its total exports to the UK.

government and other information, the scenario does not assume the introduction of tariffs between the UK and the EU.

A disorderly Brexit would lead to UK GDP being more than 3% lower in 2020 and 2021. A sharp depreciation of sterling against both the dollar and the euro relative to the baseline scenario (of about 17% and 15% respectively) results in UK inflation being 1.6 percentage points higher on average in the next two years. Higher cost-push price pressures strongly predominate in the first year. Negative demand-pull pressures start to show up more strongly in inflation at the end of the second year.

A disorderly Brexit would lead to slower economic growth and slightly higher producer price inflation in the effective euro area (see Table II.4.1). The negative impact on annual GDP growth in the effective euro area fades out after a year. The ECB responds to the lower demand with easier monetary policy. The euro depreciates slightly against the dollar.

TABLE II.4.1

DISORDERLY BREXIT SCENARIO – FOREIGN VARIABLES

A disorderly Brexit would manifest itself in the euro area mainly in lower economic growth; the euro would weaken against the dollar
(deviations from baseline scenario paths)

	Effective PPI inflation (pp)	3M EURIBOR (pp)	Effective GDP growth (pp)	USD/EUR exchange rate (%)
IV/19	0.2	-0.1	-0.5	-2.5
I/20	0.1	-0.1	-0.5	-2.5
II/20	0.1	-0.2	-0.5	-2.6
III/20	0.0	-0.2	-0.6	-2.7
IV/20	-0.2	-0.2	0.0	-2.7
I/21	-0.1	-0.2	0.0	-2.8
II/21	-0.1	-0.3	0.0	-2.9
III/21	0.0	-0.3	0.0	-2.9
IV/21	0.0	-0.3	0.1	-3.0

The slowdown of the UK economy due to a disorderly Brexit would have only a limited impact on the Czech economy through direct exports from the Czech Republic to the UK. Based on the long-term relationship, Czech exports to the UK are estimated to fall by approximately CZK 3.5 billion in response to a fall in UK GDP of 1%. A drop in UK economic growth of around 3% in 2020 and 2021 (see above) implies a decline in Czech exports of about CZK 10 billion in both years. This is an insignificant drop in terms of total Czech exports, although the UK is a major trading partner for some sectors.[26]

A disorderly Brexit would lead to slower growth of the Czech economy, mainly through a downturn in exports to the euro area, and to lower domestic rates. The growth of the Czech economy drops sharply in the event of a disorderly Brexit relative to the baseline scenario, due to an initial negative contribution of investment. Household consumption also grows at a slower rate due to lower wage growth. The drop in external demand for Czech exports is simultaneously reflected in a slightly weaker koruna, which increases the inflation pressures stemming from import prices. The interest rate path is slightly lower than in the baseline scenario, as the impacts of the weaker koruna are outweighed by lower domestic inflation pressures and a more open interest rate differential due to easier monetary policy abroad. The disorderly Brexit scenario thus leads to easier domestic monetary conditions in both the interest and exchange rate components. The deviation of the inflation forecast from the baseline scenario is therefore ultimately insignificant. The simulation results, expressed as deviations from the forecast, are given in Table II.4.2.

TABLE II.4.2

DISORDERLY BREXIT SCENARIO – DOMESTIC ECONOMY

Monetary policy would respond to the demand shock from abroad, which would lead to lower GDP growth and a weaker koruna, by slightly lowering rates, so inflation would not differ from the forecast
(deviations from baseline scenario paths)

	CPI inflation (pp)	3M PRIBOR (pp)	GDP growth (pp)	Nominal exchange rate (CZK/EUR)
IV/19	0.0	-0.1	-0.9	0.0
I/20	0.0	-0.1	-0.9	0.1
II/20	0.0	-0.1	-1.0	0.1
III/20	0.0	-0.1	-1.0	0.2
IV/20	0.0	-0.1	-0.1	0.2
I/21	0.0	-0.1	-0.1	0.2
II/21	0.0	-0.1	-0.1	0.2
III/21	0.0	-0.1	0.0	0.3
IV/21	0.0	-0.1	0.0	0.3

26 See the box *The Czech Republic's trade relations with the UK in recent years* in IR I/2019.

The Bank Board assessed the balance of risks to the inflation forecast at the monetary policy horizon as being anti-inflationary. The risks stem primarily from the situation abroad, which may be negatively reflected in the open Czech economy with a lag. In addition, uncertainties persist regarding the impacts of protectionist measures in global trade and a disorderly Brexit, the likelihood of which, however, has recently decreased somewhat.

II.4.2 Risks signalled by other entities' forecasts

Inflation expectations in the economy continue to be anchored by the CNB's 2% target. Inflation forecasted by financial market analysts is currently slightly above the CNB's 2% target at the one-year horizon. At the three-year horizon, it is at the target. According to the analysts, inflation will continue to fluctuate close to the upper boundary of the tolerance band around the target for the rest of this year and slow to 2% next year. The tightness in the labour market is expected to ease. Some of the respondents also expect lower oil prices or a stronger koruna. The inflation expectations of business managers are also close to the central bank's target at the one-year horizon (see Table II.4.3).

The indicators of inflation perceived and expected by households rose slightly further. The positive level of perceived inflation suggests that households overall felt that prices rose over the last 12 months, though only quite modestly (see Chart II.4.1). The indicator of expected inflation again moved higher on average. Its level signals that respondents who expect inflation to stay the same or increase over the next 12 months still predominate.

The analysts estimate that the Czech economy will show growth of about 2.6% this year and slow slightly next year (see Table II.4.3). Domestic consumption should remain the main source of Czech economic growth. The good financial situation of Czech households will mitigate the impacts of the stagnating German economy and the generally unfavourable external environment, which will probably start to be reflected in the domestic economy with a lag. According to the analysts, the risks of negative impacts of Brexit and protectionist measures are gaining in intensity. This will also probably weaken companies' investment activity. Despite the cooling of the German economy, demand for employees in the Czech Republic remains high, as reflected in low unemployment. The analysts believe that the tightness in the labour market will gradually ease and wage growth will decrease.

The analysts on average forecast slight appreciation of the koruna and broad stability of interest rates at the one-year horizon. The analysts perceive relatively high sensitivity of the koruna to sentiment on foreign markets. According to the analysts, its effect has recently been outweighing the markedly positive koruna-euro interest rate differential

TABLE II.4.3

EXPECTED INDICATORS OF FMIE, CF AND CORPORATIONS

The analysts' inflation expectations are slightly above the CNB's 2% target at the one-year horizon and at the target at the three-year horizon; the analysts believe that economic growth will slow slightly next year

(at 1Y; annual percentage changes unless otherwise indicated)

	6/19	7/19	8/19	9/19	10/19
FMIE:					
CPI	2.1	2.1	2.2	2.2	2.3
CPI, 3Y horizon	2.0	2.0	2.0	2.0	2.0
Real GDP in 2019	2.4	2.5	2.5	2.5	2.6
Real GDP in 2020	2.4	2.4	2.3	2.3	2.3
Nominal wages in 2019	6.7	6.7	6.7	6.9	6.9
Nominal wages in 2020	5.1	5.2	5.2	5.4	5.5
CZK/EUR exchange rate (level)	25.5	25.3	25.4	25.5	25.5
2W repo rate (in per cent)	2.1	2.0	1.9	1.9	2.0
1Y PRIBOR (in per cent)	2.4	2.2	2.1	2.1	2.2
Corporations:					
CPI	2.2			2.2	
CPI, 3Y horizon	2.7			2.6	
CF:					
Real GDP in 2019	2.5	2.5	2.6	2.5	2.6
Real GDP in 2020	2.5	2.4	2.4	2.3	2.2
Nominal wages in 2019	6.1	6.5	6.7	6.9	6.8
Nominal wages in 2020	5.0	5.1	5.3	5.4	5.5
CZK/EUR exchange rate (level)	25.5	25.6	25.5	25.5	25.3
3M PRIBOR (in per cent)	2.3	2.3	2.1	2.1	2.1

CHART II.4.1

PERCEIVED AND EXPECTED INFLATION

Perceived and expected inflation rose slightly further from the perspective of households

(balance of answers; source: European Commission Business and Consumer Survey)

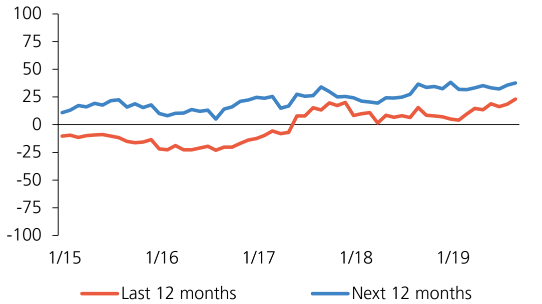
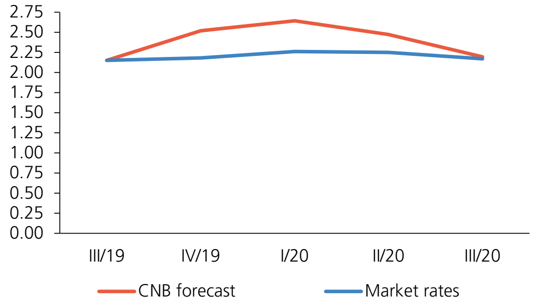


CHART II.4.2

FRA RATES VERSUS THE CNB FORECAST

The market outlook for interest rates is stable; until mid-2020 it is thus slightly below the rates contained in the CNB forecast, consistent with which is a rise in rates in this quarter and the next
(percentages)



Note: Market rates represent for 2019 Q3 and 2019 Q4 the 3M PRIBOR and for 2019 Q1–2019 Q3 the average values of the FRA 3*6, 6*9 and 9*12 rates for the last 10 trading days as of 25 October 2019.

and domestic macroeconomic fundamentals. The current uncertainties are also reflected in a wide expected range between the maximum and minimum values of the koruna.[27] All the analysts in the October FMIE survey were expecting the CNB Bank Board to leave key interest rates unchanged at the November meeting. Their average estimate of the 2W repo rate at the one-year horizon was also 2%. Several opposing factors are reflected in the analysts' outlooks for key interest rates. On the one hand, inflation remains close to the upper boundary of the tolerance band and the strong inflationary pressures are not easing much, but on the other hand, the external risks (the slowdown of the German economy, Brexit and the escalating US-Chinese trade wars) are increasing.

The analysts expect similar GDP growth and inflation as the CNB forecast, with almost the same monetary conditions structure. Like the CNB forecast, the analysts predict a modest appreciation of the koruna on average. Their one-year outlook for interest rates is almost the same as the central bank's forecast (see Table II.4.3). The analysts' wage expectations do not differ much from the CNB's prediction either.

The current market outlook for 3M rates implies stability over the one-year horizon. Consistent with the CNB forecast is a rise in domestic market interest rates in this quarter and the next, followed by a decline from mid-2020. The market outlook until mid-2020 is thus slightly below the interest rates contained in the CNB forecast (see Chart II.4.2).

27 At the one-year horizon, the range was CZK 24.8–26.4 to the euro in the October FMIE survey and CZK 22.8–26.3 to the euro in the CF survey.

III. CURRENT ECONOMIC DEVELOPMENTS

III.1 PRICE DEVELOPMENTS

Over the entire period, observed inflation was above the forecast published in spring 2018, a retrospective assessment of which is relevant for evaluating the current fulfilment of the inflation target. Inflation increased significantly above that forecast at the start of 2019 and has stayed there ever since. Consumer prices increased by 2.8% on average in 2019 Q3. With the benefit of hindsight, the CNB's monetary policy in the past period can be assessed as having been insufficiently tight as regards the fulfilment of the inflation target. The fast overall growth in consumer prices in recent months continued to be due mainly to core inflation, although faster growth in administered prices and growth in food prices also played a big role. Within core inflation, non-tradables prices continued to rise markedly. This was associated with still strong domestic demand amid continued buoyant wage growth. Growth in property prices decreased further but remains high. Import prices have been falling year on year since June, due mainly to a decrease in oil prices and also to a negative contribution of prices of products and semi-products. Following a previous significant drop, industrial producer price inflation did not decline further. On the other hand, agricultural producer price inflation saw a sharp fall, responding to this year's increased grain harvest. Construction work prices continued to grow very quickly, despite a slight slowdown. Prices of services for the business sector also continued to show brisk growth due to strong demand.

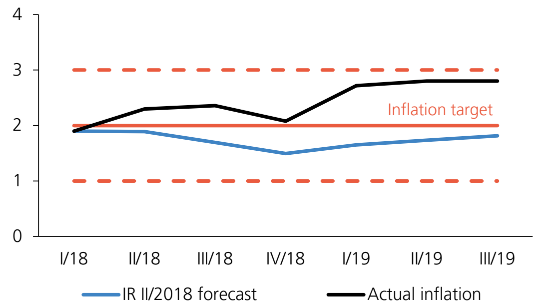
III.1.1 Fulfilment of the inflation target

According to the forecast published in Inflation Report II/2018,[28] inflation was expected to stay below the target over the entire horizon and return to it from below at the end of 2019 (see Chart III.1.1). A slowdown in consumer price inflation was expected to follow on from the significant drop in inflation observed in early 2018, which had been caused by falling core inflation and food price inflation. The forecast assumed that the strong domestic inflation pressures would gradually weaken in response to the tightening of monetary conditions in both their components and due to gradually slackening economic growth and wage growth. At the same time, the anti-inflationary effect of import prices was expected to subside gradually as a result of steady growth in foreign prices amid a gradual slowdown in the pace of appreciation of the exchange rate.

CHART III.1.1

FORECAST VERSUS ACTUAL HEADLINE INFLATION

Inflation was above the forecast over the entire period
(year on year in %)



28 This section of the Inflation Report briefly analyses the contribution of the CNB's monetary policy to this situation. In order to assess the effect of monetary policy on the fulfilment of the inflation target it is appropriate to analyse retrospectively the forecasts and the Bank Board's decisions based thereon in the past. To assess the fulfilment of the target in 2019 Q3, we have to examine – in view of the monetary policy transmission lag – the period from January to September 2018 (the "reference period"). For the sake of clarity, the analysis of the fulfilment of the forecasts in this section is limited to a comparison of Inflation Report II/2018 with subsequent inflation.

TABLE III.1.1

FULFILMENT OF THE INFLATION FORECAST

In particular, core inflation and administered price inflation exceeded expectations
(annual percentage changes; contributions in percentage points)

	IR II/2018 forecast	2019 Q3 outturn	Contribution to total difference
CONSUMER PRICES	1.8	2.8	1.0
of which:			
administered prices	1.5	4.3	0.4
first-round impacts of changes to indirect taxes[a)]	0.0	0.0	0.0
core inflation[b)]	2.0	2.7	0.4
food prices[b)]	1.9	2.9	0.2
fuel prices[b)]	-1.7	-2.1	0.0

a) impact on headline inflation except administered prices
b) excluding the first-round effects of changes to indirect taxes

TABLE III.1.2

FULFILMENT OF THE EXTERNAL ASSUMPTIONS

The faster growth in producer prices reflected a higher oil price; external economic activity rose more slowly than forecasted
(annual percentage changes unless otherwise indicated; p – prediction, o – outturn)

		II/18	III/18	IV/18	I/19	II/19	III/19
GDP in euro area[a), b), c)]	p	2.6	2.5	2.3	2.3	2.2	2.1
	o	2.4	1.8	1.4	1.5	1.1	-
PPI in euro area[b), c)]	p	2.4	2.7	2.0	1.5	1.7	1.9
	o	2.9	4.2	3.9	3.0	2.0	-
3M EURIBOR (percentages)	p	-0.3	-0.3	-0.3	-0.3	-0.2	-0.1
	o	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4
USD/EUR exchange rate (levels)	p	1.23	1.23	1.24	1.25	1.25	1.24
	o	1.19	1.16	1.14	1.14	1.12	1.11
Brent crude oil price (USD/barrel)	p	68.0	66.7	65.5	64.5	63.6	62.6
	o	75.0	75.8	68.6	63.8	68.5	62.1

a) at constant prices
b) seasonally adjusted
c) IR II/2018 outlook for effective indicator

TABLE III.1.3

FULFILMENT OF THE FORECAST FOR KEY VARIABLES

The monetary conditions were easier in the exchange rate component and tighter in the interest rate component
(p – prediction, o – outturn)

		II/18	III/18	IV/18	I/19	II/19	III/19
Consumer price index (annual perc. changes)	p	1.9	1.7	1.5	1.7	1.7	1.8
	o	2.3	2.4	2.1	2.7	2.8	2.8
3M PRIBOR (percentages)	p	0.8	0.9	1.0	1.2	1.4	1.7
	o	0.9	1.4	1.9	2.0	2.1	2.2
CZK/EUR exchange rate (levels)	p	25.2	24.8	24.6	24.4	24.4	24.3
	o	25.6	25.7	25.9	25.7	25.7	25.7
Real GDP[a)] (annual perc. changes)	p	3.4	3.6	3.6	3.6	3.5	3.3
	o	2.4	2.5	2.7	2.7	2.7	-
Nominal wages[b)] (annual perc. changes)	p	7.8	8.0	7.5	6.4	6.1	5.7
	o	7.3	7.1	6.7	7.2	6.9	-

a) seasonally adjusted
b) in market sectors

Observed inflation was above the forecast from the very beginning and has even been well above it this year. The gap between actual inflation and the forecast in 2019 Q3 was 1 percentage point (see Table III.1.1). This was fostered mainly by a weaker koruna, reflected above all in core inflation. Unexpectedly rapid growth in administered prices at the start of this year, caused by an increase in electricity prices for households, acted in the same direction. Food prices also grew faster.

Turning to external factors, growth in producer prices and economic activity in the effective euro area deviated from the assumptions of the forecast (see Table III.1.2). The faster growth in producer prices in the period under review was due mainly to stronger cost pressures reflecting a higher Brent crude oil price. By contrast, growth in external economic activity was much lower than the forecast had assumed. However, the negative demand pressures on producer prices were outweighed by a substantially weaker euro against the dollar and higher oil prices. The forecast that foreign interest rates would remain negative[29] materialised, the rates actually being even lower than forecasted as a result of further monetary policy accommodation by the ECB in the shape of an extension of the asset purchase programme. Overall, according to a simulation performed using the CNB's model, observed external developments fostered more gradual appreciation of the koruna and lower domestic interest rates compared with the forecast, amid a roughly neutral impact on inflation.

Observed domestic real GDP growth was weaker than forecasted. This was due to much lower-than-expected growth in household consumption and lower investment growth. Conversely, growth in government consumption surpassed expectations, reflecting a surprisingly sharp rise in wage and partly also non-wage expenses in the government sector. Mounting uncertainty in world trade was reflected in significantly lower import and export growth. The comparison with the forecast is substantially affected by data revisions, especially in the case of wage growth. It remained broadly stable and was thus lower than forecasted last year. This year, by contrast, it has been higher due to persisting labour market tightness amid continued growth in labour efficiency.

The structure of the monetary conditions deviated from the forecast. The exchange rate remained at a weaker level due to negative global sentiment and later also a deteriorating outlook for external demand. Monetary policy responded with an earlier and faster increase in interest rates than forecasted (see Table III.1.3). The monetary conditions were thus easier than expected in the exchange rate component at the end of the period under review, whereas the interest rate component was moved towards a neutral stance more quickly than forecasted.

29 The observed 3M EURIBOR market rates do not fully reflect the introduction of the ECB's unconventional measures. These measures are usually captured in the CNB's forecasts by shadow rates, which were more negative.

The monetary policy pursued by the CNB between January and September 2018 can be assessed as having been insufficiently tight as regards the fulfilment of the inflation target. In addition to the forecast, an assessment of the risks associated with the forecast is important for the Bank Board's decisions on monetary policy settings. In the period under review, the Bank Board assessed the risks to the forecast in most cases as balanced, once as slightly inflationary and once as slightly anti-inflationary. Interest rates were raised four times in this period. Observed inflation was just below the upper boundary of the tolerance band around the target in 2019 Q3. From this perspective, therefore, it can be said that monetary policy should have been somewhat tighter in the said period, even though the increase in rates was actually more pronounced than the spring 2018 forecast had foreseen. The CNB is nonetheless fulfilling its price stability mandate, as inflation has been continuously inside the tolerance band of ±1 percentage point around the 2% target since the end of 2016. Inflation expectations are anchored at the CNB's 2% target (see section II.4.2).

III.1.2 Consumer prices and property prices

Consumer price inflation remained at 2.8% in Q3 (see Chart III.1.2). Core inflation was still the biggest contributor to the continued rapid overall growth in prices. Inflation was also strongly affected by continued high growth in administered prices and by dissipation of the fast growth in food prices. The negative contribution of fuels gradually increased but remained insignificant. Monetary policy-relevant inflation was slightly above headline inflation in Q3.[30]

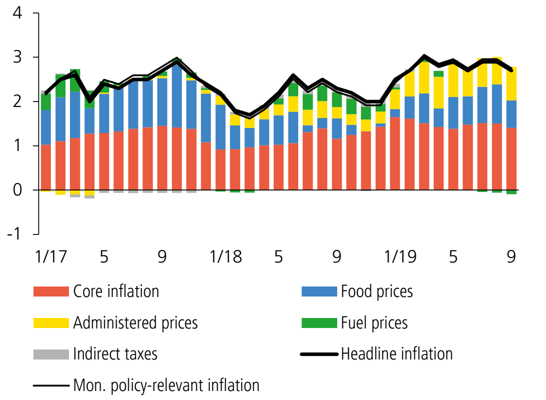
Persisting strong inflation pressures from the domestic economy are keeping core inflation at high levels. The slight rise in core inflation at the start of Q3 was caused by stronger growth in non-tradables prices (see Chart III.1.3). This was due to a temporary increase in package holiday prices in the summer months, which, however, largely faded out in September. Growth in imputed rents meanwhile slowed gradually, due to slowing growth in property prices and construction work prices. Even so, growth in imputed rents remains significant. Prices of other housing-related services[31] also maintained rapid growth within core inflation. Growth in prices in restaurants and cafés gradually strengthened as well. By contrast, the still generally subdued growth in tradables prices reflected opposite movements in individual price categories. Prices of household equipment made the biggest positive contribution. On the other hand, the contribution of prices of clothing and footwear and leisure-related goods remained negative.

30 The first-round effect of changes to indirect taxes was slightly negative in Q3, due to a reduction in VAT in public transport introduced in February 2019.
31 These include, for example, house maintenance and improvement services.

CHART III.1.2

STRUCTURE OF INFLATION

Inflation fluctuated just below 3% in Q3, with all components except fuel prices contributing to the price growth
(annual percentage changes; contributions in percentage points)



Note: Food prices also include prices of alcoholic beverages and tobacco. The contribution of the first-round effects of changes to indirect taxes relates to non-administered prices.

CHART III.1.3

CORE INFLATION

Marked growth in non-tradables prices is keeping core inflation at high levels
(annual percentage changes)

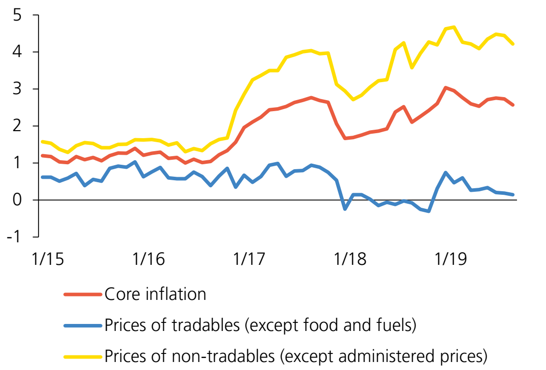


CHART III.1.4

FOOD PRICES, ADMINISTERED PRICES AND FUEL PRICES

Administered price inflation picked up further at the end of Q3, while food price inflation slowed and the decline in fuel prices deepened
(annual percentage changes)

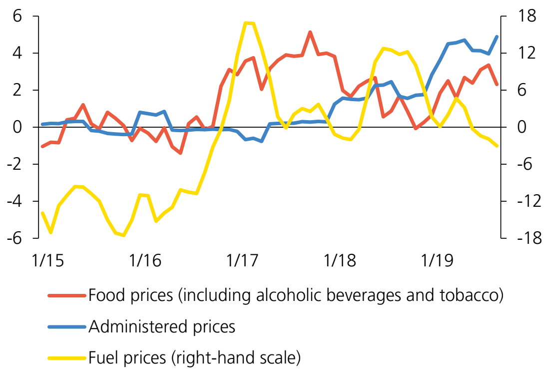


CHART III.1.5

TRANSACTION AND ASKING PRICES OF HOUSING

Growth in transaction and asking prices of apartments slowed slightly further in Q2 but remains brisk
(annual percentage changes)

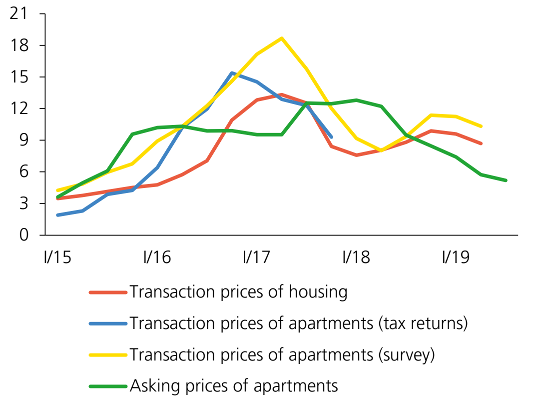


CHART III.1.6

THE EXPERIMENTAL CPIH PRICE INDEX

Just like consumer prices, the CPIH index maintained the previous quarter's growth momentum in Q2
(annual percentage changes)

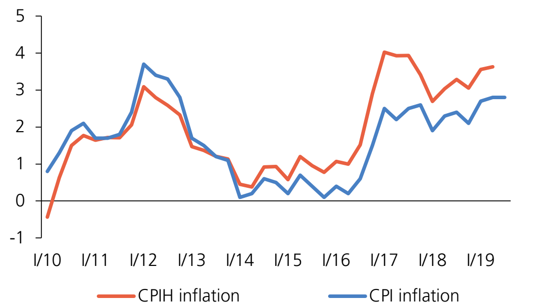
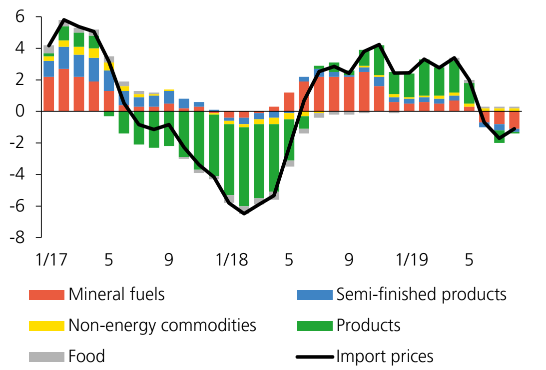


CHART III.1.7

IMPORT PRICES

A negative contribution of mineral fuels prices had the dominant downward effect on import prices in Q3
(annual percentage changes; contributions in percentage points)



Note: Food also includes beverages and tobacco.

Food price inflation initially went up in Q3 but slowed appreciably in September (see Chart III.1.4). The largest year-on-year increases were still recorded by vegetable prices. This continued to reflect their increase last year as a result of bad harvests of most crop products due to hot and dry weather in the growing season. Nevertheless, growth in vegetable prices slowed sharply in September, fostering a decline in the rate of growth of the overall food price index. Rising growth in prices of bread products, meat and fish had the opposite effect. Prices of fruit and oils continued to decline throughout Q3.

Administered price inflation remains high and picked up slightly further in September (see Chart III.1.4). This was due mainly to increasing electricity prices and to a lesser extent to rising gas and heat prices. Conversely, growth in administered prices was dampened until August by bus and train fare discounts for students and senior citizens introduced at the start of the 2018 school year. However, this effect has now subsided, so administered prices rose by 4.9% overall in September.

The decline in fuel prices gradually deepened in Q3 (see Chart III.1.4). This was due to a sharp year-on-year drop in koruna oil prices. The temporary fall in Saudi Arabian oil production in September did not affect fuel prices on the Czech market.

Growth in property prices remained brisk in Q2 despite a slight slowdown (see Chart III.1.5). Growth in transaction prices of housing fluctuated around 10%. Undersupply of apartments in cities remains a major factor behind the rapid growth in property prices overall. Amid still relatively favourable mortgage interest rates, low unemployment and rapid wage growth, this led to property price overvaluation. Growth in demand for loans has therefore been dampened by macroprudential measures adopted by the CNB over the past year. Growth in prices of new apartments in Prague slowed in Q2. Year-on-year growth in asking prices also decreased slightly further in Q3.

Growth in the CPIH index was 0.8 percentage point higher than inflation in Q2 (see Chart III.1.6). This was due to continued fast growth in property prices. Growth in the experimental CPIH, consisting of prices of both new and older property including land, stood at 3.6% in Q2 and so, like consumer inflation, remained at the level of the previous quarter.

III.1.3 Import prices and producer prices

Import prices have been declining since June due to a drop in prices of mineral fuels (see Chart III.1.7). The latter reflected a year-on-year decline in oil prices. The decline in prices of imported products additionally reflected lower industrial producer price inflation in the euro area. By contrast, prices of machinery and transport equipment made a slightly positive contribution again in August after a temporary downturn. The contributions of non-energy commodity prices and food prices remained insignificant.

Industrial producer price inflation stabilised close to 2% in Q3 after a previous significant drop (see Chart III.1.8). This drop had been due mainly to a decrease in the positive contribution of commodity and energy prices, which still remains significant. The contribution of electricity, gas and steam prices increased, while a fall in prices of coke and refined oil products, which responded to the year-on-year decline in oil prices, had the opposite effect. Prices in the food sector and in other manufacturing maintained stable positive contributions. Within the latter, prices of furniture, rubber and plastic products and machinery and equipment went up. Prices in the manufacture of basic metals were mostly unchanged.

Agricultural producer price inflation slowed sharply in Q3 (see Chart III.1.9). The observed fall in inflation was due mainly to crop product prices, which switched from their previous double-digit growth to a slight year-on-year decline. A particularly large decline was recorded by prices of cereals, which were affected by this year's favourable harvest in the Czech Republic and around the world. The fast growth in prices of fruit, vegetables and potatoes also slowed. Prices in livestock production continued rise apace. In particular, prices of slaughter pigs kept increasing, mainly due to a swine fever epidemic going on in a number of South-East Asian countries. Prices of milk and poultry also rose, while prices of other items fell.

Construction work prices continue to grow briskly despite a slight slowdown, while growth in market services prices is also buoyant (see Chart III.1.10). The persisting high growth in construction work prices reflects still strong demand for construction output and rising prices of materials and products used in the construction industry. Turning to market services for business, sizeable growth in prices was recorded for employment, insurance, reinsurance and pension financing services and also for advertising services and market research. On the other hand, prices of storage and support services in transport declined.

CHART III.1.8

INDUSTRIAL PRODUCER PRICES

Following a significant slowdown, industrial producer price inflation stayed around 2% during the summer
(annual percentage changes; contributions in percentage points)

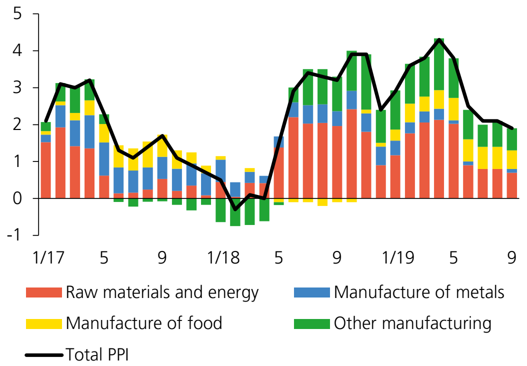


CHART III.1.9

AGRICULTURAL PRODUCER PRICES

Growth in crop prices dropped sharply, while livestock product prices continued to grow apace
(annual percentage changes)

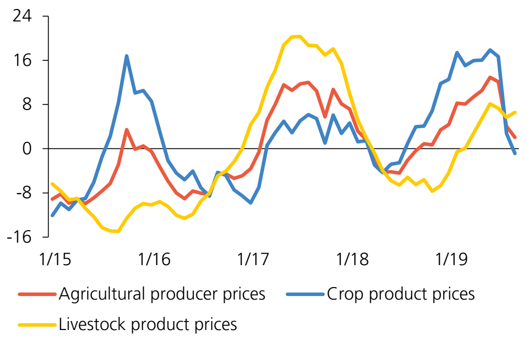
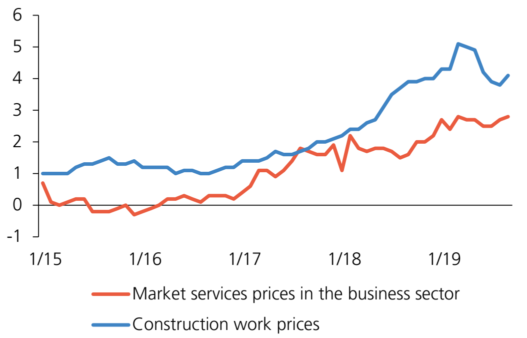


CHART III.1.10

MARKET SERVICES PRICES IN THE BUSINESS SECTOR AND CONSTRUCTION WORK PRICES

Construction work prices continued to grow briskly despite a slight slowdown, and prices of market services also maintained a solid rate of growth
(annual percentage changes)



III.2 ECONOMIC DEVELOPMENTS

The positive output gap in the Czech economy is gradually closing. The Czech economy continued to show solid growth in Q2 of this year, despite the weakening economic activity abroad. Domestic economic growth, meanwhile, was driven by government and household consumption and by a renewed positive contribution of net exports. In contrast, the contributions of fixed investment and change in inventories decreased. In Q2, the structure of gross value added formation remained largely unchanged, while the services sector, benefiting from continued growth in domestic demand, maintained its dominant contribution. The persistently subdued growth in industrial production conversely reflected the weakening of external demand. However, the previous brisk growth in the construction sector also slowed. Consumer and business sentiment, despite worsening slightly, remained relatively optimistic.

III.2.1 The cyclical position of the economy

The Czech economy is currently close to its potential output level. According to the small structural model, the gradual decrease in the positive output gap over the last two years (see Chart III.2.1) has been reflected in a slowdown in GDP growth below 3%. At the same time, employment growth has gradually weakened and the extremely strong inflationary effect of the labour market has started to ease somewhat. The output gap will gradually close further over the forecast horizon due to a continued tightening of domestic monetary conditions and a temporary slowdown of growth in external demand. An alternative estimate using the production function, which does not take inflation and the effect of monetary policy directly into account, conversely indicates that the economy has reached its potential and will remain near it at the forecast horizon.

After peaking last year, potential output growth has slowed to roughly 3%, where it remains at the forecast horizon (see Chart III.2.2). Potential output growth accelerated gradually in previous years after the repercussions of the economic crisis subsided and pronounced growth in domestic economic activity resumed amid muted inflation pressures. As regards the factors entering the production function, the labour market has improved structurally in recent years, with a rising participation rate causing faster growth in equilibrium employment. The buoyant growth in investment by non-financial corporations also continued until recently, although total fixed investment has been volatile due to uneven drawdown of EU funds. According to both methods, potential output growth has been slowing since the turn of 2019. This is due to weakening growth in investment activity, which, with a lag, is causing labour productivity growth to slow. Over the forecast horizon, investment growth will rise again as a result of an upswing in external demand. This will lead to a stabilisation of, and slight increase in, labour productivity growth and broadly stable growth in potential output. The future growth of the Czech economy will meanwhile be linked with developments in Germany. Box 1 discusses

CHART III.2.1

OUTPUT GAP

According to the small structural model, the positive output gap will continue to close gradually; according to the production function, it has already closed
(% of potential output)

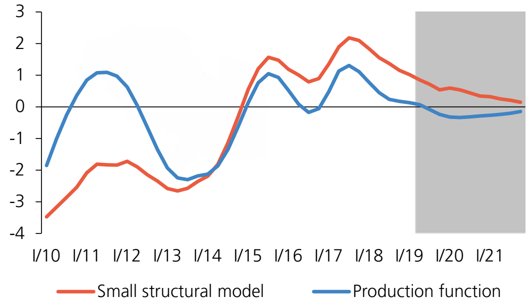


CHART III.2.2

POTENTIAL OUTPUT

Potential output growth peaked in 2018 and will slow slightly below 3% in the coming years
(annual percentage changes)

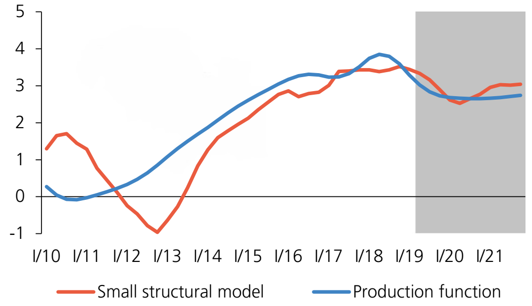
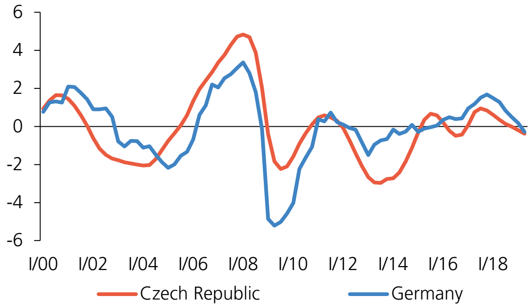


CHART 1 (BOX)

REAL GDP CYCLE

The Czech and German business cycles have long followed a similar course
(cyclical component growth in %)



how strongly the current slowdown in German output will affect the Czech Republic.

BOX 1 The interconnectedness of the Czech and German economies

One recent uncertainty is the economic slowdown in Germany and its transmission to the Czech economy. This box succinctly maps the interconnectedness of the two economies both from the perspective of cyclical alignment and by comparing the evolution of potential output in the two countries.

The Czech and German economies are aligned firstly through a similar course of the business cycle (see Chart 1).[32] This is also evidenced by the alignment of their industrial production cycles, which is based on the presence of Czech and German producers in the same international production and supply chains. From the sectoral perspective, this interconnection is particularly evident in the automotive industry, where a large proportion of imported intermediate goods (parts and components) come to Germany from Czech manufacturers. The cyclical alignment of the two economies is also evidenced by correlation of economic sentiment indicators, namely the business sector economic sentiment indicator and the manufacturing purchasing managers' index.

Despite the cyclical alignment, there is a marked difference in the evolution of potential output in the two economies (see Chart 2). This is linked with the real convergence of the Czech economy towards its more advanced neighbour, which reflects ongoing changes in the structure of the Czech economy. In Germany, by contrast, formation of gross value added is changing only slowly. In recent years, stronger growth contributions of Czech manufacturing and the tertiary sector – in particular market services, wholesale and retail trade, accommodation and food services, and transport – have been reflected in higher value added growth in the Czech Republic than in Germany.

Lower unit labour costs have long contributed significantly to the expansion of domestic industry and market services. Since 2016, however, unit labour costs have been rising faster in the Czech Republic than in Germany (see Chart 3), despite growth in physical labour productivity being higher in the former than the latter (see Chart 4). Other things being equal, this worsens the price competitiveness of Czech goods and services compared with German ones on international markets. From the perspective of the overall standing of Czech output, however, this has been more than offset by a relative increase in the

32 For the purposes of this box, the estimates of the cycle and trend real GDP growth were performed on the basis of a trend-cycle VAR model.

CHART 2 (BOX)

REAL GDP TREND GROWTH

With the exception of 2009–2013, the Czech economy has shown a clear convergence trend towards the economic level of Germany

(trend component growth in %)

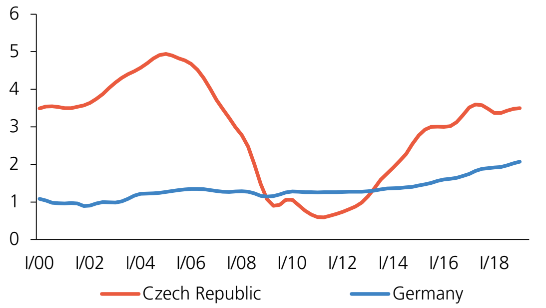


CHART 3 (BOX)

NOMINAL UNIT LABOUR COSTS

The faster wage growth in the Czech Republic than in Germany in recent years has, despite higher GDP growth, been reflected in a marked increase in Czech unit labour costs

(annual percentage changes; per hour worked)

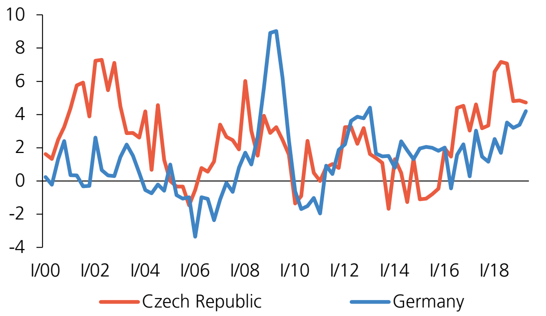


CHART 4 (BOX)

REAL LABOUR PRODUCTIVITY

Faster labour productivity growth in the Czech Republic mainly reflects higher domestic economic growth

(annual percentage changes; per hour worked)

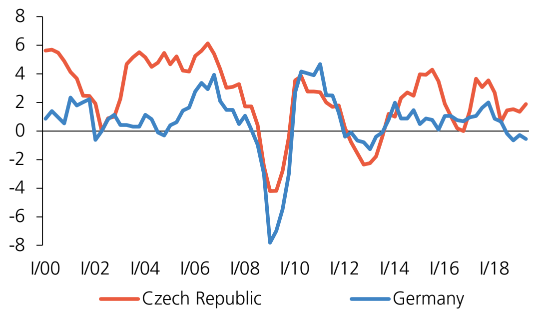


CHART III.2.3

GROSS DOMESTIC PRODUCT

In Q2, economic growth was driven mainly by government and household consumption, which was joined by a positive contribution of net exports

(annual percentage changes; contributions in percentage points; seasonally adjusted)

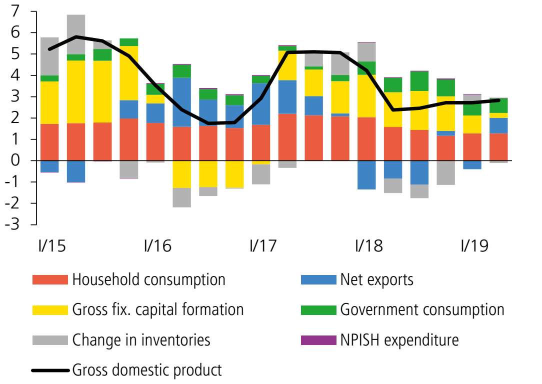
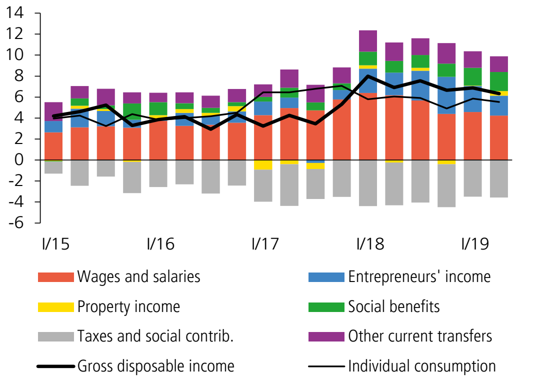


CHART III.2.4

DISPOSABLE INCOME

Rapidly increasing wages and salaries and entrepreneurs' income remained the drivers of the brisk growth in gross disposable income

(annual percentage changes; contributions in percentage points; current prices; seasonally unadjusted)



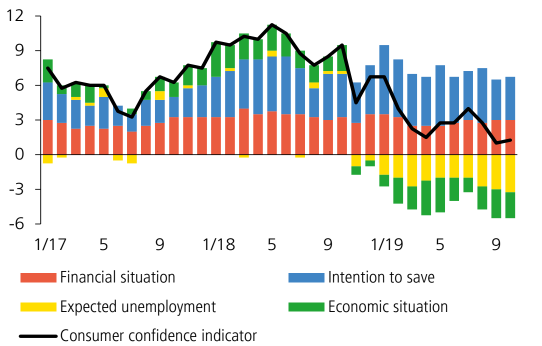
Note: Entrepreneurs' income comprises gross operating surplus and mixed income.

CHART III.2.5

CONSUMER CONFIDENCE BALANCE

Consumer confidence is still favourable, despite having dropped in the past year or so

(balance is difference in per cent between answers expressing improvement and deterioration in expected and ongoing tendencies)



Note: Expectations 12 months ahead.

quality and value added of Czech products compared with German ones. One example is the Czech automotive industry, where in recent years production has widened to include higher-priced, higher-value-added models (such as new SUV models). The trend in this sector has therefore contributed significantly to continued slight growth, or only a slight decrease, in industrial production last year and so far this year, despite the ongoing decline in the German manufacturing sector.

The above-mentioned factors promise continued relatively respectable growth in the performance of the Czech economy. This is based mainly on the assumption that potential output growth will remain faster in the Czech Republic than in Germany in the near future. From the perspective of value added, meanwhile, the stable domestic growth in recent quarters has been driven largely by services and other sectors (such as construction and wholesale and retail trade) oriented towards the strong Czech domestic demand.[33] The continued solid growth in demand stems from rapid growth in wages and other household income due to persisting labour market tightness. Expansionary domestic fiscal policy is having the same effect. The above-mentioned sectors are naturally less sensitive to swings in external demand than the export-focused manufacturing industry. Nevertheless, the cyclical alignment of the Czech and German economies can be expected to persist in the medium term[34] due to their strong business and ownership interconnectedness, especially in manufacturing.

III.2.2 The expenditure side of the economy

GDP growth stood at 2.8% in 2019 Q2 (see Chart III.2.3). GDP growth has thus not changed very much in recent quarters and remains slightly below the estimated pace of growth of potential output. In Q2, however, visible changes occurred in the growth structure. The contributions of gross fixed capital formation and change in inventories decreased markedly. Due to the import intensity of investment, this was reflected in a subsiding of the negative contribution of net exports, which occurred despite a slight acceleration of overall export growth. The continued solid growth in economic activity was also supported by faster growth in government consumption. The contribution of household consumption remained high.

Household consumption remains the primary driver of GDP growth due to strong growth of disposable income. In terms of material structure, households continue to spend mainly on short-term consumption and services. However, household consumption growth remained below gross disposable income growth in Q2 (see Chart III.2.4), so the saving rate continued to rise slightly in year-on-year comparison.

33 See section III.2.

34 Although the German economy is stagnating, it is not expected to slip into a deeper and longer-lasting recession.

After a temporary improvement in July, consumer confidence started to gradually worsen again, mainly due to increased concerns about the overall economic situation and rising unemployment (see Chart III.2.5). However, households still view their financial situation favourably. This is also evidenced by strong growth in retail sales, which continued into the beginning of Q3.

Real government consumption growth accelerated markedly above 3%. The increased growth in nominal government consumption in Q2 reflected both higher growth in non-wage consumption expenditure and higher growth in wages of government sector employees. The latter, however, was also reflected in increased growth in the government consumption deflator, which partially reduced the real growth in government consumption.

Investment activity fell below 1% in Q2 (see Chart III.2.6). This sizeable fall, reflecting the worsening economic situation abroad and deteriorating sentiment, was caused predominantly by a drop in the investment activity of non-financial corporations, which was broadly based across sectors. A decrease in the positive contributions of investment by government, households and financial institutions also contributed partially to the fall. Despite the observed slowdown, the growth in government investment can still be assessed as brisk both at the central level and at the level of local government, where EU funds continue to be drawn down.

A look at the material structure of fixed capital formation reveals, among other things, continued growth in housing investment. This occurred in a context of rapid wage growth and continued stimulation of the demand side by lowering mortgage interest rates. However, signs of a slowdown in investment activity in this segment are apparent from the supply of new residential properties, as growth in the number of apartment starts and completions has weakened.

The contribution of additions to inventories to GDP growth was roughly neutral. Compared with the previous quarter, this contribution decreased significantly, probably reflecting the growing concerns of firms about slowing external demand.

The contribution of net exports to GDP growth turned significantly positive in Q2. This was due to two factors. First, growth in exports of goods and services accelerated. In terms of product structure, this was driven mainly by sales of goods from the automotive and electrical engineering industries. Second, import activity weakened. This was related to a decline in import-intensive private investment and a decrease in additions to inventories. The combination of these factors led to a year-on-year increase in net exports (see Chart III.2.7).

III.2.3 The output side of the economy

Growth in gross value added accelerated slightly in Q2, but its structure remained virtually unchanged (see Chart III.2.8). The

CHART III.2.6

INVESTMENT BY SECTOR

The marked slowdown in fixed investment growth was linked with an increase in the negative contribution of non-financial corporations, while in all other sectors investment continued to grow

(annual percentage changes; contributions in percentage points; constant prices; seasonally adjusted)

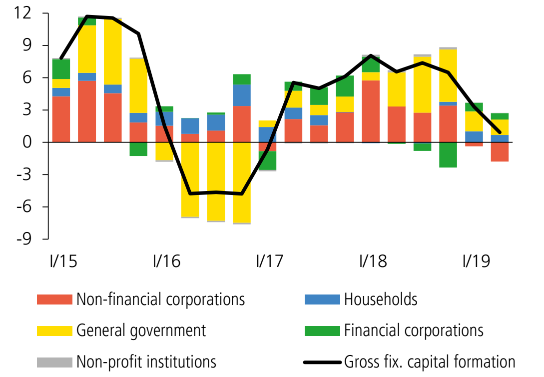


CHART III.2.7

EXPORTS AND IMPORTS

An acceleration in exports and a simultaneous slowdown in imports led to a year-on-year increase in net exports

(year on year changes in per cent and CZK billions; constant prices; seasonally adjusted)

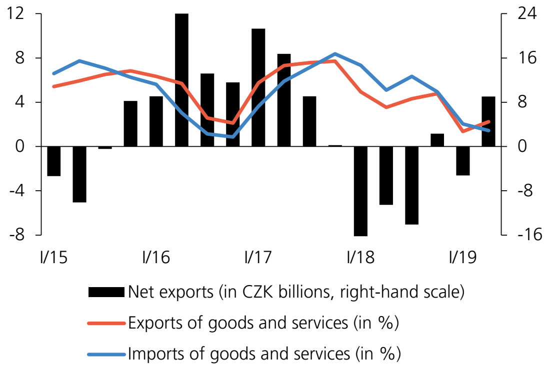
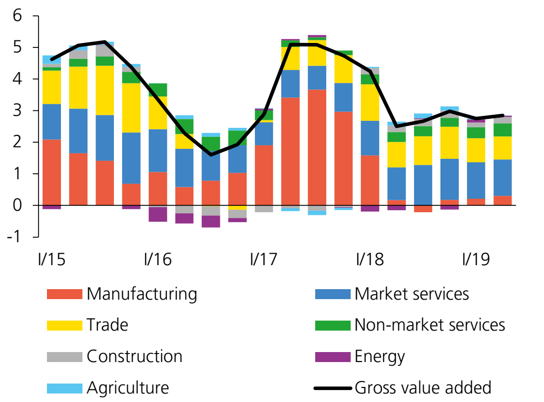


CHART III.2.8

CONTRIBUTIONS OF SECTORS OF ACTIVITY TO GVA GROWTH

The sectoral breakdown of growth in gross value added did not show any significant change

(annual percentage changes; contributions in percentage points; constant prices)



Note: Trade also includes hotels, restaurants and transport. Energy also includes mining and quarrying.

CHART III.2.9

INDUSTRIAL PRODUCTION AND CONSTRUCTION OUTPUT

Industrial production growth has been subdued in recent months; construction output decreased slightly in August
(annual percentage changes)

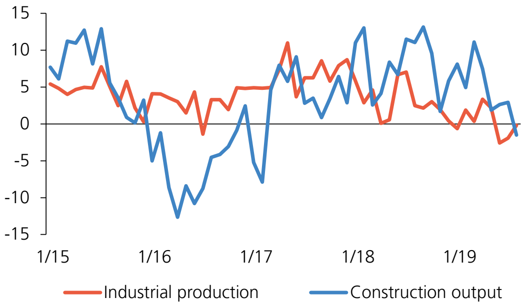


CHART III.2.10

BARRIERS TO GROWTH IN INDUSTRY

Besides insufficient demand, growth in industrial production is also still being slowed by labour shortages
(percentages)

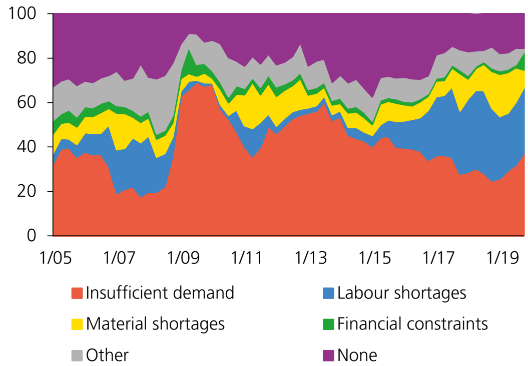
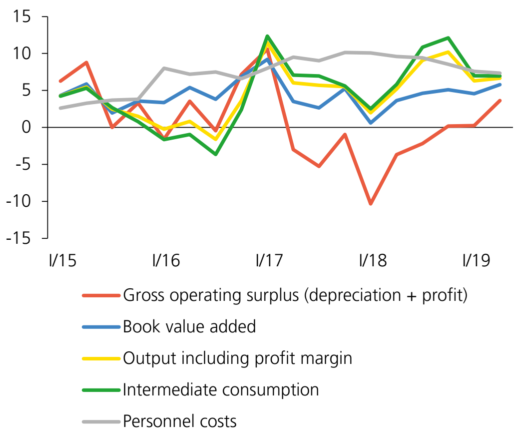


CHART III.2.11

KEY FINANCIAL INDICATORS

Growth in gross operating surplus picked up, amid a further drop in personnel cost growth and an increase in book value added growth
(annual percentage changes)



tertiary sector continues to be the main driver of GVA growth. By contrast, the contribution of manufacturing remained low. This is related to the fact that export-oriented firms are being negatively affected by slowing growth in external demand. In addition, however, many (probably domestic demand-oriented) manufacturing firms are still facing high capacity utilisation in an environment of persisting labour market tightness as they increase production. Construction and non-market services again made positive contributions to GVA growth.

Continued sales growth in market services continued to drive the information and communication sectors. A transition of the transport and storage sectors into a slight decline had the opposite effect.

Industrial production has been falling since June (see Chart III.2.9). This is due mainly to weak growth in external demand, i.e. the downswing in industrial production in the Czech Republic's main trading partner countries. The manufacturing industry saw a slight increase in production, while the other sectors declined. The July and August data on production and new orders indicate a continued subdued trend.

Insufficient demand, primarily reflecting developments abroad, was the main barrier to growth in production (see Chart III.2.10). Additionally, growth in production is being constrained in the domestic environment by persisting labour shortages linked with the tight labour market. A sharp deterioration of the perceived financial situation is also having a negative effect. Despite this, production capacity utilisation remains high at slightly below 85%.

The previously brisk growth in production also weakened in the construction sector (see Chart III.2.9). In Q2, this mainly reflected slowing growth in building construction. By contrast, civil engineering continued to grow at a solid pace, the favourable trend being supported by government investment co-financed from EU funds.

Despite a slight deterioration in the second half of the year, business sentiment remains relatively favourable. Sentiment in the construction sector saw a slight decline but remains high overall. In the services sector, by contrast, concerns about the future economic situation began to emerge. Such concerns have been apparent for some time now in industry, where, however, the mood has not worsened in recent months.

Growth in gross operating surplus picked up in Q2, reaching 3.6% (see Chart III.2.11). The improvement in the performance of non-financial corporations was supported not only by a continuing slowdown in growth in personnel costs, but also by faster growth in book value added resulting from flat growth in intermediate consumption and a slight acceleration in output growth. Profit was also positively affected by slower growth in input prices due to a decrease in import price growth.

III.3 THE LABOUR MARKET

A tight situation persists on the labour market. However, the latest data already indicate a slight decline from the peak of the current phase of the business cycle. Growth in employment slowed markedly in Q2, while the unemployment rate stayed close to its historical low. The labour force is not growing sufficiently to meet demand for labour, as indicated by a still high number of vacancies. This situation, coupled with growth in the minimum wage, is exerting continued strong upward pressure on wages. Despite slowing slightly in Q2, wage growth remained above 7% on average. This was due to a modest slowdown in wage growth in both market and non-market sectors. By contrast, growth in whole-economy labour productivity increased slightly, but still lags behind average real wage growth.

III.3.1 Employment and unemployment

The continued solid growth in economic activity is still maintaining high tightness in the labour market, which, however, recently peaked. This is confirmed by the LUCI indicator, which, starting with this Report, has been not only enriched with new data series, but also enhanced methodologically (see Box 2 for details). Amid persisting labour shortages, employment growth fell sharply to 0.1% in Q2 in an environment of weakening external demand growth. The only slight year-on-year growth was due mainly to a rise in the number of employees, while the dynamics of the number of the self-employed switched to a year-on-year decline. In terms of sector structure, according to the results of the Labour Force Survey (LFS), the growth in employment was driven mainly by services[35] and to a lesser extent by industry. Employment in agriculture and construction conversely dropped (see Chart III.3.1).[36] The potential labour force reserve, consisting of persons who are not actively seeking a job[37] but are willing to work, fell further at the start of this year. This unused labour force shrank slightly year on year to about 105,000 persons in Q2 and was broadly comparable with the number of unemployed persons according to the LFS.

The slowdown in the growth of the converted number of employees reflected a decrease in the growth of the number of employees. This was partly offset by an increase in average hours worked (see Chart III.3.2). From the sectoral point of view, the total growth in the converted number of employees (of 0.5%) was due solely to the services sector. Compared with Q1, growth in the number of employees in the services sector slowed, but on the other hand the

35 In market services, transport and storage, accommodation and administration contributed the most, whereas in non-market services health care made the largest contribution.
36 However, this sector structure (according to the LFS) and the total extent of the slowdown in employment growth do not correspond to the national accounts statistics or to the registered number of employees from the CZSO wage statistics.
37 These persons are identified not as unemployed but as economically inactive under the ILO methodology.

CHART III.3.1

EMPLOYMENT BREAKDOWN BY SECTOR OF ACTIVITY

Employment growth slowed significantly in Q2
(contributions in percentage points to year-on-year change; selected sectors of activity; source: LFS)

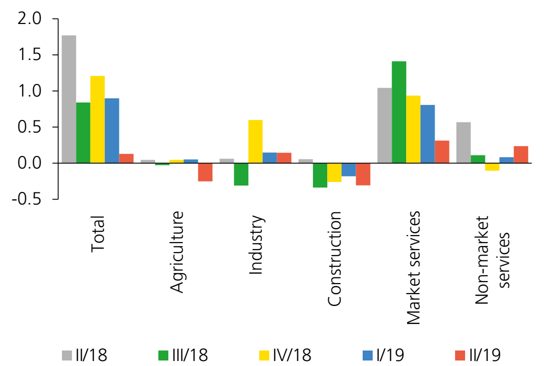


CHART III.3.2

NUMBER OF EMPLOYEES (FULL-TIME EQUIVALENT)

The falling growth in the converted number of employees reflected slowing growth in the number of employees, which, however, was partially offset by an increase in average hours worked
(annual percentage changes; contributions in percentage points)

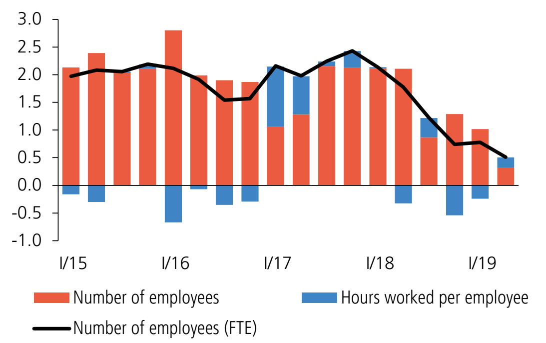


CHART III.3.3

UNEMPLOYMENT INDICATORS

The general unemployment rate and the share of unemployed persons both remained at historical lows
(percentages; seasonally adjusted; source: MLSA, CZSO)

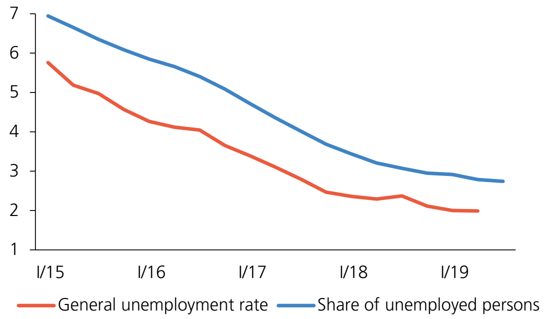


CHART III.3.4

BEVERIDGE CURVE

The number of vacancies is much higher than the number of registered unemployed persons, amid high core inflation
(numbers in thousands; seasonally adjusted; annual percentage changes for core inflation; source: MLSA, CZSO)

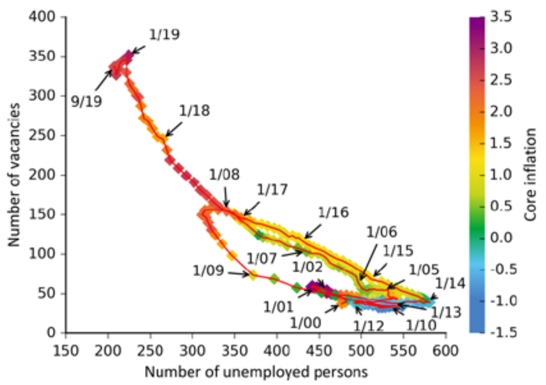
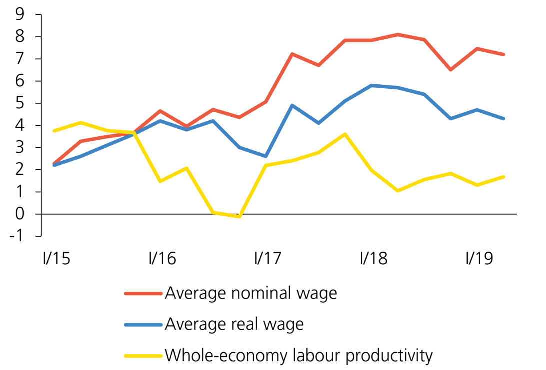


CHART III.3.5

AVERAGE WAGE AND WHOLE-ECONOMY LABOUR PRODUCTIVITY

Labour productivity growth is still lagging well behind wage growth
(annual percentage changes)



decline in average hours worked halted. As a result, the growth in the converted number of employees in services remained roughly at the same level as at the start of this year. The growth in the converted number of employees was fostered mainly by wholesale and retail trade in market services and by education in non-market services. In the highest-weight industry, by contrast, the converted number of employees decreased (by 0.5%) due to a decrease in average hours worked.

The unemployment rate has stabilised so far this year (see Chart III.3.3). The general unemployment rate is still the lowest in the EU. The continuing solid economic growth fostered a further year-on-year decrease in the number of long-term unemployed, which accounted for about one-fifth of the persisting slight decline in the total number of unemployed persons in Q2. The available monthly data for July and August indicate only a slight rise in the general unemployment rate for the summer period. The rate of economic activity of the working-age population[38] remains near a historical high (almost 77% in August). According to the Labour Office, the seasonally adjusted share of unemployed persons stabilised at 2.7% in September.

The persisting strong demand for labour is still illustrated by a high number of vacancies. The number of vacancies increased again during Q3 after a short hiatus in the first half of this year. The highest number of vacancies offered via labour offices is registered in manufacturing. There is also strong demand for new employees in construction and administrative and support service activities. Around two-thirds of vacancies were for employees with basic education and another 13% were for employees with vocational training with a school-leaving certificate. Viewed in terms of the Beveridge curve (see Chart III.3.4), the number of registered job applicants per vacancy is still close to an all-time low. In these conditions, wages are continuing to rise apace. This is reflected in high core inflation, which is currently higher than it was at the peak of the previous cycle in 2008.

III.3.2 Wages and productivity

Despite slowing slightly, year-on-year wage growth remains high in both market and non-market sectors. Average nominal wage growth (7.2%) reflects an increase in the minimum wage from CZK 12,200 to CZK 13,350 in January 2019 in addition to persisting tightness on the labour market. Average wage growth in market sectors fell slightly to 6.9%, mainly reflecting developments in industry and wholesale and retail trade. By contrast, wage growth in other market sectors accelerated. As in the previous quarter, the highest growth was recorded by administration (8.8%) and health care (8.7%). Average wage growth in non-market sectors slowed only slightly to 8.6% in the same period. The growth continued to be driven chiefly by education, where

38 This concerns the 15–64 age group.

wage growth increased further (to 11.4%). By contrast, a slowdown was recorded in public administration (6.7%) and culture (7.4%) compared with the previous quarter. The median wage rose by 6.9% in 2019 Q2 and thus lagged slightly behind the average wage.

Labour productivity growth picked up slightly due to subdued employment growth amid continued economic growth. Whole-economy labour productivity rose by 1.7% in Q2 and thus still lagged well behind growth in the average real wage (4.3%; see Chart III.3.5). Labour productivity growth continued to be driven mainly by market services and construction. Productivity growth in non-market services increased slightly but remained muted, while productivity in industry was roughly flat (see Chart III.3.6).

Nominal unit labour costs continued to grow strongly due to fast-growing wages combined with relatively subdued productivity growth (see Chart III.3.7). Growth in unit labour costs slowed only marginally to 4.9% in Q2. This reflected almost unchanged growth in nominal unit labour costs across the main sectors of the economy. The strongest growth in unit costs was thus recorded in non-market services (more than 7.5%) and industry (5.4%). In construction and market services, by contrast, the growth was more moderate due to higher labour productivity growth in these sectors.

BOX 2 The extended LUCI

The Labour Utilisation Composite Index – LUCI – was introduced two years ago and has now been extended. The labour market plays a significant role in the evolution of domestic inflation pressures, so it is important to know its cyclical position. LUCI makes it possible to aggregate a large number of time series in a transparent manner and hence provides a composite evaluation of labour market tightness. This box presents an extension of the original LUCI concept[39] and outlines its use in short-term forecasting.

Several major improvements have been made as part of the LUCI extension. First, the number of variables included has been increased. Second, the cyclical components of the time series are now filtered in a model-consistent manner,[40] unlike in the previous approach, where they were filtered outside the model. Third, it is now possible to work with time series observed at various (monthly and quarterly) frequencies, which allows for more frequent updates. The lag between LUCI and

39 The original LUCI concept was first presented in Inflation Report IV/2017.
40 Previously, cyclical components were isolated using a univariate statistical filter and the principal components method was applied to them. Now the model is formulated in stock form, which allows us to estimate cyclical components using the Kalman filter. This increases the statistical significance of the estimates, as the cyclical components of all series are filtered simultaneously.

CHART III.3.6

PRODUCTIVITY BY SECTOR OF ACTIVITY

Labour productivity growth was driven mainly by market services and construction; in industry, by contrast, productivity was broadly flat
(annual percentage changes)

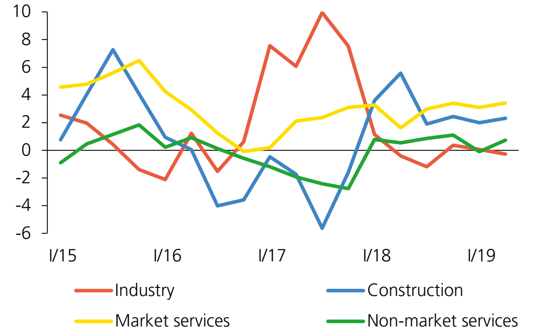


CHART III.3.7

UNIT LABOUR COSTS

The strong growth in nominal unit labour costs reflected high wage growth accompanied by only moderate growth in labour productivity
(annual percentage changes; contributions in percentage points)

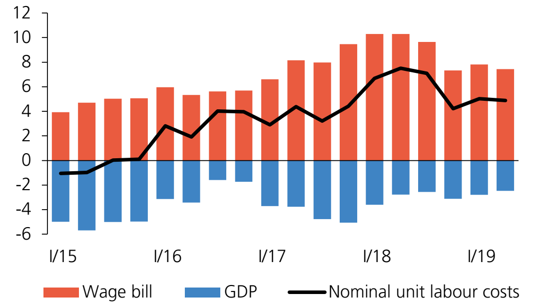


CHART 1 (BOX)

THE ORIGINAL AND NEW DEFINITIONS OF LUCI

The original and new LUCIs assess the labour market cycle very similarly; labour market tightness recently peaked
(index; vertical axis shows standard deviations)

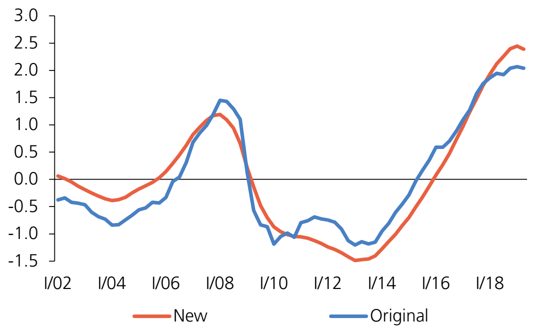
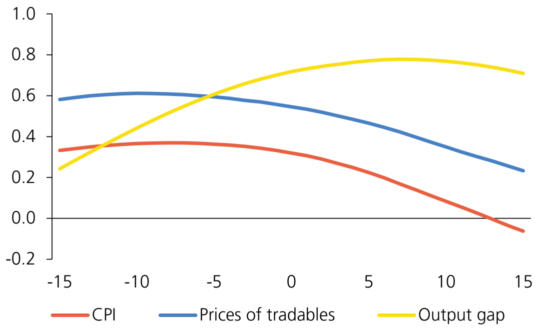


CHART 2 (BOX)

CORRELATION BETWEEN LUCI AND SELECTED VARIABLES

LUCI precedes non-tradables inflation by approximately nine months; by contrast, it lags behind the output gap
(horizontal axis shows lags in months)

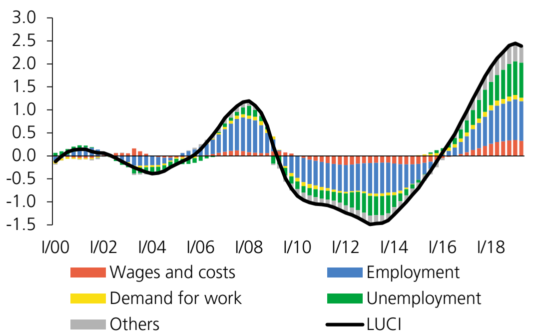


Note: Negative lag values mean that the LUCI precedes the given macroeconomic variable; positive values mean that it lags behind it.

CHART 3 (BOX)

LUCI AND ITS BASIC DECOMPOSITION

The current LUCI levels are still very high from the historical perspective, with all components indicating exceptional labour market tightness
(index; vertical axis shows standard deviations)



individual variables can meanwhile be modelled, due to the use of a dynamic factor model instead of the previous static one. This makes it possible to draw up a short-term outlook for the index. The first component of the dynamic factor model, which corresponds to LUCI,[41] explains about 64% of the variability of the cyclical components of the time series included.

The interpretation of historical labour market developments is very similar to that of the original LUCI (see Chart 1). Both the peaks and the troughs of the previous cycles are identified similarly by the two approaches. Their assessment of the currently still exceptionally high labour market tightness is also more or less the same.

The new LUCI can be used to predict selected labour market and other variables. The ability to predict labour market variables is aided both by the model structure in which LUCI is estimated and by the use of high-frequency (monthly) data. The latter makes the forecast of the overall LUCI – and hence also the subsequent decomposition into individual variables – more accurate. As well as for forecasting, LUCI can be used to evaluate the consistency of the various different labour market time series. In this way, one can, for example, resolve the issue of whether wage growth was consistent with the evolution of other labour market variables. Besides labour market variables, LUCI can be used to prepare a short-term outlook for non-tradables inflation, which LUCI precedes by about nine months (see Chart 2). By contrast, LUCI lags behind the output gap by about two quarters.

According to LUCI, the current labour market tightness is close to a historical high (see Chart 3). This is due mainly to series linked to unemployment and, to a lesser extent, to wages and costs and other factors, amid roughly equal contributions of the variables aggregated into employment and demand for labour. The contribution of wages and costs is (as in the case of unemployment) at a historical high and is thus consistent with the significant demand pressures currently observed in the domestic economy. The only gradually decreasing labour market tightness in the coming quarters will probably lead to continued brisk wage growth next year.

41 The resulting index is subsequently standardised. This means that for each estimate the long-term mean is zero or, say, a normal labour market situation. Positive values signal higher labour market tightness and negative values lower labour market tightness than the long-term average. The time series are merged into several representative categories for clarity of presentation.

III.4 FINANCIAL AND MONETARY DEVELOPMENTS

Money market rates were virtually unchanged in the past quarter. By contrast, rates with longer maturities were quite turbulent due to foreign factors. In mid-October, however, they returned to roughly the late-June level. Interest rates on loans for house purchase went down. Rates on loans to non-financial corporations have been volatile so far this year but were essentially unchanged overall. Growth in loans to the private sector slowed further year on year in Q3 in both the non-financial corporations sector and the household sector. New loans for house purchase remain lower in year-on-year terms due mainly to the high volumes of loans provided last year before credit limits took effect. The M3 growth rate was essentially unchanged. The average exchange rate of the koruna stayed at CZK 25.7 to the euro in Q3.

III.4.1 Monetary policy and interest rates

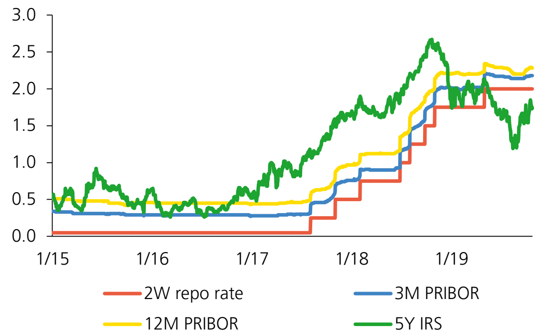
The CNB left its monetary policy rates unchanged at the August, September and November meetings (see Chart III.4.1). The two-week repo rate has thus been at 2%, the Lombard rate at 3% and the discount rate at 1% since early May. The 3M PRIBOR stayed just under 2.2% in Q3. The money market premium, as measured by the spread between the 3M PRIBOR and the 2W repo rate, remained just below 0.2 percentage point. FRA rates fluctuated. In early August, they moved lower, especially at longer maturities. In the following weeks, however, they corrected back fully, reflecting changing expectations regarding the CNB's future monetary policy rates. The end-October outlook for FRA rates implied broad stability of the 3M PRIBOR over the one-year horizon.

Domestic interest rates with longer maturities fluctuated in Q3. They are currently at roughly the end-June level (see Chart III.4.1). Published macroeconomic data (GDP growth, retail sales, inflation) signalled that the domestic economy was resisting the economic slowdown abroad. The drop in rates with longer maturities in early August was due mainly to developments abroad, where US-Chinese trade disputes escalated, the risk of a no-deal Brexit persisted and the perceived probability of a global recession increased. This was accompanied by a drop in prices of oil and some other commodities. As a result, expectations of an easing of central banks' monetary conditions strengthened. Some central banks (those in the USA, New Zealand and the euro area, for example) have already lowered their rates.[42] The markets responded very sensitively to new information. This was often reflected in financial markets being rather turbulent. In September and October, however, both domestic and foreign interest rates returned roughly to their late-June levels. The deviations in either direction did not exceed 0.2 percentage point at individual maturities. The fluctuations in domestic government bond yields were similar. The slope of the IRS yield curve remained negative. The domestic government bond curve flattened

CHART III.4.1

INTEREST RATES

Money market rates remained stable, while rates with longer maturities returned to their late-June levels after an initial fall
(percentages)



42 The Norwegian central bank, by contrast, has raised interest rates.

CHART III.4.2

GOVERNMENT BOND YIELD CURVE

The yield curve flattened out further; its level has moved quite significantly over the past year
(percentages)

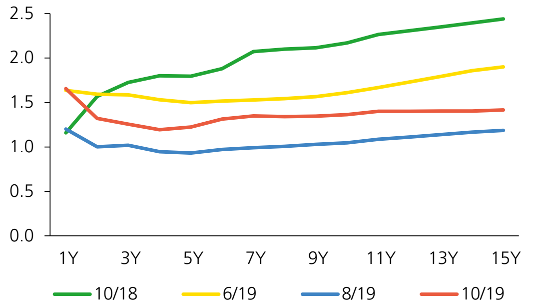


TABLE III.4.1

CLIENT INTEREST RATES ON LOANS AND DEPOSITS

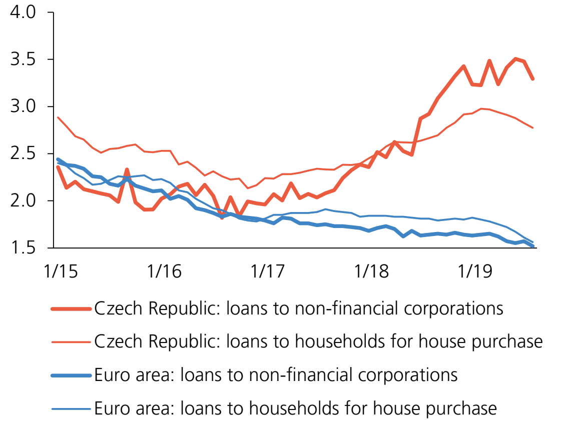
Interest rates on loans for house purchase have been falling since February this year; those on corporate loans are essentially unchanged
(interest rate in percentages; change in percentage points)

	Interest rate 8/19	Change since 2/19	8/18	11/16
HOUSEHOLDS				
Mortgages	2.6	-0.2	0.1	0.7
Mortgages with rate fixation 1–5 years	2.7	-0.1	0.2	0.7
Mortgages with rate fixation 5–10 years	2.5	-0.3	0.1	0.8
New mortgages	2.6	-0.4	0.1	0.8
Refinanced mortgages	2.6	-0.2	0.1	0.8
Consumer credit	8.5	0.0	0.0	-1.7
Deposits				
Overnight deposits	0.2	0.1	0.1	0.1
New deposits with agreed maturity	1.6	0.1	0.5	0.5
NON-FINANCIAL CORPORATIONS				
Total new loans	2.9	0.0	0.1	1.1
Small loans (up to CZK 30 million)	3.8	0.0	0.6	1.4
Large loans (over CZK 30 million)	2.8	0.0	0.1	1.0
Total outstanding loans	3.8	0.1	0.7	1.3

CHART III.4.3

CLIENT INTEREST RATES IN THE CZECH REPUBLIC AND THE EURO AREA

Client interest rates in the Czech Republic are markedly higher than those in the euro area
(total credit costs as expressed by cost of borrowing; percentages)



out further. Its level has moved quite significantly in both directions over the past year (see Chart III.4.2).

The Ministry of Finance continued its issuing activity on the primary government bond market, focusing on longer maturities. The Ministry took advantage of the above-mentioned shape of the yield curve and issued bonds mostly with maturities of seven and 14 years in the recent period. Government bonds totalling CZK 203 billion have been issued since the start of the year.[43] By contrast, the volume of short-term T-bills remained at almost zero. According to Ministry of Finance statistics, non-residents' total government bond holdings have been fluctuating around CZK 600 billion in recent months, accounting for 42% of the total. Many foreign investors are thus continuing to take advantage of the higher yield on koruna investments than on euro assets, for example. The Ministry of Finance successfully completed issues of euro-denominated bonds with a maturity of around two years. Bonds totalling EUR 1 billion were issued in five tranches, all of them with a slightly negative yield. In addition, the sale of state saving bonds ("Republic Bonds") to the public continued.

Interest rates on loans to households for house purchase have been falling since February. In an environment of strong competition, the interest rate on loans for house purchase decreased, due mainly to a decline in long-term financial market interest rates. The rate on new mortgages was 2.6% in August and that on genuinely new mortgages fell by 0.4 percentage point (see Table III.4.1.). The ten-year government bond yield, on which the mortgage rate largely depends, declined markedly overall in Q3 and is fluctuating close to 1%. Due to its only gradual transmission to mortgage rates, the spread between the mortgage rate and the government bond yield increased. According to the latest Fincentrum Hypoindex data, the mortgage rate of selected banks fell further in September and October.

Rates on corporate loans have fluctuated so far this year but are unchanged on average. Following last year's rapid growth, the rate on corporate koruna loans has been fluctuating around 2.9% this year (see Table III.4.1). The total funding costs of corporations, as expressed by the cost of borrowing, were 1.8 percentage points higher than in the euro area in August (see Chart III.4.3). Ex ante real interest rates on loans to corporations and loans for house purchase are below 1%.

Deposit rates are almost unchanged and are negative in real terms. The interest rate on the stock of deposits remained at 0.4% in August for both non-financial corporations and households. The rate on new household deposits with agreed maturity of up to two years rose

43 The Funding and Debt Management Strategy for 2019 had originally assumed issues on the domestic market of at least CZK 150 billion. In the June update, the figure was increased to CZK 220 billion.

slightly to 1.6% in May, while that on overnight deposits, which account for four-fifths of total household deposits, stayed at 0.2%. The rate on new deposits of corporations has increased a little more than that on new household deposits over the past year and is currently slightly higher than the household deposit rate (0.5% for non-financial corporations and 0.2% for households). Banks' interest margin, as expressed by the spread between rates on new loans and deposits, decreased slightly following a previous increase and is close to the average recorded since 2004.

III.4.2 The exchange rate

The koruna has stayed between CZK 25.5 and CZK 26 to the euro since May 2018 (see Chart III.4.4). In Q3, the koruna initially depreciated slightly for some time, from around CZK 25.5 to CZK 25.9 to the euro, and then started to appreciate modestly at the end of September. This trend continued into October. In the second half of the month, the koruna firmed to around CZK 25.6 to the euro. As a result, the average koruna exchange rate stayed at CZK 25.7 to the euro in Q3.

The koruna depreciated against the dollar in both quarter-on-quarter and year-on-year terms (see Chart III.4.4). During Q3, it depreciated from around CZK 22.6 to CZK 23.6 to the dollar. The average exchange rate was thus around 1.3% weaker than in Q2. In year-on-year terms, the koruna lost 4.7% against the dollar. This was due to continued appreciation of the dollar on world markets, related to growth in risks to the global economy going forward. At the end of October, the koruna-dollar rate was just above CZK 23.

Financial market expectations regarding future global economic developments led to assets being transferred to safe havens. Gold, the US dollar, the Japanese yen and the Swiss franc benefited from this process. The ECB's monetary policy easing caused the euro to depreciate. The attractiveness of the dollar decreased somewhat in October due to speculation on a further interest rate cut by the Fed and worsening data on the US economy. Sterling initially depreciated because of an increased risk of a hard Brexit. However, the likelihood of a disorderly Brexit started to fall at the end of September. This allowed sterling to recover and the euro – and probably also the koruna and other regional currencies – to strengthen. The Czech koruna is simultaneously being supported by relatively high domestic interest rates, as can be seen from a comparison of the koruna with other Central European currencies. During Q3, the koruna strengthened by 2% (3% year on year) against the forint and rather more moderately – by 1.5% (1.9% year on year) – against the Polish zloty. Moody's upgrade of the Czech government's credit rating did not affect the koruna noticeably.

The short-term interest rate differential of the koruna vis-à-vis the dollar and the euro increased in Q3. The differential between three-month koruna and dollar rates switched from a negative level of around -0.15 percentage point in late Q2/early Q3 to 0.2 percentage point in the first half of October. The positive differential between three-

CHART III.4.4

CZK/EUR AND CZK/USD EXCHANGE RATES

The koruna remains at around CZK 25.7 to the euro; it depreciated slightly against the dollar in Q3

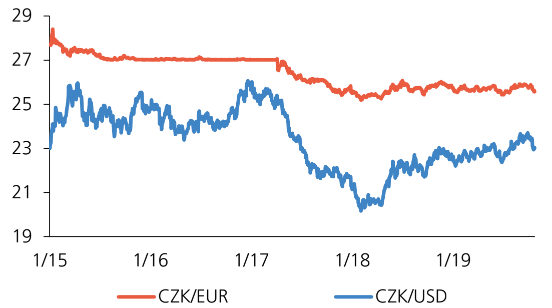


CHART III.4.5

INTEREST RATE DIFFERENTIALS

The interest rate differential of the koruna vis-à-vis the euro widened further, due in part to a cut in the ECB's rates, while the differential vis-à-vis the dollar switched from negative to positive
(percentage points)

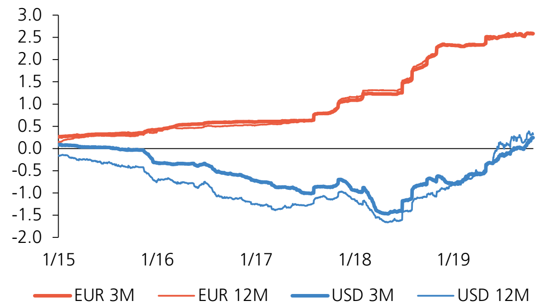
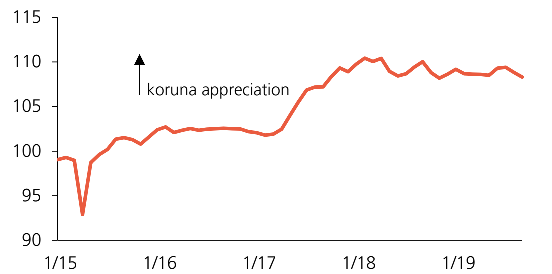


CHART III.4.6

NOMINAL EFFECTIVE KORUNA EXCHANGE RATE

The koruna weakened slightly in effective terms in Q3
(basic index; 2015 = 100)



Note: In the calculation of the nominal effective exchange rate of the koruna (NEER), the euro has the largest share in the basket (64.3%). The renminbi, the zloty, the pound, the forint, the dollar and the rouble have smaller, but still significant shares (2.6%–7.8%). The shares of the remaining six currencies range between 0.9% and 1.4%. The calculation method (as applied by the IMF) includes all SITC categories.

CHART III.4.7

LOANS TO THE PRIVATE NON-FINANCIAL SECTOR

Growth in loans to non-financial corporations has decreased significantly this year and growth in housing loans is also slowing, while consumer credit growth is little changed
(annual percentage rates of growth)

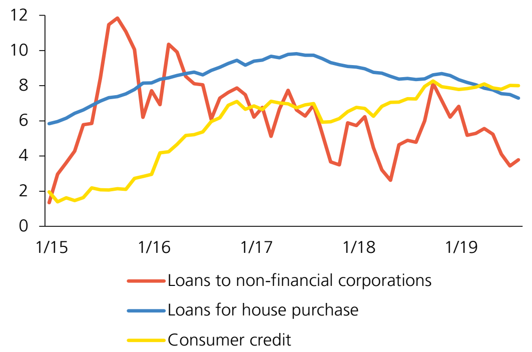
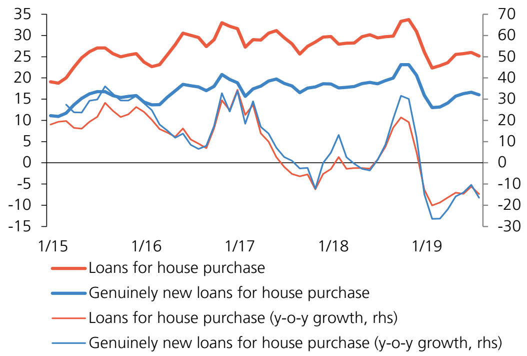


CHART III.4.8

NEW LOANS TO HOUSEHOLDS FOR HOUSE PURCHASE

The volumes of new loans for house purchase declined year on year
(monthly volumes in CZK billions; annual percentage changes)

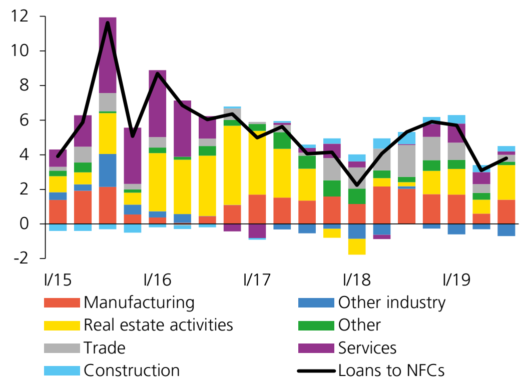


Note: The data are smoothed using three-month moving averages. Total new loans for house purchase comprise genuinely new loans (i.e. loans newly provided to the economy), refinanced loans and other renegotiated loans.

CHART III.4.9

LOANS TO NON-FINANCIAL CORPORATIONS BY SECTOR OF ACTIVITY

The contributions of loans in manufacturing and wholesale and retail trade have declined over the past year, while growth in real estate loans has accelerated
(annual percentage changes; contributions in percentage points; end-of-quarter data; most recent data are for August 2019)



Note: Other comprises agriculture and transport.

month koruna and euro rates increased to almost 2.6 percentage points in Q3.

The year-on-year depreciation of the nominal effective exchange rate of the koruna deepened slightly to 1.5% in September (see Chart III.4.6). The koruna depreciated more markedly against the Russian rouble (by almost 12%), the Japanese yen (by 11.5%), the US dollar (by 7.1%) and the Swiss franc (by 4.7%).

III.4.3 Credit

Growth in loans to the private non-financial sector slowed further (see Chart III.4.7). According to the October Bank Lending Survey, corporations' demand for loans increased slightly in Q3 following a decline in H1. Banks' credit standards were unchanged. However, perceptions of increased risks persist as regards the outlook for some sectors. Standards applied to loans to households tightened further due to the gradual implementation of the CNB's macroprudential measures.

Growth in loans to households for house purchase is gradually slowing. The annual rate of growth in loans for house purchase fell to 7.3% in August. The volumes of new loans continue to decline year on year, due mainly to strong demand recorded last year in connection with frontloading before the DTI and DSTI limits took effect (see Chart III.4.8). According to the Bank Lending Survey, demand for loans increased due to a drop in mortgage rates in part of the market. Banks expect demand to follow a similar pattern in Q4. In addition to the tighter credit limits, however, high residential property prices are dampening demand for loans. The ratio of total household indebtedness to gross disposable income remains close to an all-time high of 62%.

Year-on-year growth in loans to non-financial corporations has slowed significantly this year. The growth in corporate loans was 3.8% in August. The observed slowdown was quite broad-based but was strongest in industry. The decrease in growth in that sector was driven by manufacturing. This was linked with worsening sentiment and a downswing in other industrial sectors. Growth in loans in manufacturing has increased slightly in recent months and growth in real estate loans has accelerated (see Chart III.4.9). Demand for loans picked up partially in Q3 on the back of financing of fixed investment and mergers and acquisitions. Banks expect no further changes in demand at the year-end. Turning to loan maturities, long-term loans are continuing to show solid growth, while short-term ones have declined. Euro-denominated loans account for roughly one-third of corporate loan financing. This is motivated by the large interest rate differential and by hedging against exchange rate risk. Firms are simultaneously hedging against this risk using classical financial instruments. The proportion of hedged exports in the coming 12 months is 44%. Year-on-year growth in corporate bond issues has also slowed this year, to 3.5%.

The corporate debt financing indicators were essentially unchanged or decreased slightly. The ratio of corporate debt to nominal GDP was 57% in Q2 (as compared to 58% in 2018 Q3). The ratio of debt to gross operating surplus stayed at 222% after previous growth. Corporations' debt service costs remain below the long-term average. The ratio of interest costs to gross operating surplus reached 2.3% in terms of the annual sum and 0.1% in net terms in Q2.

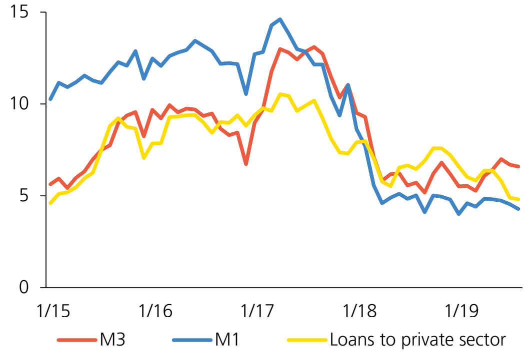
III.4.4 Money

M3 growth was essentially unchanged in Q3 (see Chart III.4.10). The annual growth rate of M3 was 6.6% in August, close to the average recorded since 2012, when it started to increase after a previous fall. The current M3 growth is being driven by the overnight deposits comprising M1 and by deposits with agreed maturity of up to two years, which continue to rise apace owing to an increase in interest rates in this segment. Turning to the sector structure, household deposits made the biggest contribution. Their rate of growth increased slightly to 7.4% following a previous slowdown. Growth in deposits of non-financial corporations also accelerated slightly to 6%.

CHART III.4.10

MONETARY AGGREGATES AND LOANS

M3 growth outpaced growth in loans to the private sector
(annual percentage rates of growth)



ABBREVIATIONS

AEIS	Average Earnings Information System
BoE	Bank of England
BoJ	Bank of Japan
CF	Consensus Forecasts
CNB	Czech National Bank
CPI	consumer price index
CPIH	experimental consumer price index incorporating prices of older properties
CZK	Czech koruna
CZSO	Czech Statistical Office
DSTI	debt service-to-income
DTI	debt-to-income
ECB	European Central Bank
EEA	European Economic Area
EIA	Environmental Impact Assessment
EIA	U.S. Energy Information Administration
EIU	Economist Intelligence Unit
ESA	European System of Accounts
ESCB	European System of Central Banks
ESR	electronic sales registration
EU	European Union
EUR	euro
EURIBOR	Euro Interbank Offered Rate
FDI	foreign direct investment
Fed	US central bank
FMIE	Financial Market Inflation Expectations
FOMC	Federal Open Market Committee
FRA	forward rate agreement
GDP	gross domestic product
GNP	gross national product
GVA	gross value added
HICP	harmonised index of consumer prices
HP filter	Hodrick-Prescott filter
HPI	house price index
ICT	information and communications technology
IEA	International Energy Agency
Ifo	index of economic confidence in Germany
ILO	International Labour Organization
IMF	International Monetary Fund
IR	Inflation Report
IRI	Institute for Regional Information
IRS	interest rate swap
JPY	Japanese yen
LFS	Labour Force Survey
LIBOR	London Interbank Offered Rate
LTV	loan to value
LUCI	Labour Utilisation Composite Index
M1, M3	monetary aggregates
MFIs	monetary financial institutions
MLSA	Ministry of Labour and Social Affairs
NAIRU	non-accelerating inflation rate of unemployment
NBS	National Bank of Slovakia
OECD	Organisation for Economic Co-operation and Development
OPEC+	The OPEC member countries and another ten oil-exporting countries (the most important being Russia, Mexico and Kazakhstan)
PMI	Purchasing Managers Index
pp	percentage points
PPI	producer price index
PRIBOR	Prague Interbank Offered Rate
repo rate	repurchase agreement rate
USD	US dollar
VAT	value added tax
WTI	West Texas Intermediate

This glossary explains some terms frequently used in the Inflation Report. A more detailed glossary can be found on the CNB website (www.cnb.cz/en/general/glossary/index.html).

Administered prices: A sub-category of the consumer basket consisting of items with price ceilings (set at either central or local level), prices regulated on a cost-plus basis (items whose prices may only reflect economically justified costs and a reasonable profit) and administratively fixed fees. The selection of these items is based on the Price Bulletin of the Czech Ministry of Finance.

Agricultural producer prices: Surveyed by the CZSO monthly on the basis of exercise contract prices (excluding their own consumption) of products intended solely for the domestic market excluding VAT.

Apartment asking prices: Asking prices of apartments as estimated by the CZSO.

Apartment transaction prices (returns): Prices based on Ministry of Finance statistics from property transfer tax returns and published by the CZSO. These prices are the closest to actual market prices of apartments in terms of methodology, but are published with a time delay.

Apartment transaction prices (survey): An alternative source of data on transaction prices of older apartments based on a CZSO survey in estate agencies and available with a shorter time delay.

Balance of payments: Records economic transactions with other countries (i.e. between residents and non-residents) over a particular period. The basic structure of the balance of payments includes the current account, the capital and financial accounts and the change in CNB international reserves.

Bid-to-cover ratio: The ratio of total demand to demand coverage in primary auctions of medium-term and long-term government bonds.

Consensus Forecasts: A regular monthly publication issued by Consensus Economics bringing together the forecasts of hundreds of prominent economists and analytical teams regarding future world developments. The CNB uses these predictions in its macroeconomic forecast when forming assumptions regarding the future development of the external environment.

Core inflation: (Formerly called adjusted inflation excluding fuels.) The increase in prices of non-food items of the consumer basket excluding items with administered prices, indirect tax changes and fuels.

Covered bond: A bond collateralised (backed) by long-term assets, usually mortgage loans or public sector loans. The issuers are mostly banks and the issuance of covered bonds is subject to strict legislative rules. Compared to standard bonds, this type of bond has lower credit risk thanks to higher coverage (known as dual recourse), which gives the covered bond holder a preferential claim on the issuer's receivables underlying the mortgage loans or public sector loans and likewise a claim on the issuer. If the issuer defaults, the holder therefore has a preferential right to the assets backing the covered bond.

Current account: Records exports and imports of goods and services, income from capital, investment and labour and unrequited transfers.

Cyclical component of the general government balance: Expresses the effect of the business cycle on the general government fiscal balance.

Discount rate: A monetary policy rate which as a rule represents the floor for short-term money market interest rates. The CNB applies it to the excess liquidity which banks deposit with the CNB overnight under the deposit facility.

Disinflation: A decline in inflation.

Effective euro area indicators: Proxy for the effect of economic activity (effective GDP) and inflation (effective producer prices and consumer prices) in the euro area on the Czech economy. The weights used in the calculation are equal to the shares of the individual euro area countries in the total exports of the Czech Republic to the euro area.

Effective exchange rate: Shows the appreciation (index > 100) or depreciation (index < 100) of the national currency against a basket of selected currencies for a certain time period relative to a base period. The weights applied in the basket are the shares of major trading partners in foreign trade turnover.

Escape clause: Excuses the central bank from its obligation to hit the inflation target. In the flexible inflation targeting regime, it is applied in the event of large shock changes in exogenous factors (particularly supply-side shocks, e.g. indirect tax changes) that are completely or largely outside the purview of central bank monetary policy.

Euro area: The territory of all Member States of the European Union that have adopted the euro as a single currency pursuant to the Treaty Establishing the European Community.

Experimental CPIH price index: Unlike the Consumer Price Index (CPI), the CPIH includes prices of older property, i.e. the transactions that households carry out between themselves. The weight of housing is therefore substantially higher. This index can be viewed as an experimental analytical tool for macrofinancial considerations. For details, see Box 1 in Inflation Report III/2017.

Financial account: Records transactions connected with the creation, liquidation and change in ownership of the financial assets and liabilities of the government, the banking and corporate sectors and other entities vis-à-vis the rest of the world. It consist of direct investment, portfolio investment, other investment and financial derivatives transactions.

Fiscal impulse: A variable taking into account the effect of fiscal policy on economic activity in the short run.

Fiscal stance: The annual change in the general government structural balance (in percentage points). A positive figure indicates fiscal restriction and a negative figure indicates fiscal expansion.

Food prices: In CNB documents, the term food prices refers to the consolidated category of prices of food and non-alcoholic beverages and prices of alcoholic beverages and tobacco.

General government balance: Revenues minus expenditures of the general government sector. A negative government balance is called a general government deficit and a positive government balance is called a general government surplus.

General government primary balance: The general government balance net of interest payments (i.e. debt service).

General government structural balance: The cyclically adjusted general government balance adjusted for extraordinary one-off operations. It captures the structural configuration of fiscal policy.

General unemployment rate: Covers the 15–64 age group (as measured by the ILO methodology in the LFS). It is the ratio of the number of unemployed persons to the labour force (i.e. the sum of employed and unemployed persons) in the given age group.

Gross domestic product (GDP): The key indicator of economic development. It represents the sum of the value added by all economic sectors. In terms of use it consists of expenditure on final consumption (consumption of households, the government and non-profit institutions), gross capital formation (fixed investment and change in inventories) and foreign trade (net exports of goods and services).

Gross operating surplus and mixed income of the household sector: Gross operating surplus – as a part of the gross disposable income of households – is the difference between gross value added in the household sector and the sum of compensation of employees and other taxes less other subsidies on production in this sector. Gross mixed income is generated only in the household sector, where remuneration for labour performed by a firm's owner or by family members cannot be distinguished from the entrepreneurial profit of the owner.

Housing transaction prices: An internationally comparable House Price Index (HPI), which measures movements in the price level of apartments and houses including related plots of land according to a single harmonised EU standard. It includes both new and older (previously inhabited) residential property. The source of the data is the CZSO.

Industrial producer prices: Surveyed by the CZSO monthly on the basis of data provided by selected organisations. Industrial producer prices are those agreed upon between the supplier and the customer inland. They exclude VAT, excise tax, costs of transport to the customer and costs incidental to transport, and are invoiced for more important trade cases.

Industrial producer prices in the euro area: Divided into their energy and core components for the purposes of the g3+ projection model. The core component approximates price developments in foreign industrial sectors affecting the price competitiveness of Czech exports. By contrast, the energy component captures price developments in foreign industrial sectors most sensitive to oil prices.

Inflation: Commonly, inflation is considered to be recurring growth of most prices in the economy. It means a decrease in the real value (i.e. purchasing power) of a given currency relative to the goods and services which consumers buy. If there is inflation in the economy, consumers need ever more currency units of the given country to buy the same basket of goods and services. In practice, inflation is measured by the increment of the consumer price index.

Inflation pressures: Determined in the CNB's modelling system by real marginal costs in the consumption sector and are divided into domestic (in the intermediate goods sector) and imported (in the import price sector).

Inflation rate: The increase in the average (basic) consumer price index for the last 12 months relative to the average for the previous 12 months.

Inflation target: The level of consumer price inflation that the CNB endeavours to achieve, set publicly and well in advance.

Labour efficiency: Affects the quantity of output per unit of labour. From a model perspective, it is the productivity of the production factor of labour in the Cobb-Douglas production function. A rise in labour efficiency enables a higher real volume of output to be produced using the same quantity of production factors. It therefore increases supply and causes the price of output relative to inputs to go down.

Loan-to-value ratio (LTV): The ratio of the amount of a loan to the value of the property securing the financing.

Lombard rate: A monetary policy interest rate which provides a ceiling for short-term interest rates on the money market. The CNB applies it to the liquidity which it provides to banks overnight under the lending facility.

Market services prices: Surveyed by the CZSO monthly. Market services prices comprise prices of domestic freight transport, postal and telecommunications services, banking and finance and insurance and sewerage charges.

Monetary aggregates: Represent the amount of money in the economy and are calculated from the liquid liabilities of a monetary nature of resident monetary financial institutions (the "money-issuing" sector) to other resident sectors (the "money-holding" sector). Besides households, the latter include non-financial corporations and non-monetary financial institutions, as well as local government authorities and social security funds (excluding central government). The Eurosystem has defined a narrow (M1), an intermediate (M2) and a broad aggregate (M3). These aggregates differ with respect to the degree of moneyness of the assets of residents of the Czech Republic included. The monetary aggregates also include liquid assets denominated in foreign currency of residents of the Czech Republic which are held with monetary financial institutions located in the Czech Republic. Narrow money (M1) consists of currency in circulation and overnight deposits. Intermediate money (M2) comprises narrow money (M1) and, in addition, deposits with an agreed maturity of up to two years and deposits redeemable at notice of up to three months. Broad money (M3) comprises M2 and marketable instruments issued by the monetary financial institutions sector. Certain money market instruments, in particular money market fund shares/units, and repurchase agreements, which are close substitutes for deposits, are included in this aggregate.

Monetary conditions: Represent the combined effect of interest rates (the interest rate component of the monetary conditions) and the exchange rate (the exchange rate component) on the economy. These are the key variables through which monetary policy can affect economic activity and, through it, inflation. Interest rates and the exchange rate do not necessarily affect the economy in the same direction.

Monetary policy horizon: The time horizon which monetary policy-makers focus on when making decisions and which takes into account the monetary policy transmission lag. This horizon is about 12–18 months ahead.

Monetary policy interest rates: Short-term interest rates associated with monetary policy-making. They comprise the two-week repo rate, the discount rate and the Lombard rate.

Monetary policy-relevant inflation: Inflation to which monetary policy reacts. It is defined as headline inflation adjusted for the first-round effects of changes to indirect taxes.

Money market: The part of the financial markets which is used to obtain short-term loans and where debt instruments maturing in less than one year are traded. T-bills are typical securities traded on this market. Within this market the CNB carries out its repo operations.

Nominal costs in the consumption sector: These comprise output prices in the intermediate goods sector and import sector, as final consumption goods are produced using inputs from these sectors. In addition, the import sector is divided into a component importing energy and a component importing other goods and services. Import prices are divided analogously (for a more detailed description of the breakdown of foreign prices into their core and energy components, see "Industrial producer prices in the euro area"). They also include price convergence, which approximates the productivity differential between the tradables sector and the non-tradables sector and its price effect, known as an analogy to the Balassa-Samuelson effect.

Nominal costs in the intermediate goods sector: Co-determined by prices of production factors, i.e. labour costs in the market sector and the price of capital. In addition to these components, they are determined by labour efficiency. In addition to domestic and external demand, the price of capital reflects the price deflator of fixed investment, which is affected by movements in the prices of imported capital goods.

Nominal unit labour costs: The labour costs needed to produce a unit of output. Nominal unit labour costs are calculated as the ratio of the nominal volume of wages and salaries to GDP at constant prices.

Non-tradables prices: Prices of items in the CZSO consumer basket which have the nature of services. These items can be divided into administered (e.g. water supply and sewerage collection charges, waste collection charges, public transport, electricity and gas, health care and education) and other (e.g. imputed rent proxying for housing prices, rental housing, repair services, recreation and accommodation, restaurants and canteens, body care services and financial and insurance services). These other items are included in core inflation.

Primary income: An item on the current account of the balance of payments comprising income from labour, capital, financial resources provided and non-produced non-financial assets (wages and salaries, dividends, reinvested earnings, interest, rent as well as taxes and subsidies on production and on imports, which represent a part of the financial flows vis-à-vis the EU budget). In a more detailed breakdown, primary income consists of three balances: compensation of employees, investment income and other primary income.

Repo rate: The CNB's key monetary policy rate, paid on commercial banks' excess liquidity as withdrawn by the CNB in two-week repo tenders.

Secondary income: An item on the current account of the balance of payments covering offsets to real and financial resources provided or acquired without a quid pro quo (subsidies and contributions vis-à-vis the EU budget and EU funds, pensions, foreign assistance, benefits, etc.)

Share of unemployed persons: The ratio of available job applicants aged 15–64 to the population of the same age.

Tradables prices: Prices of items of the CZSO consumer basket which are included in core inflation and have the nature of goods. They include, for example, clothing, footwear, equipment for housing and gardening, transport equipment and IT equipment. However, this category excludes prices of food, alcohol, tobacco and fuels, which follow specific patterns.

Unemployment rate: The ratio of the number of unemployed persons to the total labour force. We distinguish between the general unemployment rate, as determined by the CZSO according to International Labour Organisation methodology, and the share of unemployed persons, as determined by the Ministry of Labour and Social Affairs.

Whole-economy labour productivity: Calculated as the ratio of seasonally adjusted GDP to employment (i.e. including the effect of taxes and subsidies on products). Labour productivity in individual sectors is calculated as the ratio of gross value added to employment (i.e. excluding taxes and subsidies on products.

		years										
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
DEMAND AND SUPPLY												
Gross domestic product												
GDP	CZK bn, constant p. of 2010, seas. adjusted	4028.8	3999.6	3980.2	4088.2	4308.4	4409.9	4610.5	4745.9	**4868.8**	**4983.8**	**5122.8**
GDP	%, y-o-y, real terms, seas. adjusted	1.8	-0.7	-0.5	2.7	5.4	2.4	4.5	2.9	**2.6**	**2.4**	**2.8**
Household consumption	%, y-o-y, real terms, seas. adjusted	0.3	-1.2	0.5	1.8	3.8	3.5	4.4	3.3	**2.9**	**2.7**	**2.8**
Government consumption	%, y-o-y, real terms, seas. adjusted	-3.2	-2.0	2.5	1.1	1.9	2.7	1.3	3.9	**2.9**	**2.3**	**2.5**
Gross capital formation	%, y-o-y, real terms, seas. adjusted	1.8	-3.8	-5.1	8.6	13.1	-4.4	4.3	5.3	**0.5**	**0.8**	**2.9**
Gross fixed capital formation	%, y-o-y, real terms, seas. adjusted	0.9	-3.0	-2.5	3.9	10.3	-3.2	4.0	7.1	**1.0**	**1.7**	**2.6**
Exports of goods and services	%, y-o-y, real terms, seas. adjusted	9.2	4.4	0.2	8.7	6.2	4.1	7.1	4.4	**1.5**	**4.4**	**6.5**
Imports of goods and services	%, y-o-y, real terms, seas. adjusted	6.7	2.8	0.1	10.1	6.9	2.6	6.3	5.9	**0.9**	**4.2**	**6.7**
Net exports	CZK bn, constant p. of 2010, seas. adjusted	193.5	245.8	249.5	232.7	225.0	282.8	330.2	291.5	**317.8**	**338.3**	**349.3**
Coincidence indicators												
Industrial production	%, y-o-y, real terms	5.9	-0.8	-0.1	5.0	4.3	3.4	6.5	3.0	-	-	-
Construction output	%, y-o-y, real terms	-3.6	-7.6	-6.7	4.3	6.8	-5.6	3.3	9.2	-	-	-
Receipts in retail sales	%, y-o-y, real terms	1.7	-1.1	1.2	5.5	7.7	6.1	4.5	2.7	-	-	-
PRICES												
Main price indicators												
Inflation rate	%, end-of-period	1.9	3.3	1.4	0.4	0.3	0.7	2.5	2.1	-	-	-
Consumer Price Index	%, y-o-y, average	1.9	3.3	1.4	0.4	0.3	0.7	2.5	2.1	**2.8**	**2.7**	**1.9**
Regulated prices (15.54%)*	%, y-o-y, average	4.7	8.6	2.2	-3.0	0.0	0.2	0.0	1.8	**4.5**	**2.5**	**2.2**
Food prices (including alcoholic beverages and tobacco) (26.98%)*	%, y-o-y, average	4.3	2.9	3.1	1.8	0.0	0.2	3.6	1.6	**2.5**	**1.9**	**1.8**
Core inflation (54.60%)*	%, y-o-y, average	-0.4	-0.3	-0.5	0.5	1.2	1.2	2.4	2.1	**2.7**	**2.5**	**2.1**
Fuel prices (2.88%)*	%, y-o-y, average	7.2	6.0	-2.1	0.2	-13.5	-8.5	6.7	6.3	**-0.4**	**-1.1**	**-2.2**
Monetary policy inflation (excluding tax changes)	%, y-o-y, average	1.9	2.1	0.6	0.2	0.2	0.5	2.5	2.1	**2.8**	**2.4**	**2.0**
GDP deflator	%, y-o-y, seas. adjusted	0.0	1.5	1.4	2.5	1.2	1.3	1.4	2.5	**3.2**	**2.3**	**1.8**
Partial price indicators												
Industrial producer prices	%, y-o-y, average	5.6	2.1	0.8	-0.8	-3.2	-3.3	1.8	2.0	**2.6**	**1.1**	**1.3**
Agricultural prices	%, y-o-y, average	22.1	3.3	-12.1	4.7	-6.2	-6.0	7.4	-0.2	**6.3**	**-0.9**	**1.4**
Construction work prices	%, y-o-y, average	-0.5	-0.7	-1.1	0.5	1.2	1.1	1.7	3.2	-	-	-
Brent crude oil (in USD/barrel)	%, y-o-y, average	38.2	0.7	-2.6	-8.5	-46.1	-16.0	21.7	30.5	**-11.8**	**-10.5**	**-1.3**
LABOUR MARKET												
Average monthly wage	%, y-o-y, nominal terms	2.5	2.5	-0.1	2.9	3.2	4.4	6.7	7.6	**7.4**	**5.7**	**5.0**
Average monthly wage	%, y-o-y, real terms	0.6	-0.8	-1.5	2.5	2.9	3.7	4.2	5.4	**4.6**	**3.0**	**3.1**
Number of employees	%, y-o-y	0.0	-0.1	1.6	0.6	2.2	2.1	1.7	1.6	**0.5**	**0.2**	**0.2**
Unit labour costs	%, y-o-y	0.3	3.4	1.0	0.9	-0.5	3.2	3.8	6.3	**5.1**	**3.4**	**2.3**
Unit labour costs in industry	%, y-o-y	0.7	5.9	5.1	-0.4	1.8	4.3	-0.4	7.0	-	-	-
Aggregate labour productivity	%, y-o-y	2.1	-1.2	-0.8	2.2	3.8	0.8	2.8	1.6	**1.8**	**2.2**	**2.6**
ILO general unemployment rate	%, average, age 15–64	6.8	7.0	7.1	6.2	5.1	4.0	2.9	2.3	**2.1**	**2.1**	**2.1**
Share of unemployed persons (MLSA)	%, average	6.7	6.8	7.7	7.7	6.5	5.5	4.2	3.2	**2.8**	**2.7**	**2.8**
PUBLIC FINANCE												
Government budget balance (ESA2010)	CZK bn, current prices	-109.9	-159.6	-51.1	-90.6	-28.3	34.3	78.8	58.4	**49.9**	**44.7**	**29.2**
Government budget balance / GDP**	%, nominal terms	-2.7	-3.9	-1.2	-2.1	-0.6	0.7	1.6	1.1	**0.9**	**0.8**	**0.5**
Government debt (ESA2010)	CZK bn, current prices	1606.5	1805.4	1840.4	1819.1	1836.3	1754.9	1749.5	1734.7	**1710.5**	**1684.4**	**1666.1**
Government debt / GDP**	%, nominal terms	39.8	44.5	44.9	42.2	40.0	36.8	34.7	32.6	**30.3**	**28.5**	**27.0**
EXTERNAL RELATIONS												
Current account												
Trade balance	CZK bn, current prices	75.5	123.8	167.0	220.0	188.0	245.7	259.1	217.3	**245.0**	**260.0**	**260.0**
Trade balance / GDP	%, nominal terms	1.9	3.0	4.1	5.1	4.1	5.2	5.1	4.1	**4.3**	**4.4**	**4.2**
Balance of services	CZK bn, current prices	81.3	77.6	70.4	55.7	78.0	107.6	127.7	120.7	**135.0**	**140.0**	**145.0**
Current account	CZK bn, current prices	-84.8	-63.3	-21.8	7.9	11.3	74.2	83.5	15.5	**55.0**	**65.0**	**60.0**
Current account / GDP	%, nominal terms	-2.1	-1.6	-0.5	0.2	0.2	1.6	1.7	0.3	**1.0**	**1.1**	**1.0**
Foreign direct investment												
Direct investment	CZK bn, current prices	-46.8	-121.3	7.4	-80.4	49.7	-186.5	-45.9	-91.3	**-70.0**	**-90.0**	**-60.0**
Exchange rates												
CZK/USD	average	17.7	19.6	19.6	20.8	24.6	24.4	23.4	21.7	**23.0**	**22.6**	**21.9**
CZK/EUR	average	24.6	25.1	26.0	27.5	27.3	27.0	26.3	25.6	**25.7**	**25.4**	**25.1**
CZK/EUR	%, y-o-y, real (CPI euro area), avg.	-1.9	1.5	3.5	6.2	-0.9	-1.3	-3.4	-2.8	**-1.0**	**-2.8**	**-1.5**
CZK/EUR	%, y-o-y, real (PPI euro area), avg.	-3.0	2.2	2.4	5.1	-0.2	0.1	-1.8	-1.5	**-1.1**	**-1.7**	**-0.7**
Foreign trade prices												
Prices of exports of goods	%, y-o-y, average	1.7	2.9	1.2	3.5	-1.7	-3.1	-0.1	-0.3	**1.1**	**-0.3**	**0.6**
Prices of imports of goods	%, y-o-y, average	4.3	4.2	-0.2	1.9	-1.9	4.0	0.9	-0.7	**0.5**	**-0.7**	**0.6**
MONEY AND INTEREST RATES												
M3	%, y-o-y, average	1.0	5.1	5.1	5.1	7.3	9.1	11.7	6.7	**6.5**	**8.5**	**9.6**
2W repo rate	%, end-of-period, CNB forecast = average	0.75	0.05	0.05	0.05	0.05	0.05	0.50	1.75	**2.03**	**2.18**	**1.84**
3M PRIBOR	%, average	1.2	1.0	0.5	0.4	0.3	0.3	0.4	1.3	**2.2**	**2.3**	**2.0**

* figures in brackets are constant weights in current consumer basket
** CNB calculation
\- data not available/forecasted/released
data in bold = CNB forecast

2017				2018				2019				2020				2021			
QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV
1127.3	1154.8	1160.5	1167.9	1174.9	1182.3	1189.0	1199.7	1206.9	1215.8	1220.7	1225.4	1233.2	1241.8	1250.1	1258.7	1267.4	1275.9	1284.9	1294.7
2.9	5.1	5.1	5.1	4.2	2.4	2.5	2.7	2.7	2.8	2.7	2.1	2.2	2.1	2.4	2.7	2.8	2.7	2.8	2.9
3.6	4.8	4.6	4.4	4.3	3.4	3.1	2.5	2.7	2.7	2.9	3.1	2.7	2.7	2.6	2.6	2.6	2.7	2.8	2.9
1.7	1.2	0.8	1.5	3.3	3.6	4.8	4.1	3.0	3.4	2.3	2.7	2.6	1.9	2.4	2.3	2.5	2.5	2.5	2.6
-4.1	4.0	7.4	10.1	11.5	3.6	4.5	1.9	4.6	0.5	-2.4	-0.7	-4.0	2.1	2.7	2.8	2.9	2.9	2.8	2.8
-0.7	5.5	5.0	6.1	8.1	6.6	7.4	6.5	3.3	0.9	-0.1	-0.2	0.6	1.8	2.1	2.3	2.4	2.5	2.6	2.7
5.8	7.3	7.6	7.7	4.9	3.5	4.3	4.8	1.4	2.2	1.8	0.6	3.4	3.2	5.0	5.9	6.4	6.5	6.5	6.5
3.6	5.9	7.1	8.4	7.3	5.1	6.3	4.9	2.0	1.4	0.0	0.2	1.6	3.6	5.4	6.1	6.6	6.8	6.8	6.8
86.0	86.8	81.2	76.1	69.7	76.3	67.1	78.4	64.5	85.3	85.5	82.6	83.2	84.2	85.1	85.8	86.6	86.8	87.5	88.5
8.4	4.3	5.5	7.8	2.3	3.2	3.5	3.2	0.2	0.1	-	-	-	-	-	-	-	-	-	-
0.9	7.2	1.6	3.0	14.1	7.8	12.3	4.9	2.4	3.5	-	-	-	-	-	-	-	-	-	-
7.0	3.5	3.3	4.6	2.8	3.2	2.5	2.2	2.7	2.6	-	-	-	-	-	-	-	-	-	-
1.2	1.7	2.2	2.5	2.3	2.3	2.3	2.1	2.3	2.5	2.6	-	-	-	-	-	-	-	-	-
2.5	2.2	2.5	2.6	1.9	2.3	2.4	2.1	2.7	2.8	2.8	2.9	2.9	2.7	2.6	2.5	2.1	1.9	1.8	1.9
-0.5	-0.1	0.2	0.3	1.4	1.8	2.1	1.7	3.7	4.5	4.3	5.5	3.6	2.5	2.3	1.8	2.1	2.2	2.3	2.3
3.4	2.9	3.9	4.4	2.5	2.5	1.1	0.4	1.7	2.2	2.9	3.0	2.1	1.8	2.0	1.7	1.7	1.9	1.7	2.0
2.1	2.5	2.7	2.5	1.7	1.9	2.3	2.4	2.9	2.6	2.7	2.4	2.4	2.6	2.5	2.6	2.3	2.1	1.9	2.1
15.1	7.5	1.7	2.6	-1.6	5.0	12.4	9.5	1.3	2.5	-2.1	-3.5	3.1	-3.2	-2.3	-2.0	-2.2	-1.5	-1.5	-3.5
2.5	2.3	2.7	2.7	1.8	2.1	2.3	2.0	2.7	2.9	2.9	2.9	2.6	2.4	2.4	2.2	2.1	2.0	1.8	1.9
0.7	1.0	1.6	2.4	2.5	2.5	2.5	2.7	3.3	3.5	3.2	2.8	2.1	2.2	2.4	2.4	2.4	2.0	1.5	1.4
2.7	2.3	1.4	0.9	0.1	1.5	3.3	3.4	3.5	3.5	2.0	1.5	1.4	0.5	1.1	1.5	1.4	1.4	1.3	1.3
0.2	10.1	11.4	8.2	4.0	-3.4	-2.3	1.7	6.9	11.1	6.0	0.2	-3.1	-2.8	0.8	1.9	1.5	1.2	1.3	1.7
1.4	1.6	1.7	2.0	2.3	2.8	3.7	4.0	4.6	4.7	3.9	-	-	-	-	-	-	-	-	-
57.6	9.1	11.0	20.8	22.9	47.6	45.8	11.6	-4.8	-8.6	-18.3	-13.1	-10.5	-17.0	-9.3	-3.8	-2.3	-1.5	-0.9	-0.4
5.1	7.2	6.7	7.8	7.8	8.1	7.9	6.5	7.5	7.2	7.2	7.7	6.2	5.6	5.5	5.4	5.2	5.0	4.9	4.9
2.6	4.9	4.1	5.1	5.8	5.7	5.4	4.3	4.7	4.3	4.4	4.8	3.3	2.9	2.9	2.9	3.1	3.2	3.1	2.9
1.1	1.3	2.2	2.1	2.1	2.1	0.9	1.3	1.0	0.3	0.7	0.0	0.0	0.3	0.3	0.2	0.2	0.2	0.3	0.3
2.9	4.4	3.2	4.4	6.7	7.5	7.1	4.2	5.0	4.9	4.8	5.7	4.0	3.6	3.2	2.7	2.5	2.4	2.3	2.2
-1.1	1.8	-2.8	0.1	5.9	8.1	8.2	5.8	5.1	5.4	-	-	-	-	-	-	-	-	-	-
2.2	2.4	2.8	3.6	2.0	1.0	1.6	1.8	1.3	1.7	2.1	2.0	2.2	1.8	2.1	2.5	2.5	2.5	2.6	2.7
3.5	3.0	2.8	2.4	2.4	2.2	2.4	2.1	2.1	1.9	2.1	2.1	2.2	2.1	2.2	2.1	2.2	2.1	2.2	2.1
5.1	4.2	3.9	3.6	3.7	3.1	3.0	2.9	3.1	2.6	2.7	2.7	3.0	2.6	2.7	2.7	3.0	2.6	2.7	2.7
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95.1	77.2	46.5	40.4	81.2	68.9	30.9	36.2	72.5	78.8	52.0	41.7	80.0	81.0	50.0	49.0	81.0	80.0	50.0	49.0
8.2	6.1	3.6	3.0	6.6	5.2	2.3	2.6	5.6	5.6	3.6	2.8	5.9	5.5	3.3	3.1	5.6	5.2	3.2	3.0
29.8	34.4	31.8	31.7	31.3	36.5	23.1	29.8	36.9	38.1	27.0	33.0	38.0	39.0	29.0	34.0	39.0	40.0	31.0	35.0
110.5	-2.1	-30.1	5.1	51.5	5.4	-52.4	11.1	43.9	33.6	-38.0	15.5	58.0	15.0	-31.0	23.0	60.0	10.0	-34.0	24.0
9.5	-0.2	-2.3	0.4	4.2	0.4	-3.9	0.8	3.4	2.4	-2.7	1.0	4.3	1.0	-2.1	1.5	4.2	0.6	-2.2	1.5
-40.3	-3.8	10.3	-12.0	7.7	-26.4	-37.1	-35.5	2.0	-16.9	-	-	-	-	-	-	-	-	-	-
25.4	24.1	22.2	21.8	20.7	21.5	22.1	22.7	22.6	22.9	23.2	23.3	23.0	22.8	22.5	22.3	22.1	22.0	21.9	21.7
27.0	26.5	26.1	25.7	25.4	25.6	25.7	25.9	25.7	25.7	25.7	25.7	25.5	25.4	25.3	25.3	25.2	25.1	25.1	25.0
-0.7	-2.6	-4.3	-6.0	-6.3	-3.7	-1.6	0.8	0.2	-0.8	-1.4	-2.2	-2.3	-2.8	-3.1	-2.9	-1.8	-1.3	-1.3	-1.4
0.5	-1.3	-2.6	-3.7	-4.4	-2.1	-0.5	1.3	0.6	-1.1	-1.5	-2.3	-2.2	-1.3	-1.6	-1.6	-0.8	-0.7	-0.7	-0.8
2.2	0.9	-1.1	-2.4	-4.4	-1.6	1.6	3.4	3.0	1.7	0.3	-0.5	-0.5	-0.5	-0.1	-0.1	0.5	0.7	0.7	0.7
5.1	2.9	-0.9	-3.3	-6.1	-2.3	2.6	3.5	2.8	1.6	-1.0	-1.1	-0.5	-1.2	-0.5	-0.7	0.1	0.6	0.8	0.8
10.2	12.7	12.8	11.0	8.7	6.1	5.4	6.4	5.5	6.5	6.7	7.3	8.4	8.0	8.6	9.1	9.4	9.7	9.7	9.6
0.05	0.05	0.25	0.50	0.75	1.00	1.50	1.75	1.75	2.00	2.00	2.36	2.48	2.31	2.04	1.88	1.85	1.83	1.83	1.86
0.3	0.3	0.4	0.7	0.9	0.9	1.4	1.9	2.0	2.1	2.2	2.5	2.6	2.5	2.2	2.0	2.0	2.0	2.0	2.0

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