INFLATION REPORT / III

2018

CNB CZECH NATIONAL BANK

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This Inflation Report was approved by the CNB Bank Board on 9 August 2018 and – with some exceptions – contains the information available as of 20 July 2018. 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. Over the years we have gradually developed it. The form as you see it here has been in place since spring 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 the "g3" structural macroeconomic model. The core model 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, foreign trade and the koruna-euro exchange rate play an important role in the model. The structural linkages in the model provide a comprehensive and consistent view of the relationships between nominal variables and the real economy. From the viewpoint of economic theory, g3 is a dynamic stochastic general equilibrium (DSGE) model. Forward-looking expectations 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 important features 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 prediction 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. Due to the arrival of new information since the forecast was drawn up and to the possibility of the Bank Board members assessing its risks differently, the decision we adopt may not fully correspond to 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 usually 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. This instrument was used until 6 April 2017, when the Bank Board decided to discontinue the exchange rate commitment. 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 subsequently also 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

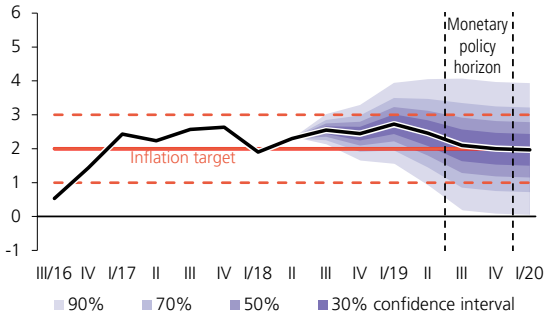
Governor

I. SUMMARY

CHART I.1

HEADLINE INFLATION FORECAST

Inflation will stay in the upper half of the tolerance band until mid-2019 and return to the target at the monetary policy horizon
(year on year in %)

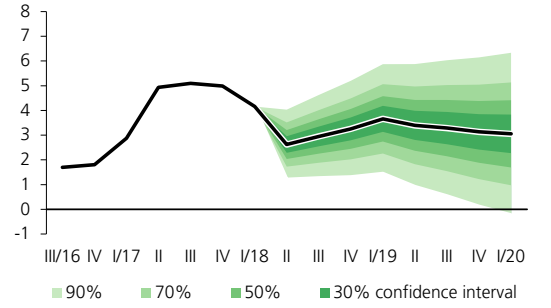


Note: The confidence intervals of the headline inflation forecast reflect the predictive power of past forecasts. They are symmetric and widening only for the first five quarters and then stay constant. This is consistent with both the past predictive power and the stabilising role of monetary policy.

CHART I.2

GDP GROWTH FORECAST

The growth of the Czech economy will slow from last year's high pace, but will remain above 3% on average
(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 be above the 2% target this year and return to it at the monetary policy horizon. The increase in inflation slightly above the target during Q2 reflected, among other factors, movements in traditionally volatile items, i.e. fuel and food prices. Administered prices of electricity increased as well. The overall fundamental inflation pressures also remain strong and will rise even further in the short run, owing mainly to buoyant wage growth in the domestic economy. At the same time, the anti-inflationary effect of import prices will halt temporarily, reflecting the koruna's recent depreciation stemming from negative sentiment on global markets. In the subsequent period, however, the overall inflation pressures will ease owing to continued growth in interest rates, renewed appreciation of the koruna and slower wage growth. Inflation will thus return to the CNB's 2% target at the monetary policy horizon (see Chart I.1). During 2020, it will stay close to the target. On the one hand, the domestic inflation pressures will ease further, but on the other hand the contribution of import prices will turn positive again owing to much slower appreciation of the koruna. Core inflation will rise further in the near future due to rising import prices, but will then come back down again slightly. Conversely, food price inflation will moderate this year and recover slightly again in 2019 in connection with the outlook for agricultural commodity prices. The current rapid year-on-year growth in fuel prices will gradually slow in the context of the outlook for world prices of oil and switch to a decline at the end of next year. Continued growth in administered prices will continue to be fostered above all by electricity prices this year and the next.

The growth of the Czech economy will slow from last year's high pace this year, but will remain above 3% in the following years (see Chart I.2). The economy will thus remain above its potential output level. The increase in domestic economic activity will be driven mainly by robust growth in household consumption, reflecting optimism of consumers in an environment of rapid growth in their income. Briskly rising external demand and increasingly distinct labour shortages are motivating domestic firms to invest in machinery and equipment, which will continue. These investments are improving labour efficiency. Capital expenditure in the government sector will also strengthen further as a result of higher drawdown of EU funds. Fiscal policy will also contribute to domestic demand growth in 2018 and 2019 via a significant rise in public sector pay, pensions and social benefits. By contrast, the monetary conditions will tighten gradually further in the interest rate component and, once the koruna starts appreciating again, also in the exchange rate component. As a result of a short-lived slowdown in export growth and a parallel acceleration in import-intensive components of domestic demand, the previously positive contribution of net exports to GDP growth has faded out and will be temporarily negative this year. The strong economic growth is reflected in a very tight labour market. The unemployment rate is at a record low and there is little room for it to decrease further. This will lead to slower employment growth and

continued high – albeit moderating in the following years – wage growth.

After weakening temporarily, the koruna will return to an appreciation trend. The exchange rate forecast for 2018 Q3 at CZK 25.8 to the euro reflects a change in sentiment on foreign exchange markets and an outflow of short-term capital from emerging markets to assets that investors perceive as less risky. The forecast assumes that this global effect will partly persist in the next two quarters. However, the renewed appreciation of the koruna will be driven by a distinctly positive interest rate differential vis-à-vis the euro area, the fading effects of asset purchases by the ECB and real convergence of the Czech economy connected with growth in labour efficiency. The koruna will thus appreciate below CZK 25 to the euro in early 2019 (see Chart I.3). In the following period, the appreciation will slow in connection with the start of monetary policy normalisation by the ECB. In 2020, the rate will stabilise above CZK 24 to the euro.

Consistent with the forecast is a continued rise in interest rates towards their long-run neutral level (see Chart I.4). The continued rise in interest rates is a reaction to marked inflation pressures from the domestic economy and, in the second half of this year, also to the temporary depreciation of the koruna. The depreciation caused the anti-inflationary effect of import prices to dissipate quickly and the exchange rate component of the monetary conditions to ease autonomously. The subsequent broad stability of rates in the forecast in 2019 is a result of renewed appreciation of the koruna amid continuing very easy monetary policy of the ECB. A broadly stable koruna exchange rate combined with a tightening of policy by the ECB will then create room for further growth in domestic rates from early 2020 onwards. By the end of that year, rates will still be below their long-run neutral level (3% for the 3M PRIBOR), but will be converging towards it from below.

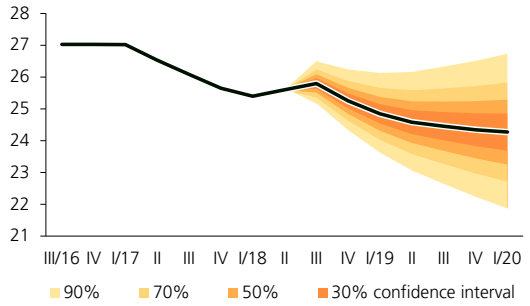
At its monetary policy meeting in August, the CNB Bank Board unanimously increased the two-week repo rate by 25 basis points to 1.25%. At the same time, it increased the Lombard rate by 25 basis points to 2.25% and the discount rate by 20 basis points to 0.25%. The new interest rate levels come into effect on 3 August 2018.

The Bank Board assessed the risks to the inflation forecast at the monetary policy horizon as being balanced. The main uncertainty is the duration of the global factors which recently caused the koruna to depreciate. Growth in protectionist measures in global trade and an escalation of the USA's trade disputes with the euro area and other trading partner countries are an additional source of external uncertainty. The inflation outlook for the coming months in the area of food and fuel prices represents a short-term downside risk.

CHART I.3

EXCHANGE RATE FORECAST

Following a temporary depreciation, the koruna will return to its appreciation trend according to the forecast
(CZK/EUR)

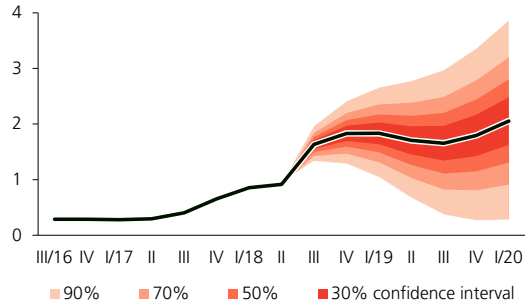


Note: The confidence intervals of the CZK/EUR exchange rate reflect the predictive power of past forecasts (from the period before the exchange rate commitment was adopted). They are symmetric and linearly widening.

CHART I.4

INTEREST RATE FORECAST

Consistent with the forecast is a continued rise in interest rates until the start of 2019 and again in 2020
(3M PRIBOR in %)



Note: The confidence intervals of the 3M PRIBOR forecast reflect the predictive power of past forecasts (from the period before the exchange rate commitment was adopted). They are symmetric and linearly widening.

II. THE FORECAST, ITS CHANGES AND RISKS

II.1 DEVELOPMENTS ABROAD AND EXTERNAL ASSUMPTIONS OF THE FORECAST

The world economy is continuing to grow at a solid pace and is not expected to slow markedly until 2020. In the euro area, however, economic growth is expected to cool somewhat this year, despite the current depreciation of the euro. Together with distinctly higher energy prices, this depreciation has moved the outlook for both producer and consumer price inflation upwards. Inflation will be just below 2% over the next two years. This will enable the ECB to end its asset purchase programme at the end of this year. However, the ECB has stated that it will not start increasing interest rates until quite some time later. The 3M EURIBOR is thus expected to remain negative until early 2020. As a result of faster monetary policy tightening in the USA, the negative differential between the euro rate and the equivalent dollar rate will widen further. However, the euro exchange rate is expected to appreciate slightly against the dollar from its current weakened level over the entire forecast horizon.

II.1.1 Economic developments abroad

The world economy is continuing to grow at a solid pace, but will gradually slow over the next two years.[1] This will be due mainly to developments in the euro area and the USA. The USA's robust economic performance this year will be further boosted by a lower tax burden and higher public spending. On the other hand, the Fed will further tighten its monetary policy. Japan and the UK will record lower but stable growth. A further slight slowdown is expected in China as the tightening of conditions in the financial sector manifests itself in full and external demand weakens. Overall, the weighted growth of all the monitored economies is expected to reach 3.2% this year (see Chart II.1.1) and then slow gradually. In addition, downside risks are visible in the medium to longer run. The biggest risk is a further escalation of international trade tensions (see Box 1) and adverse knock-on effects on sentiment, asset prices and investment.

BOX 1 US protectionist measures and their impact on world trade

The USA has adopted a series of protectionist trade measures in 2018. According to the USA, the shift towards protectionism was motivated by tariffs on US imports being lower than those on US exports elsewhere in the world and by unfair practices of its trading partners. In the case of China, the dispute also concerned insufficient protection of

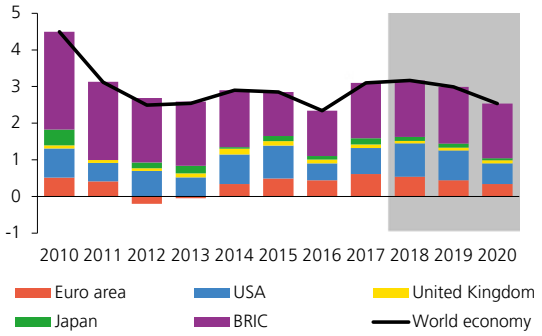
1 A more detailed description of expected developments abroad, updated every month, is available in Global Economic Outlook.

CHART II.1.1

WORLD ECONOMY GROWTH OUTLOOK

The growth of the world economy will be driven by emerging economies, whereas the contributions of the euro area and the USA will diminish

(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 in USD over the period 2010–2015; the BRIC group consists of Brazil, Russia, India and China.

TABLE 1 (BOX)

US PROTECTIONIST MEASURES

The tariffs may affect up to one-third of total US imports

Imports from	Products	Tariffs in %	Status	Volume of imports affected
All trading partners	Washing machines and solar panels	20–30%	Implemented (Jan 2018)	USD 10.3 billion (0.44% of total US imports)
Exemptions for countries with voluntary export limits[a)]	Steel and aluminum	25% and 10%	Implemented (Mar 2018)	USD 47 billion (2.0% of total US imports)
China	A total of 1,333 Chinese goods	25%	Implemented (Mar 2018)	USD 50 billion (2.1% of total US imports)
All trading partners	Cars and auto parts	25%	Under consideration	USD 208 billion (excluding parts) (8.88% of total US imports)
China[b)]	Not specified	10%	Under consideration or preparation	Up to USD 500 billion (21.3% of total US imports)

a) Argentina, Australia, Brazil and Korea are exempt.
b) On 11 July 2018, President Trump asked the US Trade Representative to prepare 10% tariffs on imports from China totalling USD 200 billion.

intellectual property and the fact that US firms are not allowed to gain a majority share in joint ventures. According to President Trump, the USA's unequal position in international trade was causing its current account deficit to rise. Following a series of unsuccessful talks with its partners, the USA rolled out tariffs on a whole range of products (see Table 1).

The USA's unilateral action led to an escalation of trade disputes, in particular with China. The USA's first step was to put tariffs on imports of solar panels and washing machines, especially those from China and other South-East Asian countries. In March, it introduced import tariffs on steel and aluminium (and other Chinese products). China responded in early April with tariffs on imports of selected US goods (soy beans, cars, chemicals, etc.). In mid-May, China offered a package of measures aimed at reducing the US trade deficit with China by up to USD 200 billion, including the lifting of some tariffs on US agricultural products, but the two sides failed to agree. On the contrary, the USA imposed further tariffs on goods imports of up to USD 50 billion a year. China reciprocated with tariffs on imports of selected US products (soy, beef, etc.). President Trump then repeated he was ready to impose tariffs on USD 550 billion worth of goods, i.e. more than total US imports from China last year (USD 506 billion). The USA is now preparing 10% tariffs on imports from China of USD 200 billion with effect from September. For the first time, the tariffs will apply to consumer goods such as handbags and digital cameras.

The current measures have had limited impacts on countries other than China, but a series of retaliatory measures have been taken. The existing US measures against all trading partners have been limited in size so far (applying to less than 3% of total US imports). The most important item is tariffs on imports of steel and aluminium, but they account for less than 4% of the total exports of its main trading partners (Mexico and Canada).[2] Several countries have responded to the protectionist measures with retaliatory tariffs on imports of US goods (see Table 2). Canada, the EU and Mexico account for the largest volumes of imports affected.

Tariffs on imports of cars and auto parts could have a greater impact on trade. President Trump has threatened such tariffs in reaction to the retaliatory measures described above. Tariffs of 25% would be imposed on cars from all countries and on trucks from NAFTA countries. The volume of imports (excluding parts) subject to the tariffs would be almost 9% of all US imports (see Table 1). Mexico, the EU, Canada and Japan would be the hardest-hit trading partners (see Chart 1), with the impact relative to the size of the exporting economy being particularly significant for Mexico. The tariffs would affect about

TABLE 2 (BOX)

RETALIATORY MEASURES OF TRADING PARTNERS

The retaliatory measures taken by the USA's trading partners, except for China, have been limited in size so far

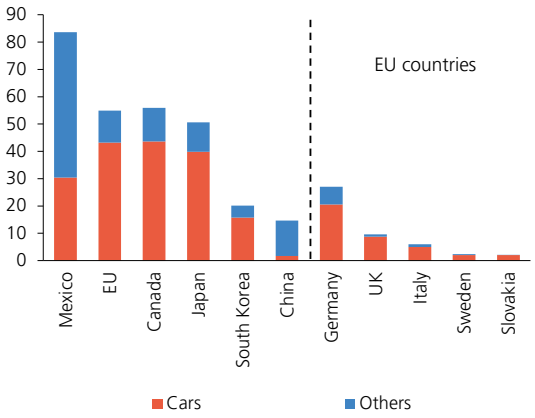
Trading partner	Products	Tariffs in %	Status	Volume of imports affected
Canada	Various, including steel, aluminium and agricultural products	10% and 25%	Implemented	USD 12.8 billion
EU	Various, including steel and whiskey	25% and 20%	Implemented	USD 3.3 billion
China	659 products, including soy beans and pork meat	25%	Implemented	USD 50 billion
Mexico	Various, including steel and whiskey	20% and 25%	Implemented	USD 3 billion
Turkey	Various, including steel and whiskey	Up to 40%	Implemented	USD 1.8 billion
India	A total of 30 products	Up to 50%	As from 4 Aug 2018	USD 240 million
Japan	--	--	Under consideration	USD 409 million
Russia	--	Up to 40%	Under consideration	USD 87.6 million

CHART 1 (BOX)

IMPORTS OF MOTOR VEHICLES INTO THE USA BY TRADING PARTNER

The USA imports the largest numbers of motor vehicles from Mexico, the EU and Canada

(USD billions; source: US Census Bureau, CNB calculation)



2 In the case of the Czech Republic, exports of steel and aluminium made up about 2.4% of total exports to the USA in 2017.

one-third of total car exports from the EU. Moreover, global chains in the auto industry need to be taken into account when assessing the impacts. Up to a half of the cars Toyota and Honda sell in the USA are produced there, whereas most VW Group, BMW and Daimler cars are actually imported. The question is whether producers will respond by reallocating production and/or focusing on exports in the higher-class segment, which is less sensitive to price movements. From the EU perspective, Germany is likely to be hardest hit, with losses running to EUR 5 billion, or 0.16% of German GDP, according to Ifo estimates.

The USA's future actions are hard to predict, but a further escalation of the trade disputes would have a sizeable impact on global activity. In addition, the protectionist tendencies and growing trade disputes are causing an increase in financial market uncertainty and, in turn, sudden capital outflows. Many countries have already had to face such situations in recent months. The higher import prices caused by the retaliatory measures are being accompanied by a weakening of the currencies of the countries concerned, causing inflation pressures to rise substantially. The protectionist measures may also lead to the introduction of non-tariff barriers or regulatory measures affecting foreign branches of US firms specialising in innovation. Protectionism may thus reduce technology spillovers in the global economy. On the other hand, the EU has managed to sign a free trade agreement with Japan, and negotiations in the same vein are continuing with China.

Annual GDP growth in the euro area slowed somewhat to 2.5% in early 2018, with all components of demand making positive contributions (see Chart II.1.2). Domestic demand growth remained robust, but the contribution of net exports declined. Besides a stronger euro, the slower growth was due to one-off factors (swings in the weather, strikes and an influenza epidemic). Quarterly GDP growth slowed to 0.4%.

Data for the euro area in Q2 suggest continued economic growth, albeit at a still slowing pace. Following a decline in April, year-on-year growth in industrial production returned to 2.4%, owing mainly to consumer goods production. The PMI in manufacturing has decreased in all components since the start of the year, but at 55 in June it remains safely in the expansion territory (see Chart II.1.3). A marked drop in growth in export orders is a signal of a continued slowdown in production in the months ahead as a result of weaker external demand, especially from the USA. By contrast, domestic consumer demand is still being supported by the ECB's accommodative monetary policy and by the favourable labour market situation. Unemployment stood at 8.5% in May and wage growth in the economy as a whole went up slightly to 1.8% in Q1. However, retail sales growth has been falling since February and stood at just 1.4% year on year in June.

CHART II.1.2

STRUCTURE OF ANNUAL GDP GROWTH IN THE EURO AREA

GDP growth slowed somewhat in 2018 Q1; all its components made positive contributions
(annual percentage changes; contributions in percentage points; seasonally adjusted; source: Datastream, CNB calculations)

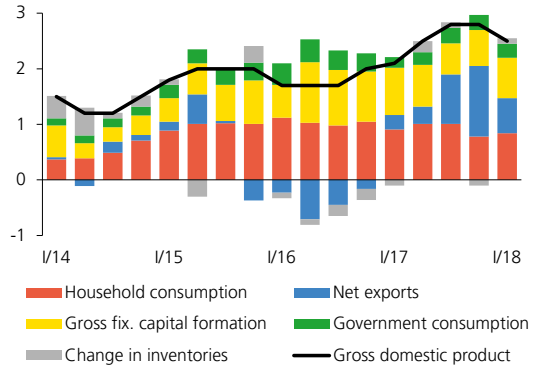
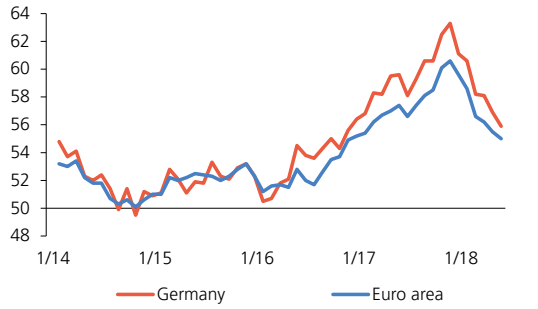


CHART II.1.3

PMI IN MANUFACTURING

Growth in industrial activity can be expected to slow both in Germany and in the euro area as a whole
(Purchasing Managers' Index; source: Bloomberg)



GDP growth in the effective euro area[3] will gradually slow to 1.8% in late 2020 (see Chart II.1.4). Economic activity in the effective euro area will increase by 2.3% this year as a whole and by 2% next year. Slightly lower growth rates are expected in the euro area proper. At its shorter end, the forecast of decreasing economic growth in the years ahead reflects the lower levels observed in early 2018 and weakening leading indicators. The longer outlook indicates a return to sustainable growth rates. For now, the rise in protectionist measures in world trade is treated as a risk rather than being part of the baseline scenario.

II.1.2 Price developments abroad

The price of Brent crude oil rose sharply amid increased volatility, but is expected to decline gradually in the years ahead. In the second half of May 2018 it approached USD 80 a barrel (see Chart II.1.5), the highest level since November 2014. This was followed by a partial correction when Russia and Saudi Arabia announced the possibility of raising production and traders then awaited the outcome of the June OPEC meeting. An only partial increase in output was agreed at that meeting. Concerns of undersupply, a production shortfall in Canada and an expected fall in exports from Iran due to US sanctions then led to a renewed surge in the oil price. Two weeks later, however, the price plunged below USD 75 a barrel again as Libya announced it was opening its export ports. Increased oil price volatility may continue to be observed going forward. The market curve implies a price of USD 77 a barrel on average for the rest of this year and USD 74 a barrel next year. The July CF expects a Brent crude oil price of USD 71 a barrel one year ahead.

The aggregate non-energy commodity price index stayed close to a three-year high in spring 2018, but then fell sharply. The food commodity price sub-index followed a similar pattern, falling to its lowest level since August 2007 in the first half of July (see Chart II.1.5). However, its outlook is rising. Prices of industrial metals did not start decreasing until mid-June, when market sentiment worsened substantially due to the escalation of the trade dispute between the USA and China. Metals prices are also under pressure due to a weakening global manufacturing outlook. The outlook for the base metals price sub-index is therefore flat.

3 For the purposes of the forecast, external real and price developments are proxied by effective euro area indicators (see also the Glossary). In these indicators, the Czech Republic's major trading partners (especially Germany and Slovakia) have larger weights (50% and 14% respectively) than their shares in the euro area proper (the weights used in the calculation of the effective indicators are equal to the shares of the euro area countries in total Czech exports to the euro area). The outlooks for GDP, PPI and CPI in the individual euro area countries are based on the July Consensus Forecasts (CF). The outlooks for government bond yields, the euro-dollar exchange rate and the NEER 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 prices of market contracts as of 9 July 2018. The outlook is indicated by the grey areas in the charts. This convention is used throughout this Report.

CHART II.1.4

EURO AREA GDP GROWTH OUTLOOK

Growth in economic activity in the euro area will continue to slow

(annual percentage changes; seasonally adjusted)

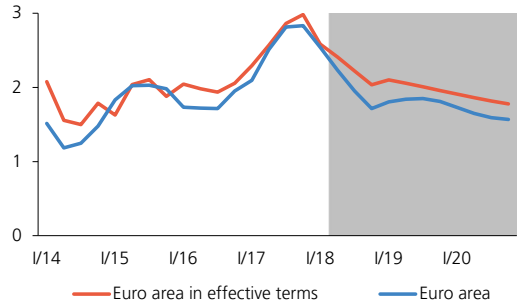


CHART II.1.5

PRICES OF CRUDE OIL AND OTHER COMMODITIES

Oil prices increased, but their longer-term outlook remains falling

(oil in USD/barrel; other commodities: index [January 2014 = 100]; average price of natural gas in Europe; source: Bloomberg, World Bank, CNB calculation)

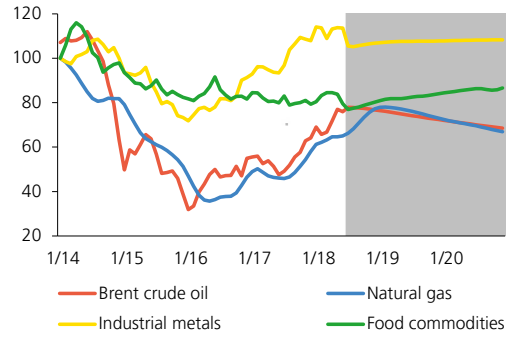
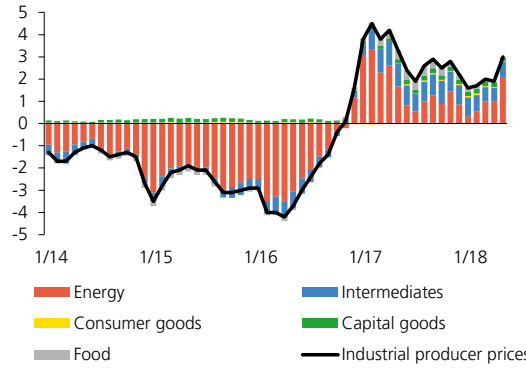


CHART II.1.6

INDUSTRIAL PRODUCER PRICES IN THE EURO AREA

Industrial producer price inflation went up in May owing to higher energy prices

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



Note: Food prices including beverages and tobacco; consumer goods excluding food.

CHART II.1.7

PPI IN THE EURO AREA

Industrial producer price inflation will peak in 2018 Q3 and then slow sharply towards the 2% level
(year on year in %; seasonally adjusted)

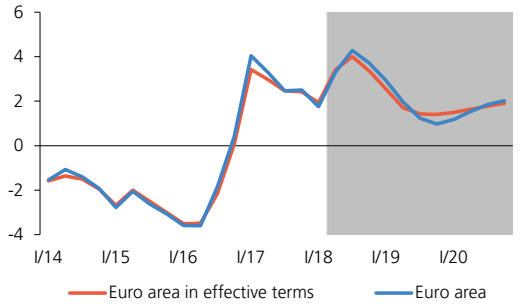
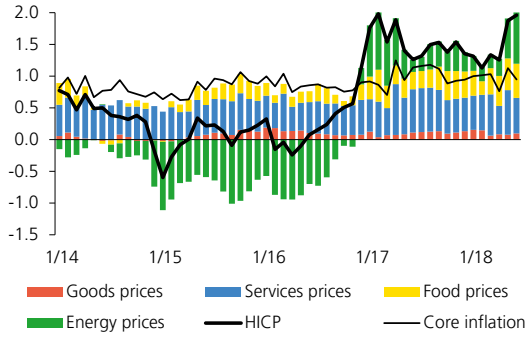


CHART II.1.8

INFLATION IN THE EURO AREA

The increase in consumer price inflation over the last two months has been driven mainly by energy prices
(annual percentage changes; contributions in percentage points; source: Eurostat, CNB calculation)

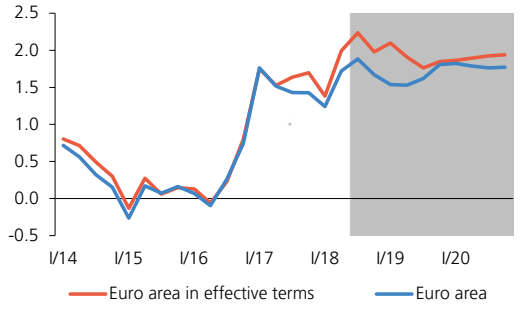


Note: Core inflation is calculated on the basis of the HICP excluding prices of energy, food, alcohol and tobacco.

CHART II.1.9

CONSUMER PRICE INFLATION OUTLOOK IN THE EURO AREA

The outlook for consumer price inflation is around 2%
(HICP; year on year in %; seasonally adjusted)



Annual industrial producer price inflation in the euro area went up to 3% in May owing to a higher contribution of energy prices (see Chart II.1.6). Adjusted for energy prices, it remained stable at 1.4%. Producer price inflation also went up in the Czech Republic's most important trading partner countries – Germany and Slovakia – to 2.6% and 4.7% respectively.

Annual producer price inflation in the euro area will peak in 2018 Q3 (see Chart II.1.7). The producer price inflation rate of 3.2%[4] expected for this year mainly reflects strong cost-push pressures (growth in oil prices and the currently weaker euro against the dollar). Industrial producer price inflation will gradually slow to just below 2% in 2019 and accelerate slightly again in the course of 2020. The patterns for the euro area proper and the effective euro area will be similar.

Consumer price inflation in the euro area accelerated sharply towards 2% (see Chart II.1.8). The current increase in inflation is being driven mainly by energy prices. Fundamental inflation pressures remain muted, even with regard to nominal wage growth in the euro area, which was flat at 2% in the private sector in Q1. Core inflation remains relatively low at around 1%.

The effective indicator of consumer price inflation in the euro area will fluctuate around 2% over the forecast horizon (see Chart II.1.9). It will exceed this level in the next few quarters and then come down as the contribution of high prices of oil and other energy sources diminishes. Inflation is expected to gradually receive more support from domestic fundamentals. They will be reflected to a greater degree in capacity utilisation amid rising labour market tightness (especially in Germany), which is expected to result in higher wage growth. The effective indicator of consumer price inflation will be above the standard inflation measure for the euro area this year and the next, as higher inflation is expected in the Czech Republic's main trading partner countries than in the rest of the euro area.

II.1.3 Financial developments abroad

According to the market outlook, the return of the 3M EURIBOR from negative levels to zero will be gradual. The rate will stay at its current level of -0.3% until mid-2019 and turn positive in mid-2020 (see Chart II.1.10). The July CF analysts expect slightly faster growth in rates, to -0.1% at the one-year horizon. The market outlook reflects the ECB's declared intention to leave rates at the current levels at least until the end

4 The forecast for industrial producer price inflation this year underwent an expert adjustment of 0.8 percentage point relative to the CF forecast, as the CF analysts did not take sufficient account of the markedly higher Brent crude oil price outlook and significantly weaker euro against the dollar. The mismatch was quantified using the CNB's internal models. The July CF expects industrial producer prices to increase by 2.4% on average this year.

of summer 2019.[5] The asset purchase programme will continue at a monthly pace of EUR 30 billion until the end of September 2018 and then be reduced to EUR 15 billion a month. Given the current economic situation, the purchases are expected to be ended completely at the end of 2018. Reinvestment of maturing assets purchased under the programme will continue for an extended period of time following the termination of the programme. According to the July CF, the ten-year German government bond yield will rise to 2% at the end of 2020 (see Chart II.1.11).

A rising outlook for the 3M USD LIBOR reflects expectations of a further tightening of Fed monetary policy. As expected, the US central bank raised the target range for its policy rates by 25 basis points to 1.75%–2.00% in June. A further two increases of the same magnitude can be expected by the end of 2018 according to the FOMC members' median estimates. The accompanying statement no longer mentioned that rates would remain below the neutral level for some time. The current market outlook therefore expects the 3M USD LIBOR to go up gradually to 3% (see Chart II.1.10). The July CF expects the ten-year US government bond yield to rise to 3.5% (see Chart II.1.11). The positive differential vis-à-vis the German government bond yield of the same maturity is thus expected to initially stagnate close to its current level of around 2.5 percentage points and then narrow gradually.

According to the July CF, the euro-dollar exchange rate will gradually appreciate (see Chart II.1.12). The currently weaker euro is due not only to the worse outlook for euro area economic growth, but also to the political situation in Italy and changes in communication about the ECB's monetary policy stance. The further tightening of Fed monetary policy, the continued expansion of the US economy and the rise in risk aversion connected with the escalation of trade disputes acted in the same direction. The euro also weakened in effective terms, its depreciation against the main currencies (the US dollar, the Japanese yen and the British pound) being only partly offset by appreciation against the currencies of emerging economies (the Turkish lira and the Russian rouble). According to the July CF, the euro will continue to depreciate gradually in effective terms.

CHART II.1.10

3M EURIBOR AND 3M USD LIBOR

The spread between 3M rates in the USA and the euro area will increase further, due mainly to tighter Fed policy

(in %, differences in percentage points)

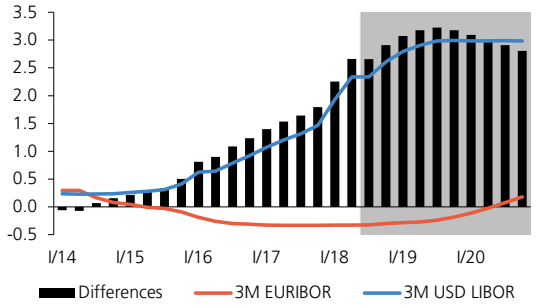


CHART II.1.11

10Y GOVERNMENT BOND YIELDS

The differential between ten-year government bond yields in the USA and Germany will narrow from 2019 H2 onwards

(in %, differences in percentage points)

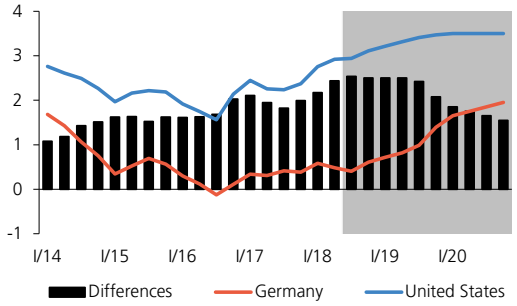
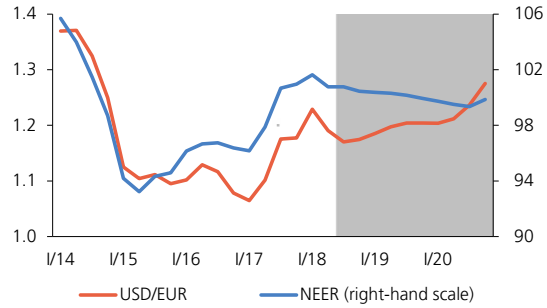


CHART II.1.12

EURO EXCHANGE RATE

The euro is expected to strengthen again against the dollar, but a gradual depreciation is expected in effective terms

(USD/EUR, NEER of euro against currencies of euro area countries' 18 main partners; 2012 Q1 = 100; right-hand scale)



5 As in previous forecasts, this prediction takes into account the ECB's asset purchase programme through expert adjustments using shadow interest rates, which are lower than market rates.

II.2 THE FORECAST

Inflation will be in the upper half of the tolerance band around the CNB's target in the quarters ahead. Inflation pressures will continue to be generated by a tight labour market accompanied by continued rapid wage growth amid record-low unemployment. The koruna's recent depreciation stemming from negative sentiment on global markets brought the anti-inflationary effect of import prices to a halt. According to the forecast, however, this global factor will gradually fade and the koruna will renew its appreciation trend. The return of inflation to the target at the monetary policy horizon will be supported by a further rise in interest rates. The economy will continue to benefit from solid growth in external demand, strong household consumption and ongoing investment activity. GDP growth will thus slightly exceed 3% on average.

II.2.1 Inflation and monetary policy

Inflation will be above the 2% target until mid-2019 and return to it at the monetary policy horizon (see Chart II.2.1). The fact that headline inflation will stay in the upper half of the tolerance band until mid-2019 will reflect both fundamental factors and the evolution of more volatile price categories (see Chart II.2.2). Substantial domestic inflation pressures will persist. Import prices – which until recently significantly dampened inflation – will temporarily act in the same direction due to a weaker koruna and rapid growth in foreign prices. Foreign prices primarily reflect a rise in oil prices, which led to a temporary increase in the contribution of fuel prices to inflation. Headline inflation will return to the target from above in the second half of 2019 and stay there in 2020. Monetary policy-relevant inflation, i.e. inflation adjusted for the first-round effects of changes to indirect taxes, will be very close to headline inflation.[6]

Core inflation will accelerate in the near future and gradually return to 2% from above next year. This will be aided by the recent depreciation of the koruna coupled with rising foreign producer price inflation in the effective euro area, which will primarily affect tradables prices. At the same time, strong inflation pressures from the domestic economy will continue to be felt, driving up prices in services in particular. These factors, together with the effect of the low comparison base in early 2018, will cause core inflation to rise to 2.5% at the start of 2019 (see Chart II.2.3). It will then start creeping down towards 2% owing to a gradually moderating inflationary effect of the domestic economy and a renewed decline in import prices.

Food price inflation will moderate in the rest of this year due to falling agricultural commodity prices. The recent depreciation of the

6 The impact of changes to indirect taxes on inflation will be negligible. The only change included in the forecast is the harmonisation increase in excise duty on tobacco products in January 2018 with a total impact on headline inflation of 0.1 percentage point this year.

TABLE II.2.1

FORECASTS OF SELECTED VARIABLES

The overall economic outlook remains positive
(annual percentage changes unless otherwise indicated)

	2017 actual	2018 forecast	2019 forecast	2020 forecast
Headline inflation	2.5	2.3	2.3	2.0
GDP	4.5	3.2	3.4	3.3
Average nominal wage	7.0	8.6	6.8	5.4
Exchange rate (CZK/EUR)	26.3	25.5	24.6	24.2
3M PRIBOR (in %)	0.4	1.3	1.7	2.4

CHART II.2.1

HEADLINE INFLATION AND MONETARY POLICY-RELEVANT INFLATION

Inflation will stay in the upper half of the tolerance band around the 2% target until mid-2019 and will be at the target thereafter
(annual percentage changes)

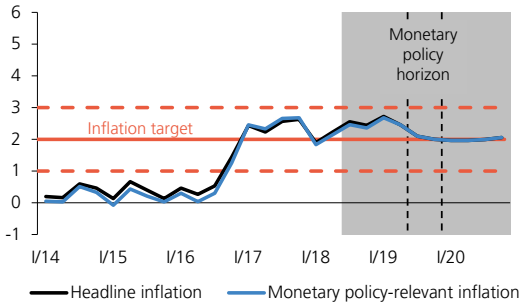
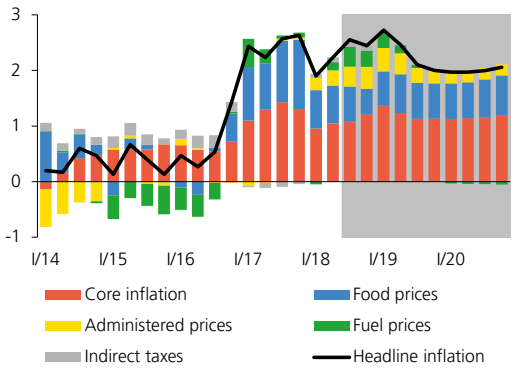


CHART II.2.2

STRUCTURE OF INFLATION AND THE INFLATION FORECAST

The currently higher contributions of administered prices and fuel prices will moderate again next year
(annual percentage changes; contributions in percentage points)



Note: Food prices also include prices of alcoholic beverages and tobacco. Indirect taxes relate to non-administered prices.

koruna will temporarily dampen this disinflationary factor. Food price inflation is therefore expected to fall to 1.7% at the close of this year (see Chart II.2.3).[7] Next year it should gradually rise above 2% again as a result of an expected recovery in agricultural commodity price inflation. By contrast, appreciation of the koruna will act against a faster increase in food prices next year.

The current rapid growth in fuel prices will gradually slow and switch to a year-on-year decline at the end of next year. According to short-term indicators,[8] fuel prices were broadly flat in July 2018 compared with the previous month. The forecast expects their rapid year-on-year growth to dissipate gradually in the quarters ahead owing to an expected easing of growth in oil and petrol prices. Renewed appreciation of the koruna against the dollar will also gradually start to foster lower prices. From the end of 2019, fuel prices should fall year on year owing to an expected decline in world fuel prices and to exchange rate movements (see Chart II.2.3).

This year, growth in administered prices will be fostered above all by electricity prices, which rose sharply in June. The forecast expects them to rise further in the coming months as the remaining distributors also incorporate the previous increase in electricity generation prices into end prices. According to outlooks from exchanges, however, electricity generation prices will start to fall year on year in 2019 and growth in electricity prices will gradually return towards 2%. Gas prices for households are still falling year on year. However, the forecast expects the growth in energy prices and the recent depreciation of the koruna to affect the future path of client prices. Likewise, the decline in heat prices is expected to fade out gradually over the rest of this year. Growth in the other administered price items will be close to 2%. Overall, this means that administered prices will rise by 2% this year and accelerate slightly next year (see Table II.2.2). In 2020, by contrast, they will slow somewhat owing to an expected unwinding of the rapid increase in electricity prices and a renewed decline in gas prices.

After weakening temporarily, the koruna will return to an appreciation trend. The exchange rate forecast for 2018 Q3 at CZK 25.8 to the euro reflects a change in sentiment on foreign exchange markets and an outflow of short-term capital from emerging markets to assets that investors perceive as less risky. The forecast assumes that this global effect will partly persist in the next two quarters. However, the renewed appreciation of the koruna will be driven by a distinctly positive interest rate differential vis-à-vis the euro area, the fading effects of asset purchases by the ECB and real convergence of the Czech economy connected with growth in labour efficiency. The koruna will thus

7 The monthly food price survey for July 2018, published after the forecast was completed, indicates that the downward correction of food price inflation could take place sooner and to a larger extent. This risk – together with the current decline in oil prices – is captured by a sensitivity scenario in section II.4.

8 CCS payment cards portal data and the CZSO's weekly surveys of fuel prices.

CHART II.2.3

COMPONENTS OF INFLATION

Food price inflation and core inflation will be close to 2%, while fuel price growth will be in double figures only temporarily

(annual percentage changes)

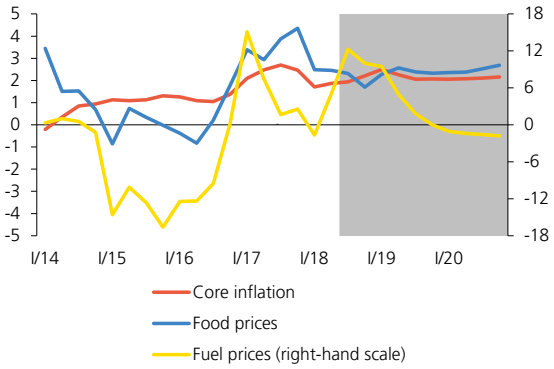


TABLE II.2.2

FORECAST OF ADMINISTRATIVE EFFECTS

Administered prices will increase, driven mainly by electricity prices

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

	2017 actual		2018 forecast		2019 forecast		2020 forecast	
ADMINISTERED PRICES[a)]	0.0	0.00	2.0	0.31	2.1	0.33	1.4	0.22
of which (main changes):								
electricity	0.3	0.01	4.5	0.19	4.0	0.17	2.0	0.09
natural gas	-2.8	-0.08	-0.6	-0.01	0.3	0.01	-1.0	-0.03
heat	-1.6	-0.03	-0.2	0.00	0.8	0.02	1.0	0.02
water	1.4	0.01	1.7	0.01	1.9	0.02	2.0	0.02
health care	4.5	0.05	4.7	0.06	2.7	0.03	2.3	0.03

a) including effects of indirect tax changes

CHART II.2.4

EXCHANGE RATE FORECAST

Following a temporary depreciation, the koruna will return to its appreciation trend according to the forecast

(CZK/EUR and CZK/USD)

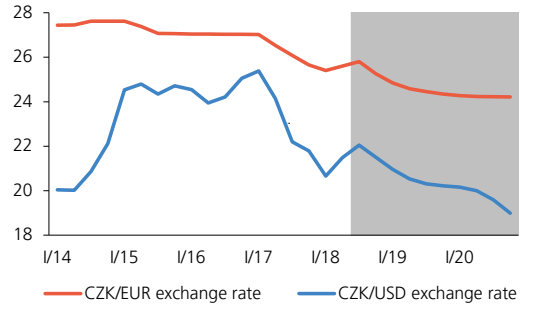


CHART II.2.5

INTEREST RATE FORECAST

Consistent with the forecast is a continued rise in interest rates until the start of 2019 and again in 2020
(percentages)

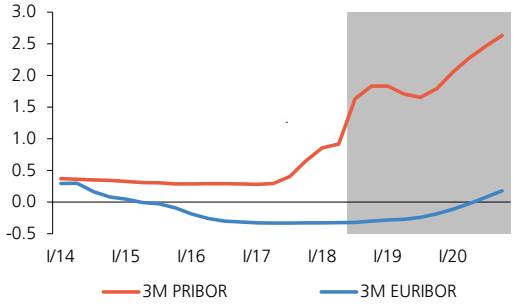


CHART II.2.6

COSTS IN THE CONSUMER SECTOR

Inflation pressures will moderate from their current high level, aided by lower growth in domestic costs and an appreciating koruna
(nominal quarterly percentage changes; contributions in percentage points; annualised)

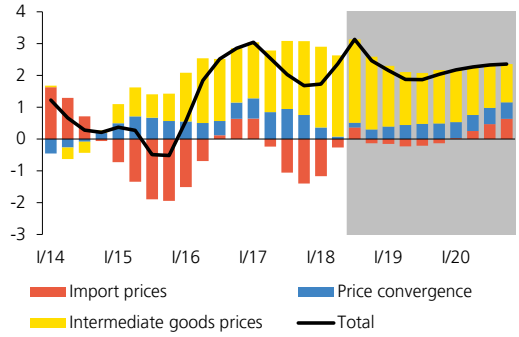
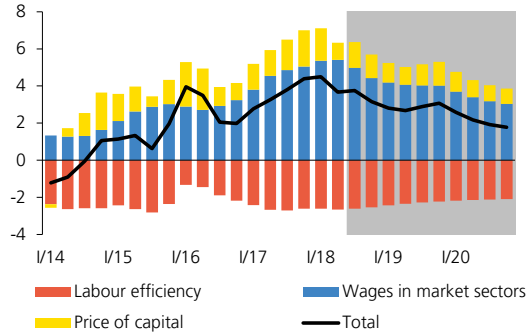


CHART II.2.7

COSTS IN THE INTERMEDIATE GOODS SECTOR

The currently strong growth in domestic costs will gradually slow, mainly as a result of falling wage growth
(nominal quarterly percentage changes; contributions in percentage points; annualised)



appreciate below CZK 25 to the euro in early 2019 (see Chart II.2.4). In the following period, the appreciation will slow in connection with the start of monetary policy normalisation by the ECB. In 2020, the rate will stabilise above CZK 24 to the euro.

Consistent with the forecast is a continued rise in interest rates towards their long-run neutral level (see Chart II.2.5). The continued rise in interest rates is a reaction to marked inflation pressures from the domestic economy and, in the second half of this year, also to the temporary depreciation of the koruna. The depreciation caused the anti-inflationary effect of import prices to dissipate quickly and the exchange rate component of the monetary conditions to ease autonomously. The subsequent broad stability of rates in the forecast in 2019 is a result of renewed appreciation of the koruna amid continuing very easy monetary policy of the ECB. A broadly stable koruna exchange rate combined with a tightening of policy by the ECB will then create room for further growth in domestic rates from early 2020 onwards. By the end of that year, rates will still be below their long-run neutral level (3% for the 3M PRIBOR), but will be converging towards it from below.

II.2.2 Costs and the labour market

The overall inflation pressures will strengthen further in the short term but ease in the subsequent period (see Chart II.2.6). Growth in total costs in the consumer sector accelerated from late 2017 onwards as the anti-inflationary effect of import prices weakened rapidly and domestic inflation pressures conversely strengthened as a result of continued strong growth in economic activity and wages. Growth in total costs will peak in 2018 Q3, when import prices will make a positive contribution owing to a temporary weakening of the koruna. It will then ease towards 2% due to renewed appreciation and a gradual moderation of domestic inflation pressures. The slowdown in total cost growth will be counteracted by a recovery in the contribution of price convergence. The contribution of import prices will turn positive again during 2020, reflecting stable growth in foreign prices amid a distinctly slower appreciation trend of the koruna. By contrast, inflation pressures from the domestic economy will continue to weaken gradually owing to slower wage growth amid continued buoyant growth in labour efficiency.

The strong domestic inflation pressures, reflecting labour market developments and robust economic growth, will diminish only gradually. Growth in domestic nominal marginal costs in the intermediate goods sector peaked well above its long-run equilibrium level in late 2017/early 2018 (see Chart II.2.7). This was due to rapid nominal wage growth in market sectors and a surge in the price of capital, reflecting the evolution of total economic activity and external demand in an upward phase of the cycle. Wage costs accelerated in 2018 Q2, but this was offset by temporarily lower growth in the price of capital. Inflation pressures were still partially dampened by rising labour efficiency, which reflected buoyant growth in private investment. A gradual slowdown in wage growth will emerge in the quarters ahead.

However, a faster return of wages to their equilibrium pace will be prevented by persisting labour market tightness. Economic activity will also slow compared to last year, partly on account of tighter monetary conditions. Rapid growth in labour efficiency will have an anti-inflationary effect over the entire forecast horizon, reflecting the high observed growth in investment in machinery and equipment. Growth in costs will thus start to slow this year, reaching around 2% by the end of 2020.

Employment growth will slow in the second half of this year due to labour shortages. Nevertheless, it will remain solid (see Chart II.2.8). Growing tightness in the labour market, linked with a record-low unemployment rate, will be reduced only partially by growth in the labour force. The latter will continue to be fostered by a gradual increase in the statutory retirement age. In addition, growth in the number of employees converted into full-time equivalents will slacken. This will be due mainly to slowing growth in the number of employees. From mid-2018 on, however, a slight cyclical increase in average hours worked should also make a positive contribution to growth in the converted number of employees.

The current very low unemployment rate will not decrease significantly further. The general unemployment rate will go down only slightly and will be just below 2% by the end of 2020 (see Chart II.2.8). The forecast also expects a slight decline in the share of unemployed persons. This will reflect a slowing decrease in the number of registered job applicants amid a continued gradual decline in the population aged 15–64.

Tightness in the labour market will keep wage growth in market sectors at a high – albeit gradually decreasing – level. According to the forecast, wage growth in market sectors went up further in 2018 Q2, fluctuating well above 8% (see Chart II.2.9). However, wage growth will start to slow at the end of 2018, due, among other things, to tightening monetary conditions and firms' efforts to maintain their price competitiveness and profitability. Nevertheless, it will stay above its long-run equilibrium level of 5% over the forecast horizon. Strong annual wage growth will continue also in non-market sectors, including next year owing to a pronounced increase in wages and salaries in the draft state budget. The forecast expects wage growth in the non-market segment of the economy to slow to just above 4% in 2020.

II.2.3 Economic activity

GDP growth will slow from last year's high levels, averaging just above 3% in the years ahead. Domestic economic activity will continue to be driven by robust household consumption and investment. Both these components reflect persisting optimism of consumers and firms in an environment of high growth in wages and salaries, sustained growth in external demand and related positive expectations regarding future economic growth. These components of domestic demand are expected to make large positive, albeit gradually slightly declining, contributions over the entire forecast horizon. By contrast, net exports

CHART II.2.8

LABOUR MARKET FORECAST

Total employment will rise at a substantially slower pace than before, while the decline in the unemployment rate will moderate

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

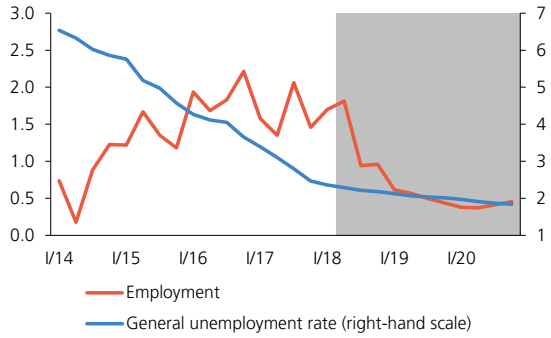


CHART II.2.9

AVERAGE NOMINAL WAGES

Wage growth in market and non-market sectors will peak at a high level this year

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

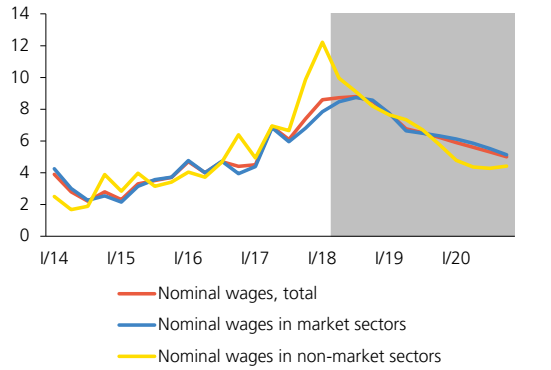


CHART II.2.10

ANNUAL GDP GROWTH STRUCTURE

Consumption and investment will contribute to GDP growth over the entire forecast horizon; the contribution of net exports will temporarily be negative this year

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

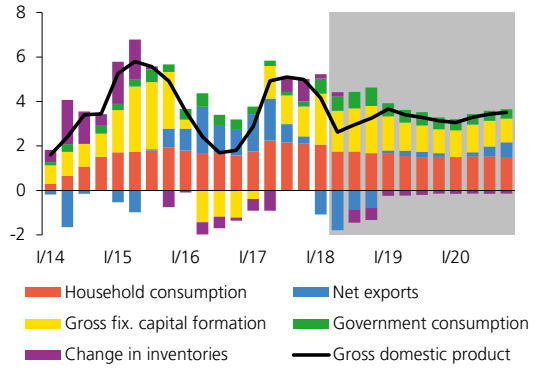


CHART II.2.11

REAL HOUSEHOLD AND GOVERNMENT CONSUMPTION

Consumption growth will remain robust but slow slightly
(annual percentage changes; seasonally adjusted)

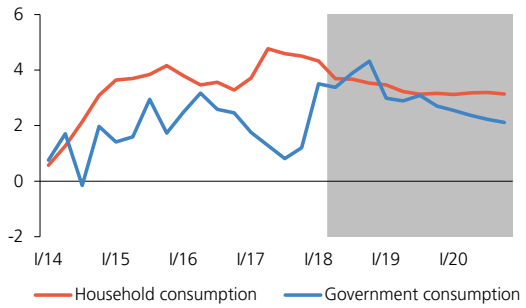
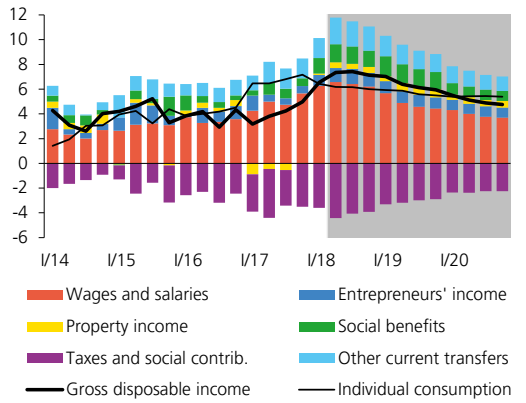


CHART II.2.12

NOMINAL DISPOSABLE INCOME

The high growth in disposable income will be a result of substantial growth in wages and salaries and other income
(annual percentage changes; contributions in percentage points)

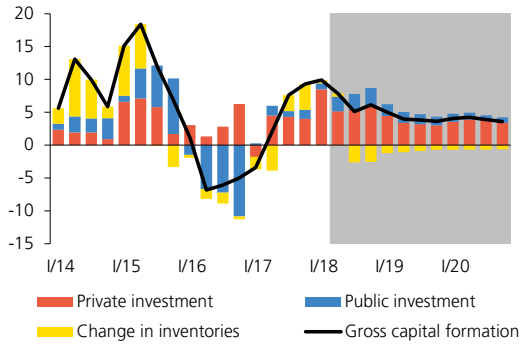


Note: Entrepreneurs' income comprises gross operating surplus and mixed income.

CHART II.2.13

INVESTMENT DECOMPOSITION

Gross capital formation will rise due to continued growth in private investment and government investment from EU funds
(annual percentage changes; contributions in percentage points; constant prices; seasonally adjusted; source: CZSO; contributions of private and government investment: CNB calculation)



will temporarily dampen GDP growth this year. This is due to a slowdown in exports in 2018 H1 as a result of a cooling of external demand and previous appreciation of the koruna. The contribution of net exports will turn positive again in 2019 (see Chart II.2.10). GDP will grow by 3.2% overall this year and pick up pace slightly in the next two years.

Household consumption growth will reflect strong growth in wages and salaries and other income. According to the forecast, annual household consumption growth slowed in 2018 Q2, mainly due to base effects. Even so, household consumption growth remains robust and will converge towards 3% from above over the forecast horizon (see Chart II.2.11). Household expenditure will continue to be driven by brisk disposable income growth connected with the continued surge in wages and salaries and increasing income of entrepreneurs (see Chart II.2.12). The contribution of pensions and social benefits will also increase. Consumption growth will reach 3.8% this year. Slightly lower rates can be expected in the next two years. This will reflect gradually slowing growth in wage income and an increase in the saving rate amid rising interest rates.

Real government consumption will continue to rise, mainly due to growth in current expenditure and wage growth in the government sector. Its pace will accelerate to just below 4% this year (see Chart II.2.11). Real government consumption will record a slightly lower pace next year. Nominal government consumption will be driven mainly by growth in compensation of employees, but will be reduced in real terms by an increase in its deflator. The government consumption forecast also includes a planned public transport fare discount for students and senior citizens as from September 2018.

Gross capital formation will continue to be driven by both private and government investment. Investment growth stayed high in early 2018 (see Chart II.2.13). Solid growth in external demand combined with a tight labour market will spur additional private investment in the business sector, fostering an increase in labour efficiency. Conversely, a gradual increase in interest rates will have a slight dampening effect on investment. Government investment will strengthen further this year due to faster absorption of EU funds. On the other hand, the current strong additions to inventories will fade and their contribution will turn negative. Growth in total investment will thus reach 7% this year. Growth in private and government investment will slow slightly in 2019 and 2020 and the contribution of additions to inventories will stay negative. Total investment will thus increase by around 4%.

Following a downturn in the first half of this year, export growth will return to rates consistent with external demand. The temporary decline in growth of exports of goods and services in 2018 H1 was due, among other things, to slower growth in exports in the automotive industry. In addition to a temporary slowdown in external demand, labour shortages and partly also the previous appreciation of the koruna are being felt. These effects will gradually fade away and exports of

goods and services will pick up again. However, they will be dampened by continued growth in domestic personnel costs and later also renewed appreciation of the koruna. Exports of goods and services will thus grow by around 4% in 2018 and accelerate towards 8% in 2019 and 2020 (see Chart II.2.14).

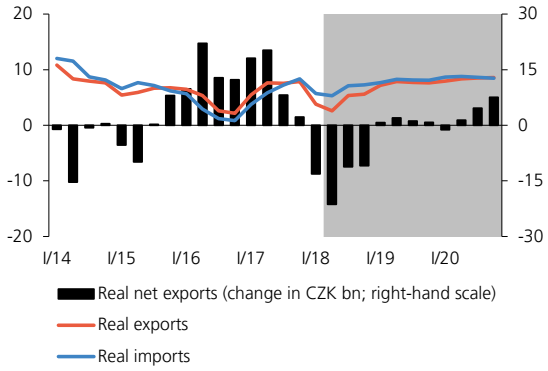
Robust aggregate domestic demand will continue to foster strong import growth. That growth will be driven by a rise in import-intensive investment and household consumption. The appreciating koruna will also have some effect. Overall, imports of goods and services will grow by more than 6% this year. Owing to renewed higher export growth, import growth will accelerate above 8% in 2019 and 2020 (see Chart II.2.14).

The contribution of net exports to GDP growth will be negative this year as a result of a short-lived slowdown in export growth. In addition, an acceleration in import-intensive components of domestic demand and appreciation of the koruna will have some effect. The growth rates of exports and imports will start to converge in 2019 and 2020 and the contribution of net exports will return to slightly positive levels.

CHART II.2.14

REAL EXPORTS AND IMPORTS

Export growth will initially lag behind import growth; their rates will later converge, reflecting the positive external demand outlook and strong domestic demand
(annual changes in per cent and CZK billions; seasonally adjusted)



II.2.4 The balance of payments

The forecast expects the current account surplus to decrease to 0.8% of GDP this year. The goods surplus (see Table II.2.3) will drop below the levels reached in the past two years due to a sizeable slowdown in export growth (lower growth in exports of cars and auto parts) and faster nominal import growth, linked, among other things, with year-on-year growth in energy commodity prices. The primary income deficit will widen as a result of growth in the investment income deficit and a decline in the compensation of employees deficit due to rapid growth in payments of compensation to non-residents. The decline in the current account surplus will be counteracted by continued growth in the services surplus due to a rise in surpluses on manufacturing services, travel and other services. A decline in the secondary income deficit due to higher expected net drawdown of EU funds (which, however, has been subdued so far in H1) will act in the same direction.

A modest year-on-year increase in the current account surplus to almost 1% of GDP is forecasted for 2019. The expected improvement in the goods and services balance will mainly reflect slower growth in domestic demand. However, this will be offset by the effect of appreciation of the koruna on domestic exports. Expected growth in income from EU funds will also contribute to the increase in the current account surplus. Conversely, rising direct investment earnings of non-residents and growth in private transfers abroad will foster a lower current account surplus.

The forecast expects a further slight increase in the current account surplus in 2020. Its ratio to GDP will remain at the 2019 level. A rising goods and services surplus due to a further decline in domestic demand growth and a fall in energy commodity prices is expected to

TABLE II.2.3

BALANCE OF PAYMENTS FORECAST

The current and capital account surpluses will decrease quite significantly this year and increase again over the next two years
(CZK billions)

	2017 actual	2018 forecast	2019 forecast	2020 forecast
A. CURRENT ACCOUNT	54.2	40.0	50.0	55.0
Goods	240.9	225.0	235.0	250.0
Services	122.0	130.0	135.0	140.0
Primary income	-260.8	-275.0	-285.0	-295.0
Secondary income	-47.9	-40.0	-35.0	-40.0
B. CAPITAL ACCOUNT	46.5	25.0	30.0	30.0
C. FINANCIAL ACCOUNT[a)]	117.1	30.0	5.0	70.0
Direct investment	-135.3	-80.0	-60.0	-60.0
Portfolio investment	-268.3	-50.0	-75.0	-15.0
Financial derivatives	-14.2	-	-	-
Other investment	-711.5	85.0	40.0	40.0
Reserve assets	1246.4	75.0	100.0	105.0

a) forecast excluding operations of banking sector and financial derivatives

foster an increase in the surplus. Conversely, the current account deficit will be moderated by a higher income deficit (an increase in the investment income deficit and growth in private transfers abroad).

The capital account surplus will continue to be affected mainly by drawdown of EU funds over the entire forecast horizon. The much lower balance over the entire forecast horizon compared to the 2015–2017 levels (by around a half on average) is due mainly to the usual slow start to the drawdown of EU funds in the programme period. Moreover, an increase in the surplus may also be fostered by revenues from the sale of emission permits, which rose in price last year for the first time in a long time. However, the forecast does not incorporate those revenues yet.

The volume of financial account transactions will drop sharply year on year in 2018. This is related to the unwinding of one-off factors that stimulated an inflow of capital before the exchange rate commitment was ended in 2017. The net inflow of direct investment into the Czech Republic will fall sharply this year. This will be due mainly to a marked drop in the inflow of debt capital into the Czech Republic.[9] By contrast, the expected disinvestment by ČEZ in Bulgaria and the completion of the investment by Nexen in the Czech Republic will act against a decline in the net inflow. The net inflow of portfolio investment will also drop significantly. However, a positive and further increasing interest rate differential of the koruna vis-à-vis the euro and expected appreciation of the koruna will dampen residents' interest in investment abroad while maintaining non-residents' interest in domestic debt securities.[10] The forecast also incorporates expected banking sector accounting operations at the end of the year aimed at optimising contributions to the Resolution Fund.[11] Turning to other investment in the corporate sector, the net outflow of capital will resume as a result of the traditional provision of export loans and also due to lower interest of firms with foreign links in holding financial capital in the Czech Republic. The forecasted growth in reserve assets this year reflects expected returns on international reserves and net operations vis-à-vis the EU.

The net capital inflow on the financial account (including change in reserve assets) will almost halt in 2019. The net inflow of direct investment will decline slightly due to the unwinding of one-off effects (the disinvestment by ČEZ and the investment by Nexen). On the other hand, the net inflow of portfolio investment will increase slightly, due mainly to renewed interest among non-residents in investing in government bonds. However, a gradual renewal of residents' interest in

9 The total net inflow in 2018 will also be reduced by a one-off financial operation by a major Czech foreign-owned firm linked with the payment of part of its retained earnings to its foreign owner.

10 However, a sizeable outflow of debt capital, associated with foreign investors moving into assets that markets traditionally regard as safer, has been observed so far this year.

11 These operations are recorded on the other banking sector investment account in the same amount but with the opposite sign. However, this account is not part of the forecast.

investing abroad will act in the opposite direction. The net inflow of debt capital will continue to be supported by a relatively high and slightly rising positive differential between domestic and euro area interest rates. A significant year-on-year decline in the net capital outflow from the corporate sector under other investment is due to an assumption that part of the strong outflow of capital recorded in early 2018 was one-off in nature, involving the return of capital moved temporarily to the Czech Republic last year. The forecasted higher growth in reserve assets than in 2018 is associated with an expected slight increase in returns on the CNB's reserves and a year-on-year increase in the surplus on operations vis-à-vis the EU.

The forecast for 2020 expects a sharp decrease in the net outflow of capital under portfolio investment. Residents' interest in investing abroad will rise further, while non-residents' interest in investing in domestic government bonds will disappear. The other financial account items are expected to be broadly at their 2019 levels.

II.2.5 Fiscal developments

The government budget surpluses, primarily reflecting growth in tax revenues, will persist. Like last year, the general government surplus will reach 1.6% of GDP this year and will remain at a similar level in the next two years (see Table II.2.4). In addition to the economic growth effect, general government revenues are being bolstered by the positive impact of VAT control statements and the first two phases of ESR introduced in previous years and by a further rise in excise duty on cigarettes. By contrast, strong wage growth in the government sector, continued growth in government investment and faster growth in social transfers will increase government expenditure. Social transfers will rise due to the introduction of more generous pension indexation,[12] a package of new social measures[13] and fare discounts for students and senior citizens. The revenue side of the public budgets will be affected slightly negatively by an increase in the tax discount for dependent children.

Positive developments will also be apparent in continued structural surpluses and a further drop in government debt. The general government structural surpluses will exceed 1% of GDP. The medium-term objective of a structural deficit of 1% of GDP will thus be comfortably met at the forecast horizon. Government debt will gradually decline to below 30% of GDP in 2020 owing to the general government

TABLE II.2.4

FISCAL FORECAST

The government sector balance will remain in surplus
(% of nominal GDP)

	2017 actual	2018 forecast	2019 forecast	2020 forecast
Government revenue	40.5	41.2	41.6	41.4
Government expenditure	38.9	39.6	40.1	39.7
of which: interest payments	0.7	0.7	0.6	0.6
GOVERNMENT BUDGET BALANCE	1.6	1.6	1.5	1.7
of which:				
primary balance[a)]	2.3	2.3	2.1	2.3
one-off measures[b)]	0.1	0.0	0.1	0.1
ADJUSTED BUDGET BALANCE[c)]	1.5	1.6	1.4	1.6
Cyclical component (ESCB method)[d)]	0.1	0.5	0.4	0.3
Structural balance (ESCB method)[d)]	1.4	1.1	1.0	1.3
Fiscal stance in pp (ESCB method)[e)]	0.6	-0.3	-0.2	0.3
Cyclical component (EC method)[d)]	0.0	0.0	0.1	0.2
Structural balance (EC method)[d)]	1.6	1.6	1.3	1.4
Fiscal stance in pp (EC method)[e)]	0.6	0.1	-0.3	0.1
GOVERNMENT DEBT	34.7	32.4	30.4	28.1

a) government budget balance minus interest payments
b) This item consists of expected revenue from 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
e) year-on-year change in structural balance

12 The indexation equation was adjusted this year to take into account half of the growth in real wages instead of the one-third applied previously. According to the assumptions of the forecast, from 2019, the flat-rate component of pensions will increase to 10% of the average wage and senior citizens aged over 85 will receive an extra CZK 1,000 a month. This will increase pension spending by 0.3% of GDP.

13 These include higher sick pay, the introduction of paternity leave and carer's leave, higher child allowances, accelerated parental allowance and higher foster care benefits. The budgetary impact of these measures amounts to 0.25% of GDP.

primary surpluses and still low interest rates on government debt relative to the buoyant nominal GDP growth.

TABLE II.2.5

FISCAL IMPULSE

The fiscal impulse will be positive in 2018 and 2019, due to the support of household consumption and growth in government investment
(contributions to GDP growth in percentage points)

	2017 actual	2018 forecast	2019 forecast	2020 forecast
FISCAL IMPULSE[a)]	0.2	0.5	0.4	0.0
of which impact through:				
private consumption	0.2	0.4	0.2	0.0
private investment	-0.1	0.0	0.0	0.0
government investment, domestic	0.1	0.1	0.0	0.0
government investment, EU funded	0.0	0.1	0.1	0.0

a) Figures may not add up owing to rounding.

Fiscal policy will remain expansionary this year and the next (see Table II.2.5). The fiscal impulse this year will be distinctly positive – at 0.5 percentage point – after last year's slightly positive contribution of fiscal policy to economic growth. The fiscal expansion will relate mainly to measures supporting household consumption, including buoyant wage growth in the government sector. Czech economic growth will also be bolstered by faster growth in government investment in 2018. The forecast expects a positive fiscal impulse of 0.4 percentage point for next year, reflecting an above-average rise in old-age pensions, continued growth in government investment and strong wage growth. According to the assumptions of the forecast, the effect of fiscal policy will be neutral in 2020.

II.3 COMPARISON WITH THE PREVIOUS FORECAST

The biggest change compared to the previous forecast pertains to the exchange rate of the koruna, which weakened in Q2 as a result of an unexpected and significant change in sentiment on financial markets. The persisting weaker koruna, coupled with faster growth in foreign producer prices, leads to higher import prices than in the previous forecast. The outlook for domestic inflation pressures has also been revised upwards slightly due to faster wage growth, which is indicated by the figures for 2018 Q2 and which also persists at the longer end of the forecast horizon. Stronger inflation pressures both from the domestic economy and from abroad are thus acting in parallel at the shorter end of the forecast. In addition to these fundamental factors, the inflation forecast has moved higher due to an increased outlook for administered prices and traditionally volatile items, i.e. fuel and food prices. Overall, the new forecast thus indicates a need for a faster increase in interest rates until mid-2019. This revision reflects the path of the exchange rate most of all. The decrease in the prediction for domestic economic activity this year mainly reflects data revisions and a slightly lower external demand outlook.

As regards foreign variables, producer price inflation this year has been revised significantly upwards (see Chart II.3.1).[14] The outlook is 1 percentage point higher this year than in the previous forecast. The outlook for 2019 remains at the level of the previous forecast in terms of the full-year average; only the growth in individual quarters has changed. This shift mainly takes into account stronger cost pressures stemming from the significantly higher current and future oil price. The exchange rate of the euro against the dollar is also distinctly weaker, reflecting slower economic growth in the euro area this year and the next. The market outlook for 3M EURIBOR interest rates is 0.1 percentage point lower in 2019 in response to the communication issued by the ECB's Governing Council on 14 June. As well as changing the parameters of the asset purchase programme, the ECB stated in its accompanying commentary that it intends to leave interest rates at the current very low levels until at least the end of next summer. The outlook for shadow 3M EURIBOR rates, which directly takes into account the extension of the ECB's asset purchase programme to the end of 2018 at a reduced monthly pace of EUR 15 billion, has been lowered somewhat more than the market outlook.

The forecast for domestic economic growth this year is lower, while the outlook for next year remains unchanged (see Chart II.3.2). The GDP forecast revision is due largely to lower observed data in the past arising from a revision of the national accounts for 2016 and 2017. The contributions of household consumption and private investment are thus lower than in the previous forecast. By contrast, the

CHART II.3.1

CHANGE IN THE FORECAST FOR EFFECTIVE PPI IN THE EURO AREA

The higher producer price inflation in the euro area this year reflects a markedly higher outlook for the Brent crude oil price coupled with a weaker euro against the dollar
(annual percentage changes; differences in percentage points – right-hand scale; seasonally adjusted)

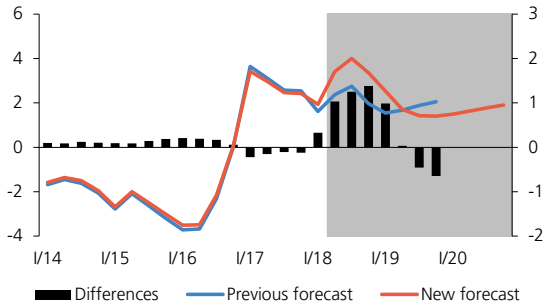
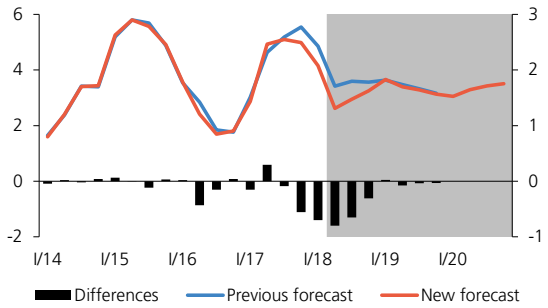


CHART II.3.2

CHANGE IN THE GDP FORECAST

The forecast for domestic economic activity this year is lower
(annual percentage changes; differences in pp – right-hand scale; seasonally adjusted)



14 The differences relative to the past are due to time series revisions and changes in weights in the PPI index for some euro area countries.

CHART II.3.3

CHANGE IN THE FORECAST FOR NOMINAL WAGES IN MARKET SECTORS

The higher wage growth forecast takes the leading indicators for Q2, higher inflation and a weaker koruna into account
(annual percentage changes; differences in pp – right-hand scale; seasonally adjusted)

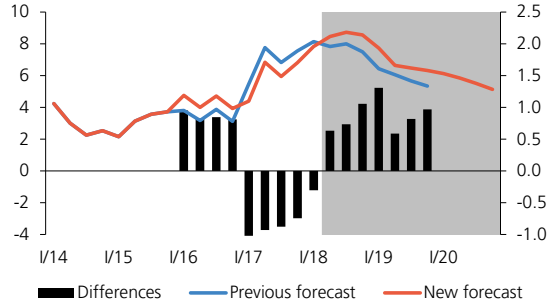


CHART II.3.4

CHANGE IN THE HEADLINE INFLATION FORECAST

The headline inflation forecast is markedly higher at the horizon of up to one year due to a combination of factors, while the changes at the longer horizon are small
(year on year in %; differences in pp – right-hand scale)

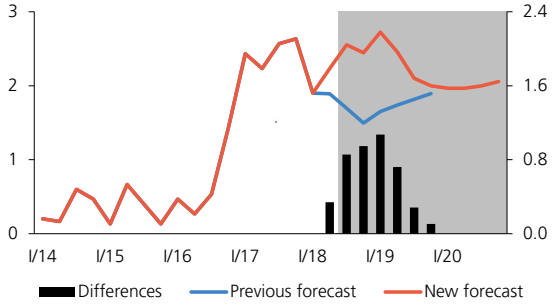
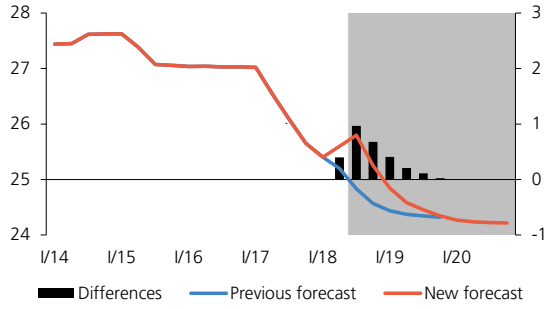


CHART II.3.5

CHANGE IN THE EXCHANGE RATE FORECAST

The koruna will initially be weaker due to a change in sentiment on financial markets; it returns to the levels of the previous forecast at the longer horizon
(CZK/EUR; differences in CZK – right-hand scale)



contribution of government consumption is slightly higher, as compensation of employees and the non-wage components of government consumption are both expected to rise more strongly next year. The lower domestic economic growth this year will also be due partially to a slightly weaker external demand outlook, which will reduce the contributions of net exports and private investment. However, the more subdued export growth observed at the start of this year will fade away in the second half of 2018. A rather larger contribution of net exports than in the previous forecast is expected from the start of 2019.

Wage growth will be faster than in the previous forecast (see Chart II.3.3).[15] This change reflects the overall situation on the increasingly tight labour market and expectations of higher figures for 2018 Q2 based on short-term indicators. Coupled with a weaker koruna and higher expected inflation, this leads to faster wage growth in 2018 H2 and a more gradual slowdown in wage growth during 2019.[16] Overall, domestic inflation pressures will thus be slightly stronger this year and the next than in the previous forecast.

The inflation forecast is markedly higher at the horizon of up to one year but is little changed at the monetary policy horizon (see Chart II.3.4). The higher inflation outlook than in the previous forecast is due to a combination of factors, only some of which are fundamental in nature. In addition to higher observed levels (mainly of fuel and food prices, which have been highly volatile recently), it reflects a higher outlook for administered prices (particularly higher electricity prices), faster wage growth and higher import prices. Fundamental inflation pressures are higher this year, reflecting a weaker koruna, higher foreign producer price inflation and slightly stronger inflation pressures from the domestic economy than in the previous forecast. Next year, slightly higher domestic inflation pressures are roughly offset by lower growth in import prices due to stronger appreciation of the koruna in this period. Administered price inflation has been revised upwards due mainly to a sharper rise in electricity prices. The assumptions regarding the first-round effects of changes to indirect taxes are unchanged, so the outlook for monetary policy-relevant inflation has been revised to the same extent as that for headline inflation.

The change in the outlook for the koruna exchange rate for the coming quarters takes into account past market developments driven by global factors. The koruna, along with other currencies in the region, depreciated unexpectedly and is therefore currently significantly weaker compared to the previous forecast (see Chart II.3.5). The forecast assumes that the negative effect of global sentiment will partly persist in the next two quarters. In the longer term, however, the

15 The differences relative to the past are due to time series revisions made by the CZSO.
16 Expected labour efficiency growth remains unchanged from the previous forecast and the expert adjustment taking the strong labour market pressures into account has been reduced slightly. The higher wage growth outlook thus reflects the combined effect of the above fundamentals captured by the core prediction model.

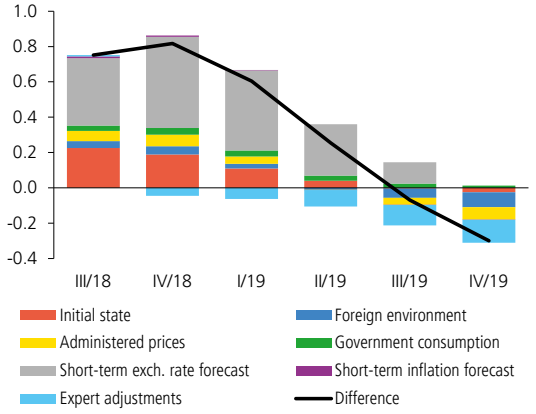
exchange rate path returns to the levels of the previous forecast. This return will be supported, among other things, by somewhat longer accommodative ECB monetary policy than assumed in the previous forecast.

The forecast indicates a need for a faster increase in domestic interest rates until mid-2019 (see Chart II.3.6). This is due partly to the currently significantly weaker koruna and its subsequent only gradual correction. The initial state, specifically wage growth, import prices and observed inflation, and also the outlook for administered prices and government consumption, are acting towards higher rates this year, too. However, the aggregate contribution of these factors is only about a half that of the revision of the exchange rate path. By contrast, the contribution of expert adjustments has been acting slightly towards lower rates since the end of 2018. The expert adjustment slowing the appreciation of the koruna is offset, among other things, by a smaller expert intervention in wage growth. Slightly more accommodative ECB monetary policy and in H2 also the revision of the outlook for administered prices will also foster lower rates during 2019.

CHART II.3.6

DECOMPOSITION OF CHANGES IN THE INTEREST RATE FORECAST

The higher interest rate outlook at the horizon of up to one year is due to several factors, dominated by a weaker koruna
(3M PRIBOR, percentage points)



II.4 RISKS AND UNCERTAINTIES OF THE FORECAST

At its monetary policy meeting in August, the Bank Board assessed the risks to the inflation forecast at the monetary policy horizon as being balanced. Three uncertainties, or risks, were identified during the preparation of the forecast, uncertainties which the Bank Board subsequently agreed with. The main uncertainty is the duration of the global factors associated with the change in sentiment on global markets which caused the koruna to depreciate. The outlooks of other entities indicate a weaker exchange rate at the one-year horizon than the CNB forecast amid similar interest rates and the same inflation outlook. Growth in protectionist measures in global trade and the escalation of the USA's trade disputes not only with the euro area, but also with China and other trading partners, is also a source of external uncertainty. A downward risk is the short-term inflation outlook owing to the recent movements in the indicators of volatile inflation components.

II.4.1 Risks perceived by the CNB

The exchange rate path is a significant uncertainty surrounding the forecast, as captured by a sensitivity scenario. Roughly in April this year, global financial markets saw a change in sentiment which is fostering an outflow of short-term capital from emerging markets into assets perceived as less risky by investors. The koruna, along with other regional currencies, has thus weakened against both the euro and the dollar. In the variant with a weaker exchange rate, the symmetric sensitivity scenario assumes a slower fade-out of the negative sentiment than the forecast does. The exchange rate shock in 2018 Q3 is therefore somewhat stronger in this scenario than in the forecast and is simultaneously assumed to be more persistent in the following two quarters.[17] The simulation results, expressed as deviations from the forecast, are given in Table II.4.1. The variant with a stronger nominal exchange rate than in the forecast (in which the negative sentiment fades out more quickly) has the same results but with the opposite sign.

The sustained weaker exchange rate in the sensitivity scenario leads to a distinctly higher interest rate path than in the forecast. Monetary policy thus responds to the fact that the weaker exchange rate boosts import price growth and generates higher inflation pressures. Another effect of the depreciation is a brief improvement in exporters' price competitiveness, which temporarily raises GDP growth compared to the forecast via higher net exports. Inflation therefore goes up by about 0.2 percentage point at the one-year horizon. However, GDP growth then dips slightly below the forecasted level in response to tighter

TABLE II.4.1

EXCHANGE RATE SENSITIVITY SCENARIO

A sustained depreciation of the koruna leads to temporarily higher inflation and faster GDP growth compared to the forecast; interest rates are also higher in the short run and thus have a stabilising effect
(deviations from baseline scenario paths)

	CPI inflation (in pp)	3M PRIBOR (in pp)	GDP growth (in pp)	Nominal exchange rate (CZK/EUR)
III/18	0.0	0.0	0.0	0.2
IV/18	0.0	0.3	0.2	0.5
I/19	0.1	0.6	0.3	0.6
II/19	0.1	0.6	0.2	0.2
III/19	0.2	0.4	0.1	0.1
IV/19	0.3	0.2	-0.1	0.1
I/20	0.2	0.0	-0.3	0.1
II/20	0.2	-0.1	-0.3	0.1
III/20	0.1	-0.1	-0.1	0.1
IV/20	0.0	-0.1	0.0	0.1

17 The standard exchange rate sensitivity scenario assumes a one-off swing in the nominal exchange rate of ±3% in Q1 of the forecast only. At present, however, an exchange rate shock is already being observed and has been incorporated into the baseline scenario. Nevertheless, there is uncertainty about how long it will last. The standard sensitivity scenario was therefore modified so that the exchange rate weakens only moderately compared to the forecast in 2018 Q3, but this weakening will fade out more gradually.

monetary policy via higher interest rates and later also an exchange rate correction. The stabilising effect of monetary policy thus leads to inflation returning to the target, although a little later than in the forecast. Neither of these scenario variants is inconsistent with the process of raising interest rates towards their neutral level; they differ only in terms of its pace in the next few quarters.

The short-term risk of lower inflation is described by a sensitivity scenario in which the recent growth in volatile prices fades out more quickly than in the forecast. This primarily involves the possibility of a correction of the recent developments in food and fuel prices. The surge in their growth in Q2, which contributed significantly to the rise in consumer price inflation and to the non-materialisation of the previous forecast, may dissipate quickly in the period ahead. This is implied by some indicators published after the forecast was drawn up. The July weekly survey of food prices points to a sharp drop in fruit and vegetable prices. Coupled with the currently lower price of Brent crude oil relative to the market outlook used as an assumption of the forecast, this represents an anti-inflationary risk for 2018 Q3.

In the sensitivity scenario, inflation is closer to the target and growth in interest rates is only imperceptibly slower than in the forecast (see Table II.4.2). The differences between the two scenarios are due solely to a negative one-off shock to traditionally volatile inflation components. Its initial impact on annual inflation fades out after a year, while its secondary impacts are weak as usual and the fundamental inflation pressures are not revised significantly over the entire forecast horizon. Forward-looking monetary policy pursued under flexible inflation targeting therefore has no reason to respond strongly to this type of shock. The impacts of the sensitivity scenario on the exchange rate of the koruna and economic growth are also negligible.

The growth in protectionist measures in global trade is a major source of external uncertainty. Box 1 in section II.1 describes the measures that have been implemented or are under consideration. The next steps of the USA are hard to predict, but an escalation of its trade disputes not only with China, but also with the euro area and other trading partners would have a visible impact on the global economy. This would be reflected in slower economic growth in the Czech Republic via trade links; the impacts on inflation and interest rates would nevertheless also depend on the reaction of the koruna exchange rate, among other things.

The Bank Board assessed the risks to the inflation forecast at the monetary policy horizon as being balanced. The main uncertainty is the duration of the global factors which recently caused the koruna to depreciate. Growth in protectionist measures in global trade and an escalation of the USA's trade disputes with the euro area and other trading partner countries are an additional source of external uncertainty. The inflation outlook for the coming months in the area of food and fuel prices represents a short-term downside risk.

TABLE II.4.2

LOWER INFLATION SENSITIVITY SCENARIO

Inflation at the one-year horizon is lower in the sensitivity scenario than in the forecast; the deviations of the other variables are insignificant
(deviations from baseline scenario paths)

	CPI inflation (in pp)	3M PRIBOR (in pp)	GDP growth (in pp)	Nominal exchange rate (CZK/EUR)
III/18	-0.4	-0.1	0.0	0.0
IV/18	-0.4	-0.1	0.0	0.0
I/19	-0.5	0.0	-0.1	0.0
II/19	-0.4	0.0	0.0	-0.1
III/19	-0.1	0.0	0.0	-0.1
IV/19	0.0	0.0	0.0	-0.1
I/20	0.0	0.0	0.0	-0.1
II/20	0.0	0.0	0.0	0.0
III/20	0.0	0.0	0.0	0.0
IV/20	0.0	0.0	0.0	0.0

TABLE II.4.3

EXPECTED INDICATORS OF FMIE, CF AND CORPORATIONS

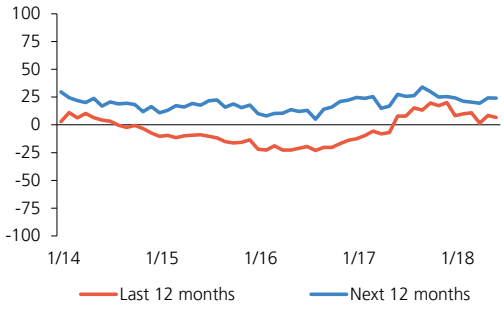
The analysts' inflation expectations are close to the CNB's 2% target at both the one-year and three-year horizons; the analysts believe that economic growth will slow
(at 1Y; annual percentage changes unless otherwise indicated)

	3/18	4/18	5/18	6/18	7/18
FMIE:					
CPI	2.1	2.1	2.1	2.1	2.1
CPI, 3Y horizon	2.0	2.0	2.0	2.0	2.0
Real GDP in 2018	3.4	3.5	3.6	3.4	3.4
Real GDP in 2019	2.9	2.9	3.0	3.0	3.0
Nominal wages in 2018	7.1	7.2	7.5	7.8	7.8
Nominal wages in 2019	5.2	5.2	5.5	5.6	5.7
CZK/EUR exchange rate (level)	24.7	24.6	24.6	24.6	24.8
2W repo rate (in per cent)	1.4	1.3	1.3	1.4	1.6
1Y PRIBOR (in per cent)	1.8	1.8	1.8	1.8	2.0
Corporations:					
CPI	2.1			2.0	
CPI, 3Y horizon	2.6			2.6	
CF:					
Real GDP in 2018	3.5	3.5	3.5	3.4	3.4
Real GDP in 2019	3.0	3.0	3.0	3.0	3.0
Nominal wages in 2018	7.0	7.1	7.2	7.6	7.5
Nominal wages in 2019	5.5	5.6	5.7	6.0	5.9
CZK/EUR exchange rate (level)	24.8	24.8	24.9	24.8	25.0
3M PRIBOR (in per cent)	1.5	1.4	1.4	1.5	1.6

CHART II.4.1

PERCEIVED AND EXPECTED INFLATION

The indicators of perceived and expected inflation are slightly positive
(balance of answers; source: European Commission Business and Consumer Survey)



II.4.2 Risks signalled by other entities' forecasts

Inflation expectations in the economy continue to be firmly anchored by the CNB's 2% target. Inflation forecasted by financial market analysts is currently only just above the CNB's 2% target at the one-year horizon. At the three-year horizon, it is exactly at the target. The inflation expectations of business managers are also close to the central bank's target at both horizons (see Table II.4.3).

The indicator of inflation perceived by households decreased marginally. Its slightly positive level suggests that households overall felt that prices rose over the last 12 months, though only slightly (see Chart II.4.1). The indicator of expected inflation recorded only minor changes. Its level signals that the respondents who expect prices to rise more rapidly over the next 12 months slightly outnumber those who expect prices to stay the same or increase more slowly than they did previously.

The analysts expect the Czech economy to show growth of over 3% both this year and the next (see Table II.4.3). The analysts expect the growth of the Czech economy to slow by about 1 percentage point this year from last year's high rates. The continued solid growth will be fuelled mainly by household consumption stemming from high wage growth and also by investment related to labour shortages and drawdown of EU funds. On the other hand, foreign trade will dampen the pace of economic growth in the Czech Republic. The overheated labour market is regarded as one of the factors slowing growth. According to the analysts, further growth in employment is no longer possible. Nominal wage growth will thus increase further this year. A slowdown of up to 2 percentage points is expected next year. The analysts on average forecast the koruna to appreciate to CZK 25 to the euro at the one-year horizon.[18] Most of the analysts in the July FMIE survey were expecting the CNB Bank Board to leave key interest rates unchanged at the August meeting, while a minority were expecting them to be raised by 0.25 percentage point. Their average estimate of the 2W repo rate at the one-year horizon was 1.6%. On the other hand, in the polls of two news agencies released just before the meeting, a significant majority of analysts tended to expect higher interest rates.

Compared to the CNB, the analysts expect similar GDP growth and the same inflation. The analysts' wage expectations are markedly lower by comparison with the CNB. The structure of the monetary conditions is slightly different. The exchange rate at the one-year horizon is weaker on average in the analysts' predictions than in the CNB forecast, while the interest rate forecast does not differ much.

18 The expected range between the maximum and minimum values in the analysts' estimates widened compared to previous surveys. This is probably linked with the current change in market sentiment and the uncertainty regarding its duration. The range is CZK 24.0–25.3 to the euro in the July FMIE survey and CZK 24.3–26.0 to the euro in the CF survey.

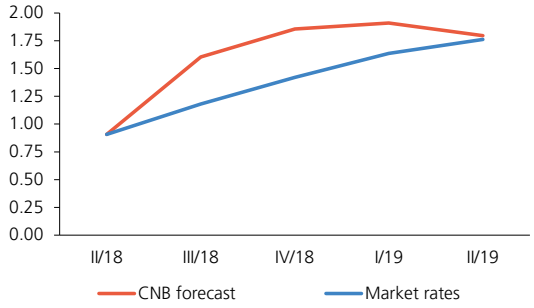
The current market outlook for 3M rates implies a steady increase over the one-year horizon. Consistent with the CNB forecast is a further increase in interest rates until the start of next year, followed by a period of stability. The market outlook is thus initially lower and at the one-year horizon is in line with the interest rate level contained in the CNB forecast (see Chart II.4.2).

CHART II.4.2

FRA RATES VERSUS THE CNB FORECAST

The market outlook for interest rates is gradually rising; at the one-year horizon it is in line with the rates contained in the CNB forecast

(percentages)



Note: Market rates represent for 2018 Q2 and 2018 Q3 the 3M PRIBOR and for 2018 Q4–2019 Q2 the average values of the FRA 3*6, 6*9 and 9*12 rates for the last 10 trading days as of 20 July 2018.

III. CURRENT ECONOMIC DEVELOPMENTS

III.1 PRICE DEVELOPMENTS

Observed inflation differed little from the forecast published in early 2017, a retrospective assessment of which is relevant for evaluating the current fulfilment of the inflation target. The only exception was the start of 2018, when inflation dipped slightly below the target. Inflation averaged 2.3% in 2018 Q2. Looking back, the CNB's monetary policy in the previous period, including the decision to discontinue the exchange rate commitment in early April 2017, can be assessed as having been appropriate. So far this year, the gradual rise in inflation has been fostered mainly by higher growth in prices of fuels, foods and electricity. Core inflation also went up slightly on the back of rising growth in non-tradables prices. Consumer prices continued to be affected by strong domestic demand. Owing to depreciation of the koruna against the euro and fast growing energy commodity prices, the year-on-year decline in import prices moderated and industrial producer price inflation increased. Growth in construction work prices also accelerated in an environment of increasing demand and wages. Growth in prices of services for the business sector remains stable. Therefore, only agricultural producer prices decreased.

III.1.1 Fulfilment of the inflation target

Inflation reached 2.3% in 2018 Q2, the same level as the forecast published in IR I/2017,[19] and increased slightly above the CNB's target (see Chart III.1.1). That forecast had been based on the assumption that the exchange rate would be used as an instrument for easing monetary policy under a CNB exchange rate commitment of CZK 27 to the euro until mid-2017. Given the subsequent developments, it became the basis for the decision to discontinue the exchange rate commitment in early April 2017. The forecast had expected inflation to increase into the upper half of the tolerance band around the CNB's 2% target and to return to the target from above over the monetary-policy horizon. The growing economy and wages had been expected to continue to foster higher domestic costs and hence also higher consumer prices. The then slightly positive contribution of import prices had been expected to gradually turn anti-inflationary.

Except at the start of 2018, headline inflation was close to the forecast. The difference was zero in 2018 Q2 (see Table III.1.1). Slight, mutually offsetting, deviations from the forecast were recorded for all

CHART III.1.1

FORECAST VERSUS ACTUAL HEADLINE INFLATION

Inflation was mostly close to the forecast
(year on year in %)

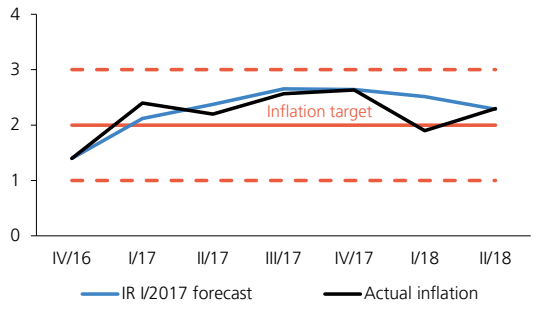


TABLE III.1.1

FULFILMENT OF THE INFLATION FORECAST

The inflation forecast was fulfilled in Q2; the slight deviations of individual components offset each other
(annual percentage changes; contributions in percentage points)

	IR I/2017 forecast	2018 Q2 outturn	Contribution to total difference
CONSUMER PRICES	2.3	2.3	0.0
of which:			
administered prices	1.3	1.8	0.1
first-round impacts of changes to indirect taxes[a)]	0.1	0.1	0.0
core inflation[b)]	2.3	1.9	-0.2
food prices[b)]	3.1	2.5	-0.2
fuel prices[b)]	-3.6	5.0	0.3

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

19 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 2018 Q2, we have to examine the period from autumn 2016 to mid-2017. For the sake of clarity, the analysis of the fulfilment of the forecasts in this section is limited to a comparison of Inflation Report I/2017 with subsequent inflation.

consumer basket items (except for the first-round effects of changes to indirect taxes). Food price inflation and core inflation were lower than expected. Fuel prices conversely rose, despite having been expected to go down.

Turning to external factors, stronger external demand represented the biggest deviation from the forecast. The higher growth in economic activity in the euro area was also reflected in faster growth in producer prices, although they were dampened by a stronger euro against the dollar. Oil prices have increased since the end of 2017, whereas the forecast expected them to be flat (see Table III.1.2). The forecast that foreign interest rates would remain at slightly negative levels[20] materialised. Overall, according to the assessment based on the CNB's core prediction model, the effect of external developments on domestic inflation was slightly anti-inflationary through pressure for greater appreciation of the koruna. In terms of the stance of the overall monetary conditions, this was a factor potentially speaking in favour of a more gradual-than-forecasted increase in domestic interest rates. In reality, however, the koruna appreciated at a pace consistent with the forecast, probably due in part to overboughtness of the koruna market in the first few quarters after the exchange rate commitment was ended.

Domestic economic activity fostered higher-than-forecasted inflation. As regards the components of GDP, more robust growth was recorded mainly by private investment and household consumption. Faster nominal wage growth, associated with a tighter labour market, was consequently observed.

The duration of the exchange rate commitment was shortened by almost one quarter relative to the assumption of the forecast contained in Inflation Report I/2017. The exchange rate stayed very close to the CNB's commitment of CZK 27 to the euro until 6 April 2017, when the CNB ended the commitment; the koruna then mostly appreciated gradually. Market interest rates were stable at first, responding later only to the CNB's key rate increases in four steps starting in August 2017 (see Table III.1.3). The overall monetary conditions were in line with the forecast, although the exchange rate component tightened earlier while the interest rate component was shifted towards a neutral stance somewhat later.

Overall, the monetary policy pursued by the CNB between October 2016 and June 2017 can be assessed as appropriate. 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. The Bank Board assessed the risks to the forecasts initially as being balanced and later as being skewed in a mildly inflationary

TABLE III.1.2

FULFILMENT OF THE EXTERNAL ASSUMPTIONS

External economic activity and industrial producer prices in the euro area rose more strongly than forecasted
(annual percentage changes unless otherwise indicated;
p – prediction, o – outturn)

		I/17	II/17	III/17	IV/17	I/18	II/18
GDP in euro area[a), b), c)]	p	1.3	1.4	1.7	1.8	1.8	1.9
	o	2.3	2.6	2.9	3.0	2.6	-
PPI in euro area[b), c)]	p	1.7	2.2	2.4	2.1	2.1	2.1
	o	3.4	3.0	2.5	2.4	1.9	-
3M EURIBOR	p	-0.3	-0.3	-0.3	-0.3	-0.3	-0.2
(percentages)	o	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3
USD/EUR exchange rate	p	1.05	1.04	1.04	1.04	1.05	1.05
(levels)	o	1.06	1.10	1.18	1.18	1.23	1.19
Brent crude oil price	p	55.8	56.8	57.1	57.0	57.0	56.9
(USD/barrel)	o	54.6	50.8	52.2	61.5	67.2	75.0

a) at constant prices
b) seasonally adjusted
c) IR I/2017 outlook for effective indicator

TABLE III.1.3

FULFILMENT OF THE FORECAST FOR KEY VARIABLES

Domestic GDP growth and nominal wage growth both exceeded the forecast, thus fostering higher inflation
(p – prediction, o – outturn)

		I/17	II/17	III/17	IV/17	I/18	II/18
Consumer price index	p	2.1	2.4	2.7	2.6	2.5	2.3
(annual perc. changes)	o	2.4	2.2	2.6	2.6	1.9	2.3
3M PRIBOR	p	0.3	0.3	0.8	0.8	0.9	1.0
(percentages)	o	0.3	0.3	0.4	0.7	0.9	0.9
CZK/EUR exchange rate[a)]	p	27.0	27.0	26.1	25.7	25.6	25.6
(levels)	o	27.0	26.5	26.1	25.7	25.4	25.6
Real GDP[b)]	p	2.4	2.5	3.1	3.1	2.9	2.5
(annual perc. changes)	o	2.9	4.9	5.1	5.0	4.2	-
Nominal wages[c)]	p	5.0	5.3	5.5	5.4	5.2	5.2
(annual perc. changes)	o	4.4	6.8	6.0	6.8	7.8	-

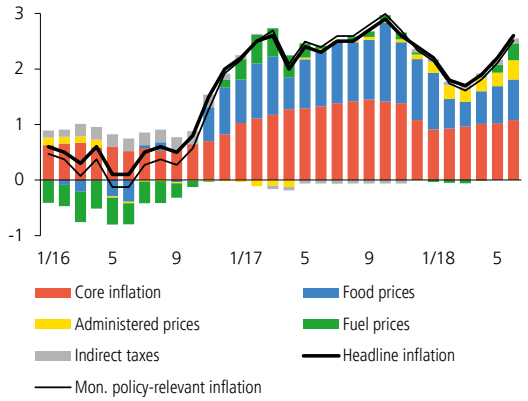
a) The forecast assumed that the exchange rate would stay at CZK 27 to the euro until mid-2017.
b) seasonally adjusted
c) in market sectors

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

CHART III.1.2

STRUCTURE OF INFLATION

Inflation accelerated in Q2, due mainly to higher growth in prices of fuel and food
(annual percentage changes; contributions in percentage points)



Note: Food prices also include prices of alcoholic beverages and tobacco. Indirect taxes relate to non-administered prices.

CHART III.1.3

CORE INFLATION

Core inflation rose slightly owing to faster growth in non-tradables prices after a slowdown at the start of the year
(annual percentage changes)

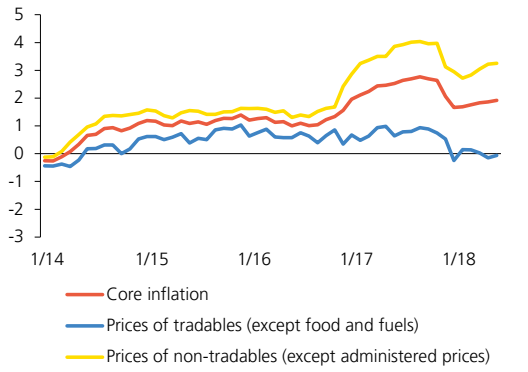
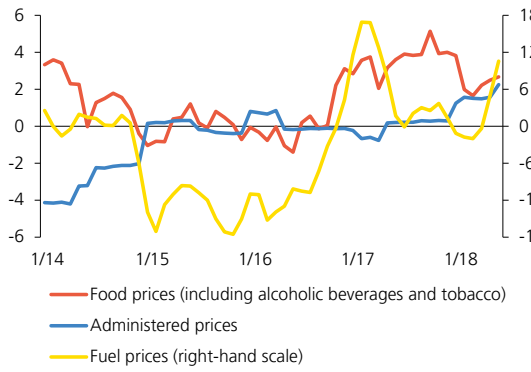


CHART III.1.4

FOOD PRICES, ADMINISTERED PRICES AND FUEL PRICES

Fuel prices have risen the most recently; growth in food and administered prices has been more moderate
(annual percentage changes)



direction. This was one reason why the exchange rate commitment was discontinued slightly earlier than assumed by the forecast. Observed inflation was above the CNB's 2% target (though within the tolerance band) for most of the period. This was a deliberate component of the exit strategy.

III.1.2 Consumer prices and property prices

Consumer price inflation accelerated gradually in 2018 Q2, reaching 2.6% in March (see Chart III.1.2). This mainly reflected movements in traditionally volatile items. A substantial increase in growth was recorded for fuel prices, which responded to the surge in oil prices on world markets and the weakening of the koruna. Food price inflation picked up as well. Administered price inflation also increased due to a rise in electricity prices in June. Core inflation edged up, too. Monetary policy-relevant inflation was around 0.1 percentage point lower than headline inflation.[21]

The slight increase in core inflation in Q2 was due to renewed faster growth in non-tradables prices (see Chart III.1.3). This was related primarily to a renewed pick-up in prices of imputed rents, which occurred despite a gradual slowdown in new apartment prices. Growth in net rents also went up slightly, while growth in prices of recreational and cultural services and prices in restaurants and cafés was broadly flat. Tradables prices recorded a slight year-on-year decline in May and June. This reflected a gradual pass-through of the previous appreciation of the exchange rate[22] to prices in this segment of the consumer basket, which, however, was partially offset by the intensifying inflationary effect of the domestic economy.

Food price inflation accelerated again, reaching 2.7% in June (see Chart III.1.4). The 0.5 percentage point increase in food price inflation in Q2 was due mainly to a rise in the traditionally volatile prices of fruit and vegetables.[23] Growth in prices of tobacco products and alcohol also gradually rose. Nevertheless, agricultural producer prices, which affect prices of other foods in the medium run, switched to a year-on-year decline for the first time in a long time. Growth in meat prices thus slowed by about one-half compared to the previous quarter, while bread product prices even started to fall slightly in year-on-year terms. Prices of sugar recorded a more pronounced decline owing to the abolition of quotas in Europe and an excess of this commodity on global markets. Conversely, prices of dairy products, eggs, oils and fats continued to rise.

21 The tax impact is due to rises in excise duty on cigarettes and tobacco in January 2018. Given their gradual pass-through to consumer prices, these tax impacts materialise during the first three months of the year.
22 Despite the current weakening, the exchange rate against the euro firmed by almost 2% year on year.
23 Prices of vegetables recorded a year-on-year decline on average for the quarter as a whole, but their growth accelerated sharply in 2018 Q2, fostering higher growth in food prices.

Administered price inflation was flat in April and May but surged to 2.2% in June due to higher electricity prices (see Chart III.1.4). They rose by 5.2% in June, mainly reflecting higher electricity generation prices on exchanges. Prices in health care and school catering also showed brisk growth, reflecting last year's rapid growth in food prices with a lag. Conversely, still falling prices of gas and heat for households prevented a larger increase in administered prices.

Higher dollar prices of oil combined with a weaker koruna fostered rapid growth in fuel prices (see Chart III.1.4). Oil prices in world markets surged in Q2. Their year-on-year growth briefly exceeded 50%. Moreover, the recent sizeable depreciation of the koruna against the dollar caused the previous dampening effect of the exchange rate on year-on-year growth in koruna prices to weaken significantly. Overall, this resulted in a year-on-year increase in fuel prices at filling stations of more than 10% in June.

Growth in property transaction prices slowed slightly further in 2018 Q1. Slower growth was recorded both for transaction prices of housing overall (7.7%) and transaction prices of apartments (9.3%; see Chart III.1.5). Growth in transaction prices of apartments remained similar in Prague and the rest of the Czech Republic. By contrast, asking prices continued to rise apace in 2018 Q2 (by 12.2%). As in previous quarters, growth in these prices was higher in the capital (14.2%) than in the rest of the Czech Republic (9.5%).

Growth in the experimental CPIH index slowed sharply to 2.7% in 2018 Q1 (see Chart III.1.6). This index, consisting of prices of both new and older property as well as land (with a relatively large weight – see Box 1 in IR III/2017), thus slowed more significantly than the consumer price index. This was due to the aforesaid slowdown in property price growth, which, however, remains strong. The CPIH index therefore stayed 0.8 percentage point above CPI inflation.

III.1.3 Import prices and producer prices

The decline in import prices slowed sharply due to the weaker koruna and fast growing energy commodity prices (see Chart III.1.7). The weaker exchange rate and fast growing producer prices in the effective euro area were reflected mainly in a smaller negative contribution of prices of imported products, i.e. machinery and transport equipment, miscellaneous manufactured articles and chemicals. The decline in prices of semi-finished products, observed since January, almost disappeared as well. Import prices of mineral fuels rose on the back of the surge in global oil prices and the shift of the koruna to a weaker level.

Briskly growing commodity and energy prices fuelled a rapid rise in industrial producer price inflation (see Chart III.1.8). As in the case of import prices, producer price inflation was affected mainly by the surge in oil prices combined with the weaker koruna. However, the growth in energy commodity prices gradually fed through to related

CHART III.1.5

TRANSACTION AND ASKING PRICES OF HOUSING

The gradual slowdown in property transaction prices continues; asking prices are growing faster
(annual percentage changes)

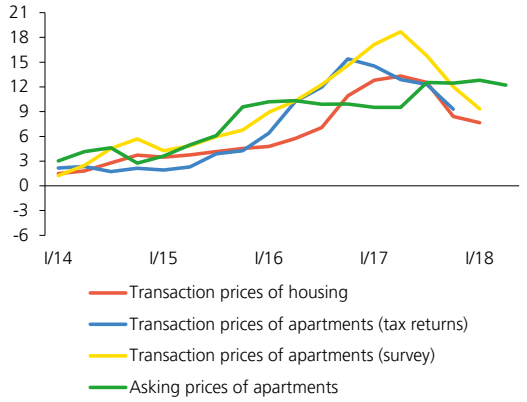


CHART III.1.6

THE EXPERIMENTAL CPIH PRICE INDEX

Growth in the CPIH index slowed significantly in 2018 Q1, but is still above consumer inflation
(annual percentage changes)

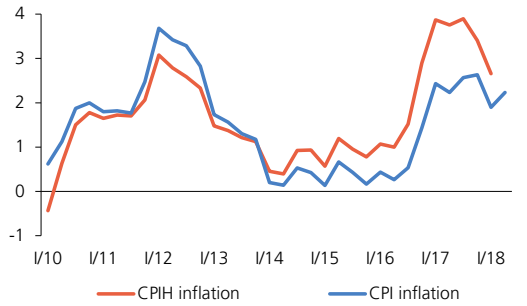
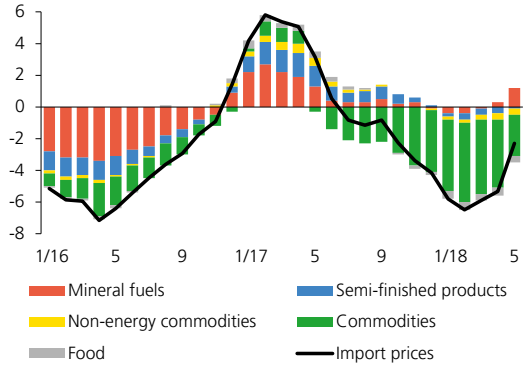


CHART III.1.7

IMPORT PRICES

The more moderate decline in import prices was due to a weaker exchange rate and increasing energy prices
(annual percentage changes; contributions in percentage points)



Note: Food also includes beverages and tobacco.

CHART III.1.8

INDUSTRIAL PRODUCER PRICES

Industrial producer price inflation rose dynamically, due mainly to an increase in the contribution of prices of commodities and energy
(annual percentage changes; contributions in percentage points)

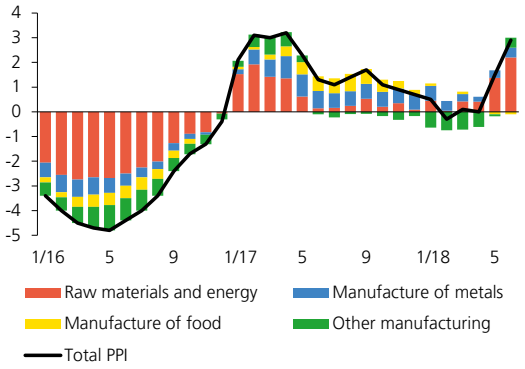


CHART III.1.9

AGRICULTURAL PRODUCER PRICES

The decline in agricultural producer prices was due to a greater extent to livestock production
(annual percentage changes)

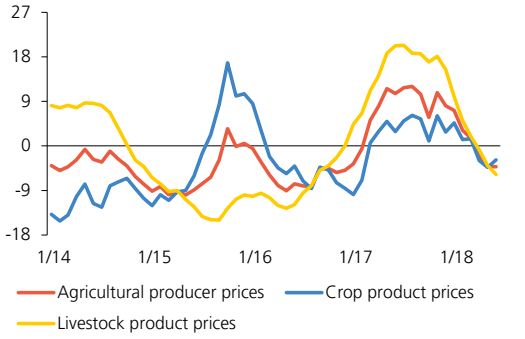
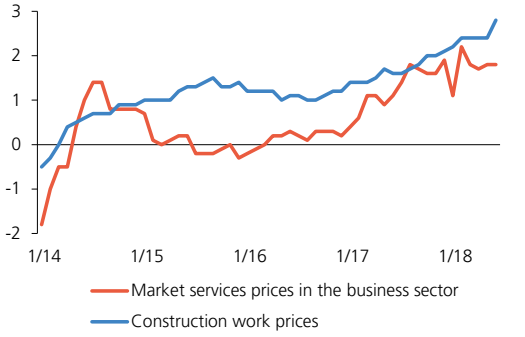


CHART III.1.10

MARKET SERVICES PRICES IN THE BUSINESS SECTOR AND CONSTRUCTION WORK PRICES

Growth in construction work prices rose further, while growth in market services prices was flat
(annual percentage changes)



areas of industrial production (manufacture of chemical products and rubber and plastic products). Growth in prices of metals and fabricated metal products also increased. Prices of electronic, electrical and optical equipment started to rise for the first time in a long time. By contrast, producer prices in the food industry started to go down in year-on-year terms. In terms of use, prices of energy and intermediate goods showed the strongest growth in 2018 Q2. Conversely, non-durable goods recorded a year-on-year decline in prices.

Agricultural producer prices started to decrease in Q2 for the first time in long time. This applied to both livestock and crop production (see Chart III.1.9). The effect of last year's recovery in global demand for agricultural commodities faded. This mainly affected milk and meat prices. At the same time, domestic producer prices increasingly reflected the effect of the stronger koruna in year-on-year terms. Overall, this led to a pronounced and general switch of prices from growth to year-on-year decline, especially in livestock production. Only prices of cattle rose significantly in this category, while the other major commodities showed marked year-on-year decreases. Prices of most main components of crop production, except for cereals and fruit, decreased.

Prices of market services for the business sector grew at a stable pace, while growth in prices of construction work increased (see Chart III.1.10). In market services, marked price growth was recorded by employment placement services, private security agencies and insurance. Constantly falling prices of telecommunication services and storage and transport services had the opposite effect. The price developments reflected domestic inflation pressures in an environment of rising demand and wages. Growth in construction work prices gradually increased to its highest level since early 2009, due in part to higher growth in prices of materials and products used in the construction industry.

III.2 ECONOMIC DEVELOPMENTS

The Czech economy is above its potential output level amid robust economic growth. Household consumption remains a stable basis for GDP growth, reflecting strong income growth and optimistic expectations. Growth in economic activity is also being significantly aided by an increase in investment in the private sector and recently also in the government sector. Buoyant growth in import-intensive private investment coupled with insubstantial growth in exports led to a negative contribution of net exports to GDP growth in 2018 Q1. Favourable trends in economic activity can be observed in most sectors. Growth in gross value added is due increasingly to trade and market services. By contrast, growth in manufacturing is gradually slowing. The positive demand situation is reflected in still high business confidence, even though strong growth in personnel costs is reducing corporate profits. Labour shortages are a growing barrier to growth.

III.2.1 The cyclical position of the economy

The output gap of the Czech economy is positive. According to the small structural model, it was close to 1.5% in 2018 Q1 (see Chart III.2.1). This is consistent with the still tight labour market situation and strong domestic – and to a lesser extent external – demand. Renewed growth in demand in previous years led to the negative output gap closing and turning positive. This was fostered by easy monetary policy and, in 2015, drawdown of EU funds. In 2016, conversely, a negative fiscal impulse resulted in the economy temporarily nearing the potential output level from above. However, this effect faded out last year and the positive output gap opened up again. The output gap will gradually close over the forecast horizon. Tighter monetary conditions and slowing external demand will be felt, while the fiscal impulse will remain positive until 2019. By contrast, an alternative estimate using the production function, which does not take the inflation rate and the effect of monetary policy directly into account, conversely suggests a less open output gap at present but a steady widening of the gap over the entire forecast horizon.

The small structural model currently estimates potential output growth at close to 4%. It accelerated in previous years after the repercussions of the economic crisis subsided and robust growth in economic activity resumed amid muted inflation pressures (see Chart III.2.2). Potential output growth will return to 3% from above at the end of the forecast period. As regards the factors entering the production function, the labour market improved, with a rising participation rate causing faster growth in equilibrium employment. Investment by non-financial corporations also saw renewed growth, although total fixed investment has been volatile in previous years due to the EU funding cycle. Investment will also have a positive effect this year, when a further pick-up in labour productivity growth is also forecasted.

CHART III.2.1

OUTPUT GAP

According to the small structural model, the currently positive output gap will close gradually; according to the production function, conversely, it will gradually increase from its currently low level
(% of potential output)

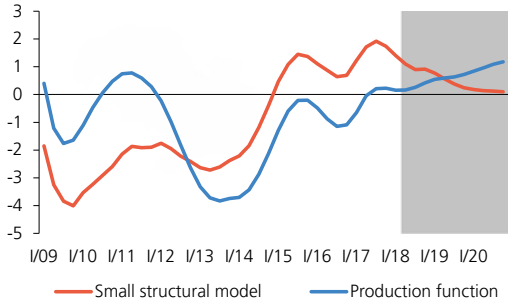


CHART III.2.2

POTENTIAL OUTPUT

According to the small structural model, potential output growth rose to 4% but will gradually slow; according to the production function, it will fluctuate around 3%
(annual percentage changes)

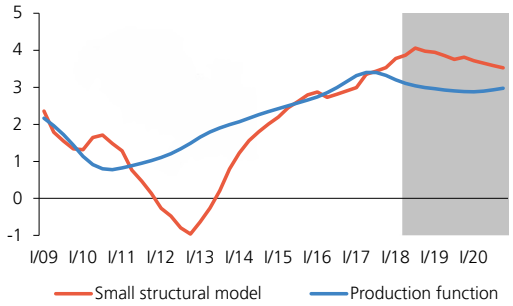


CHART III.2.3

GROSS DOMESTIC PRODUCT

Czech economic growth slowed slightly in 2018 Q1, due mainly to a negative contribution of net exports and a drop in the contribution of change in inventories
(annual percentage changes; contributions in percentage points; seasonally adjusted)

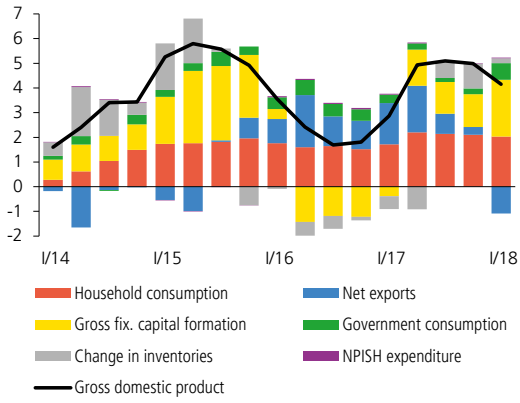
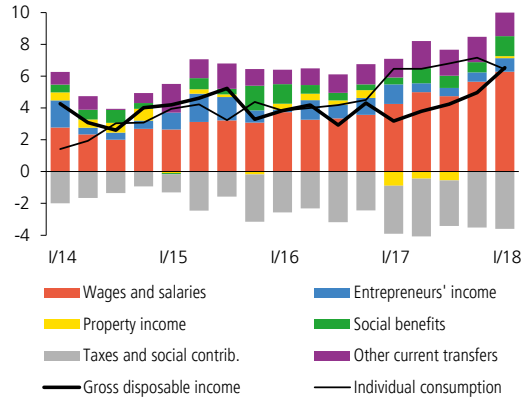


CHART III.2.4

DISPOSABLE INCOME

The faster growth in disposable income was linked mainly with a higher contribution of wages and salaries
(annual percentage changes; contributions in percentage points; current prices; seasonally unadjusted)

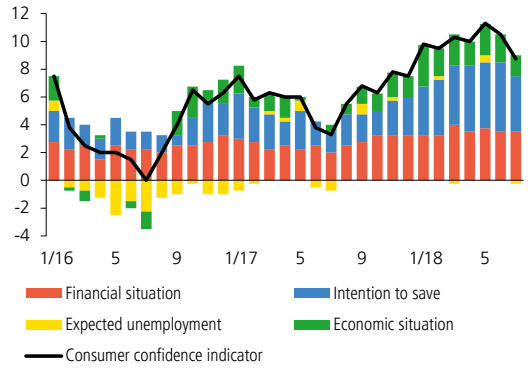


Note: Entrepreneurs' income comprises gross operating surplus and mixed income.

CHART III.2.5

CONSUMER CONFIDENCE BALANCE

Consumer confidence is strong due to a good expected economic and financial situation
(balance is difference in per cent between answers expressing improvement and deterioration in expected and ongoing tendencies)

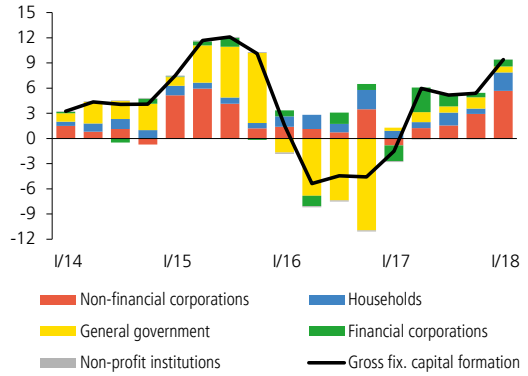


Note: Expectations 12 months ahead.

CHART III.2.6

INVESTMENT BY SECTOR

The strong growth in investment by non-financial corporations was joined by faster growth in household investment
(annual percentage changes; contributions in percentage points; constant prices; seasonally unadjusted)



III.2.2 The expenditure side of the economy

GDP growth slowed slightly to 4.2% in 2018 Q1 (see Chart III.2.3). Although the contribution of household consumption to GDP growth remains strong, it was exceeded in Q1 by that of gross fixed capital formation. Government consumption had also a positive effect. Conversely, the contribution of change in inventories decreased and the contribution of net exports turned negative.

Household consumption continued to grow briskly in all segments. The growth in real household consumption was due mainly to expenditure on short-term consumption and services. Spending on semi-durable and durable goods also made a positive contribution to total growth.

The growth in household consumption reflected strong growth in gross disposable income. Within it, growth in wages and salaries picked up further. The contributions of social benefits and entrepreneurs' income also increased. Growth in gross disposable income was dampened only by higher collection of taxes and social contributions (see Chart III.2.4), consistent with the growth in wages and salaries.

Consumer confidence has fallen over the last two months, but remains high. This is being fostered by a positive outlook for the Czech economy and by expectations of a good financial situation of households (see Chart III.2.5). With incoming rising dynamically, there was an increase in the intention to save, which, according to revised data, has been reflected in growth in the saving rate since last year. Consumer optimism was confirmed by continued strong growth in retail sales in both the food and non-food segments.

Real government consumption growth went up and government investment continued to rise. The stronger government consumption growth recorded at the start of this year was linked mainly with wage growth in the public sector, although non-wage government expenditure increased as well, at both the central government and local government levels. Government investment is being favourably affected by increasing drawdown of EU funds. The largest increase in Q1 was recorded by fixed investment in buildings and structures, which, in terms of the material breakdown of investment activity, usually captures growth in large-scale infrastructure investment.

The growth in private investment was due mainly to investment by non-financial corporations (see Chart III.2.6). As regards the material breakdown, all components contributed to the growth in fixed investment. In addition to investment in buildings and structures, investment in machinery and equipment rose further and investment in transport equipment intensified. This reflects firms' efforts to streamline production amid labour market constraints linked with labour shortages and fast growing wage costs. Despite a slight slowdown in external demand, aggregate demand remains very strong due to its fast growing domestic component.

Household investment, a large proportion of which is in housing, also intensified. This was reflected in the material structure of fixed capital formation, where the contribution of investment in dwellings increased. A surge in apartment starts and completions was observed in 2018 Q1. This represents a partial positive signal about the supply side of the residential property market. Neither the gradual increase in interest rates nor the tightening of credit standards has led to a significant decline in the volume of new mortgage loans yet, so demand remains high.

Compared to the end of 2017, the contribution of additions to inventories was significantly lower. The contributions of stocks of materials and finished goods both decreased. The contribution of work-in-progress remains strong.

Net exports recorded a year-on-year decrease due to export growth slowing more than import growth (see Chart III.2.7). The slower growth in total foreign trade turnover was due predominantly to the slowdown in external demand. This was reflected mainly in lower exports of transport equipment. The previous appreciation of the koruna and capacity constraints on firms also had an effect. Given the high import intensity of exports, imports slowed slightly as well. On the other hand, imports were supported by the strong domestic demand.

III.2.3 The output side of the economy

Growth in gross value added weakened slightly in 2018 Q1, owing mainly to manufacturing (see Chart III.2.8). Its contribution was one-third lower than in the previous quarter. This was probably linked with the drop in external demand observed at the start of this year. However, high production capacity utilisation, especially in the automotive industry, might also have had some effect. Conversely, market services and construction recorded faster growth in value added. Value added rose in all the monitored sectors except for energy and agriculture.

Significant growth in sales was recorded in transport and storage and in information and communication activities. Sales also increased in professional, scientific and technical activities and in administrative and support service activities. Growth in sales in accommodation and food service activities moderated compared to 2017, but remains robust. Conversely, real estate activities recorded a year-on-year drop in sales.

Growth in industrial production decreased in Q1 due to a slowdown in external demand (see Chart III.2.9). This affected almost all branches of manufacturing. Production in the energy and mining and quarrying industries returned to a decline at the start of the year. Data for April and May are indicating renewed quarter-on-quarter growth in industrial production. This is confirmed by a sizeable increase in growth in new orders. However, year-on-year growth in industrial production remains subdued due to base effects.

CHART III.2.7

EXPORTS AND IMPORTS

Exports slowed more strongly than imports and net exports thus decreased year on year
(annual changes in per cent and CZK billions; constant prices; seasonally adjusted)

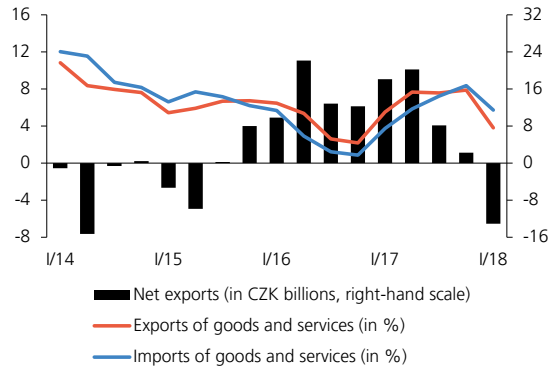
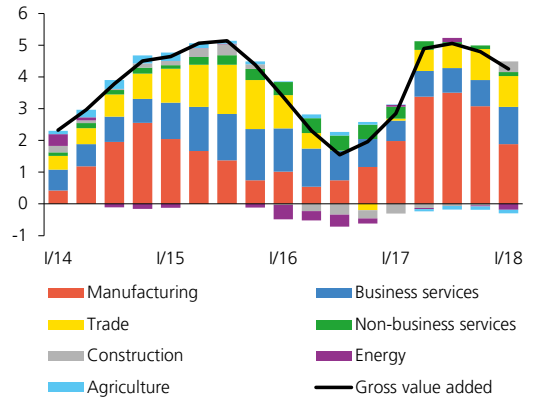


CHART III.2.8

CONTRIBUTIONS OF BRANCHES TO GVA GROWTH

Growth in value added slowed, owing mainly to slower growth in manufacturing
(annual percentage changes; contributions in percentage points; constant prices)



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

CHART III.2.9

INDUSTRIAL PRODUCTION AND CONSTRUCTION OUTPUT

Annual industrial production growth has been affected by base effects over the last two months; growth in construction output continues to be driven by building construction
(annual percentage changes)

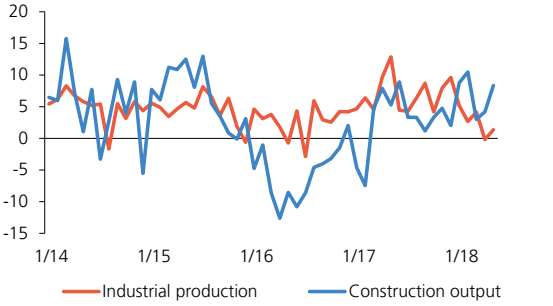


CHART III.2.10

BARRIERS TO GROWTH IN INDUSTRY

Labour shortages are still the main barrier to growth in industrial production
(percentages)

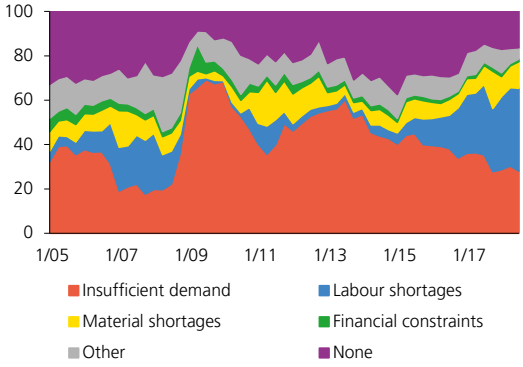


CHART III.2.11

KEY FINANCIAL INDICATORS

The lower output growth and continued rapid growth in wage costs were reflected in a significant decrease in the operating surplus of non-financial corporations in Q1
(annual percentage changes)

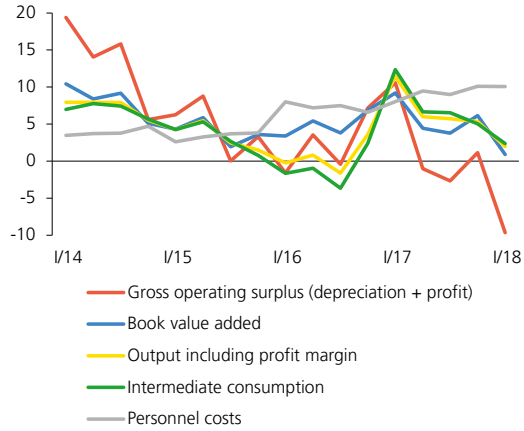
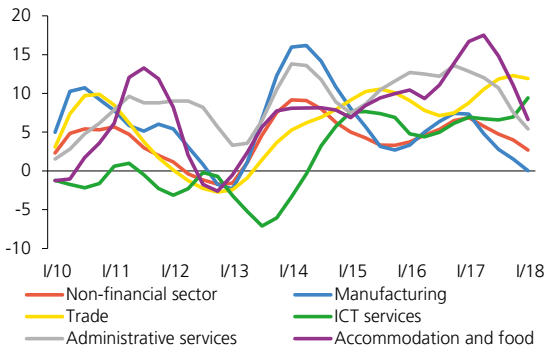


CHART 1 (BOX)

BOOK VALUE ADDED IN THE NON-FINANCIAL CORPORATIONS SECTOR

Growth in book value added in manufacturing halted at the start of 2018, while gross margins in the tertiary sector continue to rise apace
(annual percentage changes; seasonally adjusted; HP trend with lambda 1)



Labour shortages continue to be the most important constraint on the production potential of industrial corporations. According to the results of the CZSO's July business survey, the importance of this constraint increased further (see Chart III.2.10). There was also an increase in the share of corporations facing material shortages. Capacity utilisation in industry remained at around 85%.

Construction output growth picked up in Q1, due mainly to building construction (see Chart III.2.9). The latter also rose briskly in April and May. Although government investment saw renewed growth last year and civil engineering rebounded from its decline, its growth remains muted for now.

Business confidence remains high. Positive sentiment prevails in industry, trade and services. The renewed growth in construction output is helping to reduce pessimism in construction, which long faced falling demand.

The lower output growth resulted in a decline in the gross operating surplus of non-financial corporations amid higher input costs. The surplus recorded a significant year-on-year decrease in Q1 for the first time in a long time, falling by almost 10% (see Chart III.2.11). In addition to still strong growth in wage costs, the lower dynamics of non-financial corporations' income were due to slower output growth, especially in manufacturing. Moreover, renewed growth in prices of energy and non-energy commodities increased the material cost-output ratio. As a result, growth in the book value added of non-financial corporations slowed considerably.

BOX 2 Margins and the price elasticity of aggregate supply

Producers' and sellers' margins and their cyclical properties have a significant effect on the dynamics of inflation. This box therefore presents the results of empirical analyses of the cyclical behaviour of margins in selected branches of the Czech economy. It uses both data on the implicit margins of the non-financial sector as a whole and estimated price spreads for selected goods.

Margins in the business sector can be inferred from book value added and the gross operating surplus.[24] They are closely correlated with gross and net margins respectively. Both showed an increase in year-on-year growth after the CNB introduced its exchange rate commitment (see Charts 1 and 2).[25] The commitment not only had

24 Book value added is the difference between the monetary value of output and production inputs. Gross operating surplus is the difference between book value added and labour costs.
25 This included an increase in both volume and unit margins following the introduction of the exchange rate commitment.

a direct effect on export-oriented sectors such as manufacturing, but also had an indirect upward effect on profitability in the tertiary sector via growth in demand.

Growth in book value added remained robust until 2017, whereas growth in the operating surplus largely halted in 2016. The key factor was rapid growth in wage costs linked with emerging labour market tightness. This effect was particularly evident in manufacturing, which was the first sector to experience shortages of suitable labour. Moreover, after the exit from the exchange rate commitment at the start of 2017 Q2, it was joined by the effect of strong appreciation of the koruna, and the operating surplus in manufacturing began to decline in year-on-year terms. Growth in value added remains positive in the tertiary sector, which is benefiting from robust growth in domestic demand. Nonetheless, growing wage costs are starting to push growth in the operating surplus towards negative values. Given the rising volume of output, this means that unit margins are currently falling in most sectors after several years of growth.

In the case of consumer prices of food products, margins are showing a cyclical pattern and have increased significantly since mid-2015. This can be seen from the spreads between consumer prices of selected food items and the relevant producer prices in agriculture and the food industry. Both spreads, which started to widen clearly for most items in mid-2015, are currently around their peaks. This is evident from Chart 3, which shows an increase in the median spread between consumer prices and producer prices from less than 40% in 2013 to more than 50% today. The spread between consumer prices and agricultural producer prices has grown from 88% in 2013 to almost 100% today, but its overall dynamics are very volatile. The increase in margins can be interpreted as a response to growing demand linked with the recovery of the economy.

Margins on consumer prices of industrial goods are exhibiting a long-running downward trend and weak cyclical dependence. Items roughly corresponding to selected industrial goods can be found in both the consumer price index and the producer price index (using the two- to three-digit breakdowns of the two indices), and a rough estimate of the dynamics of margins, but not their levels, can subsequently be constructed.[26] These margins have long been falling for the overwhelming majority of industrial goods. This is due probably to both long-term real convergence and modern technology enabling consumers to compare prices of goods on the internet, which is forcing retailers to offer lower prices. In addition to this trend, most of the goods under review show cyclical dependence, as the spread in prices increased slightly in 2006 and 2007 and is rising now as well. However,

26 Unlike for food, where the price per natural unit is available, for industrial goods only indices are available, hence the level of margins cannot be constructed.

CHART 2 (BOX)

GROSS OPERATING SURPLUS IN THE NON-FINANCIAL CORPORATIONS SECTOR

Growth in the operating surplus turned negative in manufacturing but remains distinctly positive in some branches of the tertiary sector
(annual percentage changes; seasonally adjusted: HP trend with lambda 1)

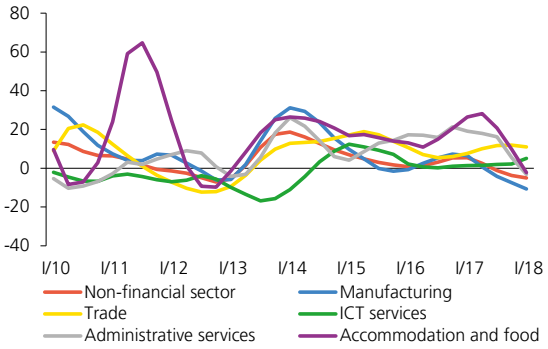
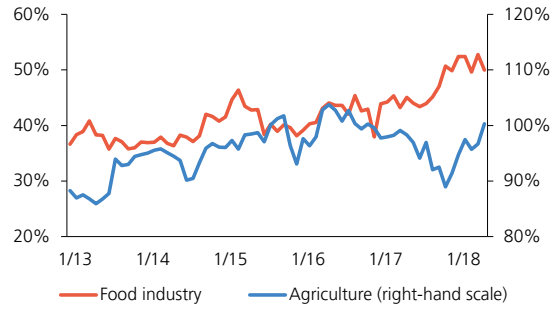


CHART 3 (BOX)

SPREAD BETWEEN CONSUMER AND PRODUCER PRICES OF FOOD PRODUCTS

The spread between consumer and producer prices of food has been widening since 2015 and is currently peaking
(percentages; median of logarithms of ratios of consumer prices to producer prices; source: CZSO, CNB calculation)



the cyclical dynamics are weaker and less pronounced than the trend dynamics.

To sum up, margins in the Czech economy have been affected both by the dynamics of costs and by cyclical demand pressures. Businesses' margins are determined mainly by costs and the exchange rate. The effect of the exchange rate differs greatly across branches of the economy. The appreciation of the koruna is having a downward effect on demand and the koruna value of sales in export-oriented manufacturing, whereas the tertiary sector, which is geared mostly to the domestic market, is benefiting from lower prices of imported inputs. The effect of cyclical demand pressures, which is probably linked with the level of competition in the given market segment, can also be regarded as mixed. This is evidenced by margins on consumer goods, which reflect demand pressures, but with varying intensity for different types of goods. Take, for example, the significantly procyclical margins on food products, which are offered mostly on markets with an oligopolistic structure. By contrast, in the case of industrial goods, where a higher level of competition can be expected, a long-running downward trend in margins dominates the cyclical dynamics. Aggregate demand is therefore price-elastic with regard to the business cycle, but to different degrees for different goods. The economic recovery is thus generating not only cost-push inflation pressures relating to rapid wage growth, but also demand-pull pressures manifesting themselves to various degrees in price margins on individual consumer goods and hence in inflation.

III.3 THE LABOUR MARKET

The Labour Utilisation Composite Index, which increased further above the peak of the previous cycle, is indicating a generally tight situation. Continued economic growth led to a further rise in employment in 2018 Q1 and caused the unemployment rate to reach a new historical low. Firms are finding it increasingly difficult to fill vacancies, as the labour force is not growing sufficiently to meet demand for labour. This situation is exerting strong upward pressure on wages, bolstered by growth in the minimum wage in recent years. Average wage growth in market sectors accelerated to 7.8% in Q1. Wages in non-market sectors rose even faster. By contrast, growth in whole-economy labour productivity slowed markedly in early 2018. Growth in nominal unit labour costs thus increased considerably.

III.3.1 Employment and unemployment

The robust growth in economic activity is pushing up employment and further increasing labour market tightness (see Chart III.3.1). Despite perceived labour shortages, employment growth accelerated in 2018 Q1 (to 1.7%; see Chart III.3.2). The year-on-year employment growth was due to a strong rise in employee numbers, whereas the number of self-employed declined modestly. As regards age structure, around two-thirds of the growth in employment was due to the 45–59 age group, in which a drop in the number of unemployed people accounted for roughly one-third of the employment growth. Alongside the drop in the number of unemployed, growth in the labour force contributed more than one-third to the total employment growth. As a result, the potential labour force reserve, consisting of persons who are not actively seeking a job[27] but are willing to work, fell markedly. Their number declined by a sizeable 19,500 year on year to 113,500. As for the sector structure, the growth in employment in 2018 Q1 was – as in the previous period – due mainly to the tertiary sector, where the strongest contribution came from market services. There, employment grew the most – and at roughly equal rates – in wholesale and retail trade, transport and storage, accommodation services and information activities. Growth in employment in non-market services was driven mainly by public administration and education. In industry, employment increased only very moderately, due to a stagnation of employment in the highest-weight manufacturing sector. Employment went down slightly in cultural, entertainment and recreational activities, administration and construction.

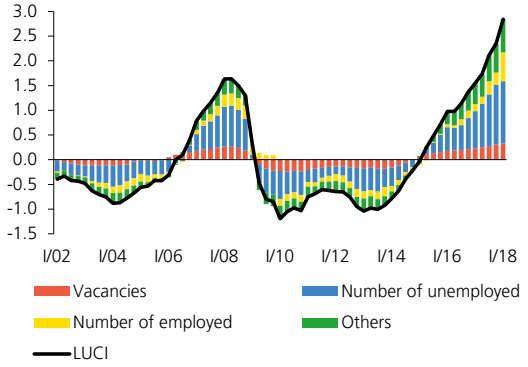
The converted number of employees increased markedly further due to strong growth in the number of employees. The trend observed in 2017 H2, when growth in the converted number of employees had been driven exclusively by a rising number of employees, thus continued into Q1 (see Chart III.3.3). Average hours worked per

27 And are thus not identified as unemployed under the ILO methodology.

CHART III.3.1

LUCI – LABOUR UTILISATION COMPOSITE INDEX

The current labour market tightness markedly exceeds the peak of the previous cycle
(standard deviations from long-term average)



Note: The contributions are a result of the aggregation of the contributions of the individual time series in the given categories.

CHART III.3.2

EMPLOYMENT BREAKDOWN BY BRANCHES

The faster growth in employment was mostly due to the market services sector
(contributions in percentage points to annual change; selected branches; source: LFS)

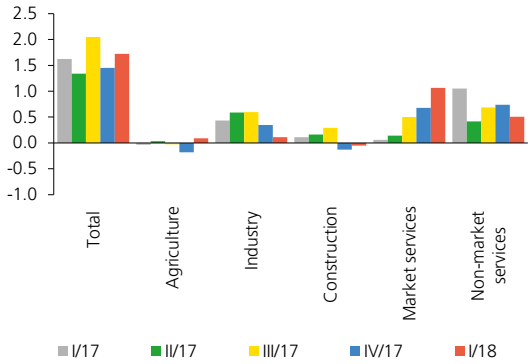


CHART III.3.3

NUMBER OF EMPLOYEES (FULL-TIME EQUIVALENT)

The increase in the number of employees was accompanied by a stagnation of average hours worked
(annual percentage changes; contributions in percentage points)

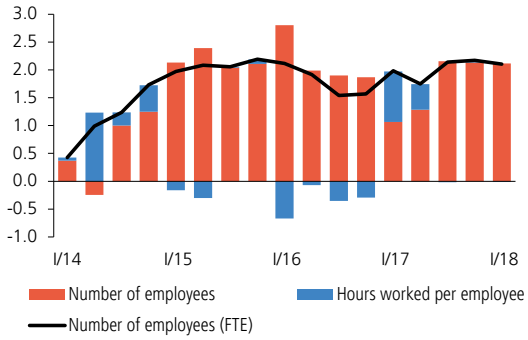


CHART 1 (BOX)

TOTAL EMPLOYMENT

Part-time employment has recently accounted for almost half of the growth in total employment
(annual percentage changes; contributions in percentage points; source: CZSO LFS, CNB calculation)

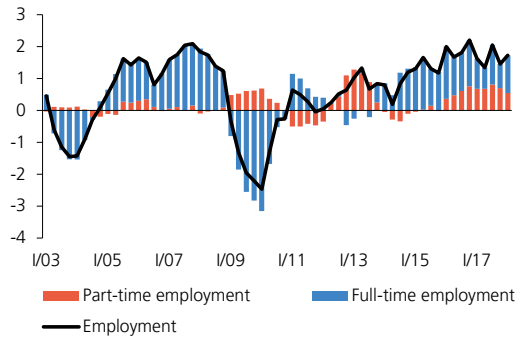


CHART 2 (BOX)

PART-TIME EMPLOYMENT

The growth in part-time employment is due in large measure to women in families with children and to pensioners
(annual percentage changes; contributions in percentage points; source: CZSO LFS, CNB calculation)

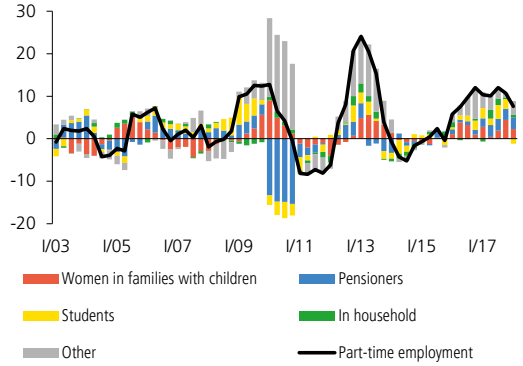
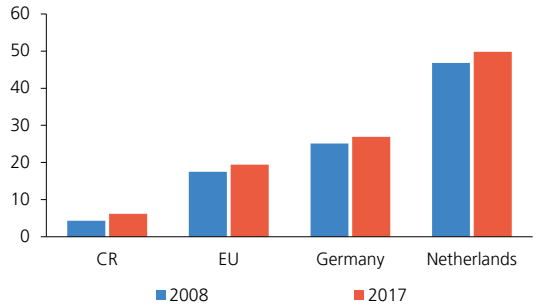


CHART 3 (BOX)

SHARE OF PART-TIME EMPLOYMENT IN THE ECONOMY

The share of part-time employment in the Czech Republic has long been low compared with the EU
(percentages; source: Eurostat)



Note: The proportion of part-time work in employment among people aged 15–64.

employee were flat year on year over the last three quarters despite a significant contribution of part-time work to employment growth (see Box 3). The growth in the converted number of employees was mostly broad-based across economic sectors. Services and manufacturing both contributed significantly. In the latter sector, unlike in the economy as a whole, average hours worked increased.

BOX 3 Part-time employment as a phenomenon of recent years

Part-time jobs have significantly contributed to the strong growth in employment over the last two years. Unlike at the peak of the previous business cycle, when the high growth in employment was due almost exclusively to full-time work, the contributions of part-time and full-time employment have been almost equal in the last two years (see Chart 1). Given the current labour market tightness, this has been associated with a growing participation rate, which is being pushed higher mainly by women, who are increasingly working part-time.

Those for whom employment is their main activity are contributing the most to the growth in part-time employment (see Chart 2). Persons for whom employment is not their main activity account for only about one-third of the growth in part-time work. They are mainly pensioners (including people on disability pensions), students and persons in the household, for whom part-time work is often only a form of extra income.

Among working persons, women in families with dependent children make most use of part-time work. Shorter working hours enable them to better balance family and work life. In general, about three-quarters of part-time work is done by women – mainly those aged 30–44. Men work part-time much less, except in the youngest and oldest age groups. Men aged 60 or over account for more than one-tenth of all part-time employment. Only about 5% of part-time work is done by young men (aged 15–29). Even in these age groups, however, the share of part-time work in employment among men also lags well behind that among women. The age structure of part-time employees thus reveals that women working part-time are mostly mothers returning from parental leave, whereas the largest group among men consists of persons around retirement age.

As regards sector structure, the tertiary sector accounts for about three-quarters of the growth in part-time employment. Within the tertiary sector, the shares of market and non-market services are roughly the same. The tertiary sector is followed a long way behind by industry. However, the number of part-time jobs in this sector has also grown substantially over the past two years owing to the very tight labour market. Over the last two years, the proportion of part-time employment has increased in all the main branches of the economy

except market services (where it has been broadly flat).

By international comparison, the share of part-time employment in the Czech Republic remains very low (see Chart 3). This is true relative to the Netherlands, the leader in the EU, and to Germany and the European average. The differences are caused by several factors, including, for example, different economic structure (a higher proportion of services relative to industry in these countries). They are also related to the rate of economic activity. Despite having risen to a historical high in the Czech Republic, it remains lower for women and in the youngest and oldest age groups (students and people around retirement age), i.e. in categories where the share of part-time employment is typically higher. A further increase in the supply of part-time jobs could thus lead to growth in the rate of economic activity in these categories. The share of part-time employment in Central Europe is similar to that in the Czech Republic due to similar socio-cultural characteristics.

The potential for further growth in the share of part-time employment based on the integration of unemployed persons into the labour market is limited (see Chart 4). However, the overall trend will depend on how the labour force, whose growth has recently been associated with growth in the share of part-time employment, evolves. There is still quite a large set of people among the economically inactive who are not actively seeking a job but are willing to work (around 110,000 persons). These are mainly persons with a higher preference for part-time employment due to their gender and age. However, if people in this group do not become economically active, average working hours in the Czech economy will conversely probably increase. This trend is currently evidenced by flow data showing that employees more often lengthen than shorten their working hours.

A drop in the number of unemployed persons pushed the general unemployment rate down to new historical lows (see Chart III.3.4). The rate was 2.4% in May and remains the lowest in the EU. This is due mainly to a continued decline in the number of long-term unemployed. The strong labour market tightness is being partially eased by moderate growth in the number of economically active persons, which moved the rate of economic activity to 76.8% in May. According to labour offices, the share of unemployed persons dropped further to 3.1% in June. This reflected a decreasing number of available job applicants amid a modest drop in the population aged 15–64.

Vacancies currently outnumber the unemployed. The number of vacancies offered via labour offices exceeded 280,000 in June (seasonally adjusted), a significant proportion of which were in manufacturing. There was also strong demand for new employees in wholesale and retail trade and in construction. In June, almost 60% of vacancies were for employees with basic education and another 20% or so were for employees with vocational training with a school leaving certificate. The robust economic growth simultaneously led to a further, although now

CHART 4 (BOX)

NUMBER OF UNEMPLOYED PREFERRING PART-TIME EMPLOYMENT

The potential for further growth in the proportion of part-time employment among unemployed persons is low
(thousands of persons; source: CZSO LFS, CNB calculation)

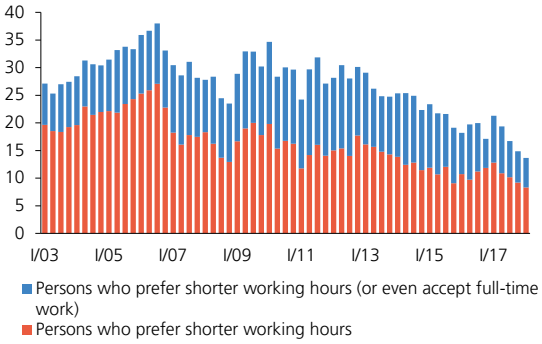


CHART III.3.4

UNEMPLOYMENT INDICATORS

Both the general unemployment rate and the share of unemployed persons are hitting new historical lows
(percentages; seasonally adjusted; source: MLSA, CZSO)

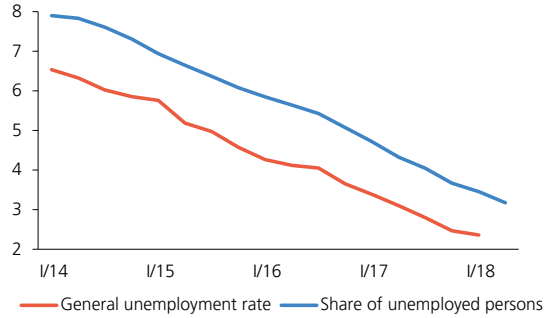


CHART III.3.5

BEVERIDGE CURVE

The number of vacancies reached record highs, exceeding the number of unemployed for the first time in history
(numbers in thousands; seasonally adjusted; annual percentage changes for core inflation; source: MLSA, CZSO)

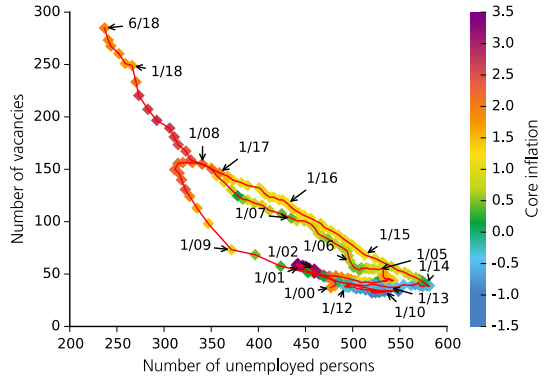


CHART III.3.6

AVERAGE WAGE AND WHOLE-ECONOMY LABOUR PRODUCTIVITY

Labour productivity grew much more slowly than real wages at the start of this year
(annual percentage changes)

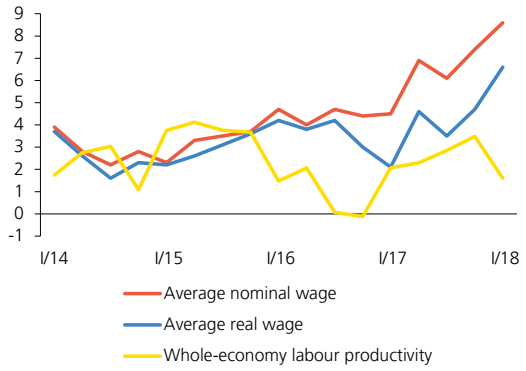


CHART III.3.7

PRODUCTIVITY BY SECTOR

Labour productivity in construction grew markedly for the first time in a long time, while growth in productivity in industry slowed
(annual percentage changes)

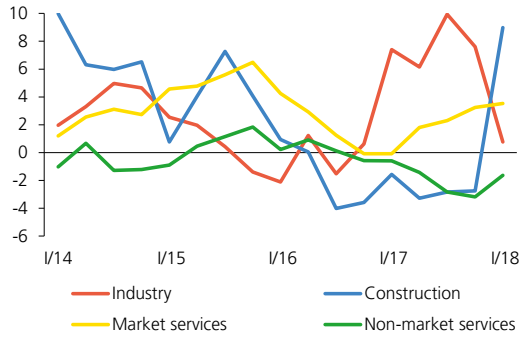
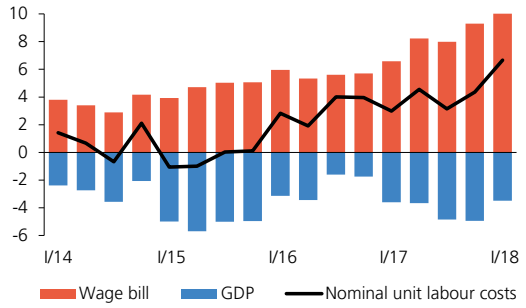


CHART III.3.8

UNIT LABOUR COSTS

Growth in nominal unit labour costs strengthened due to slower economic growth coupled with higher growth in the wage bill
(annual percentage changes; contributions in percentage points)



only moderate, decline in the number of registered unemployed persons. Persons unemployed for one year or more continue to account for more than half of the year-on-year drop. Viewed in terms of the Beveridge curve (see Chart III.3.5), the number of unemployed persons on the labour market is currently at an all-time low and the number of vacancies at an all-time high (amid record-high employment and labour force levels). This is being reflected in marked wage growth, which helped to keep core inflation distinctly positive.

III.3.2 Wages and productivity

Average wage growth accelerated further at the start of this year. Both market and non-market sectors recorded strong earnings growth in Q1. The fast wage growth was also due, among other things, to an increase in the minimum wage from CZK 11,000 to CZK 12,200 at the start of 2018. Nominal wages in market sectors rose by 7.8% year on year. Wages went up at an above-average rate in mining and quarrying, electricity generation, transport, wholesale and retail trade, real estate activities and health care. Non-market sectors recorded even faster growth (12.2%). Wages rose fastest in the culture sector. Wage growth in public administration and defence and education was only slightly lower. As for Q2, new data from industry indicate that the average nominal wage will continue to rise apace.

Labour productivity slowed due to lower economic growth and higher employment growth. Whole-economy labour productivity rose by 1.6% in Q1 (see Chart III.3.6). The productivity trends were mixed across sectors (see Chart III.3.7). Productivity growth in market services strengthened only slightly. The switch to strong year-on-year growth in construction was due mainly to GVA growth. By contrast, productivity growth slowed sharply in industry, including manufacturing. This reflected a – probably temporary – drop in growth in this part of the economy at the start of this year. Productivity in non-market services continued to fall in year-on-year terms.

Growth in nominal unit labour costs increased markedly due to slower GDP growth coupled with higher growth in the wage bill. Nominal unit labour costs increased by 6.7% year on year (see Chart III.3.8). Labour costs per unit of output rose the fastest in non-market services (by more than 13%). The growth in other sectors was significantly lower. Nominal unit labour costs grew by 5.6% in industry and 3.9% in market services. By contrast, in construction they recorded a modest drop of 1.3% due to significant growth in productivity.

III.4 FINANCIAL AND MONETARY DEVELOPMENTS

The increases in the CNB's monetary policy rates at the end of June and early August 2018 represented further steps towards the return of monetary policy to a neutral stance. Interest rates on the financial market, and gradually also some client interest rates, responded to the raising of the two-week repo rate. The koruna mostly depreciated during Q2 owing to global factors. Growth in loans to the private sector slowed, mainly because of a significant drop in growth in loans to non-financial corporations. Growth in loans to households has also slackened recently but remains robust. A drop in growth in mortgage loans is being partly offset by a pick-up in consumer credit. Consistently with this, M3 growth also slowed further.

III.4.1 Monetary policy and interest rates

The CNB Bank Board raised monetary policy rates at its June and August meetings.[28] These decisions were the fourth and the fifth increases in domestic interest rates since the exit from the CNB's exchange rate commitment in early April 2017. Nominal interest rates thus continue to move gradually towards a neutral stance.

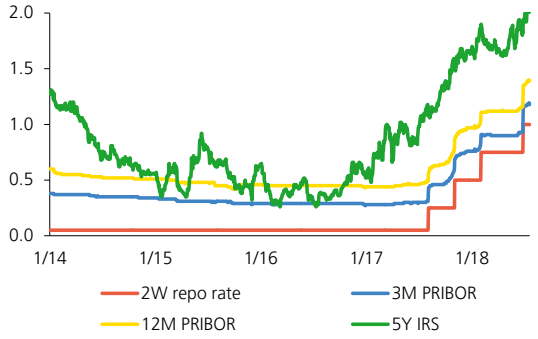
Money market rates responded to the increase in the CNB's policy rates by rising across the board (see Chart III.4.1). The 3M PRIBOR was 0.9% on average in 2018 Q2 and has stabilised just below 1.2% since the start of July. The money market premium, as measured by the spread between the 3M PRIBOR and the 2W repo rate, remained just below 0.2 percentage point. FRA derivative rates started to edge up at the end of May. The market thus responded to comments made by several Bank Board members suggesting an earlier increase in the CNB's key rates compared with the forecast. A further upward shift occurred after the CNB's key rates were raised in late June. The end-July outlook for FRA rates implied expectations of smooth growth in the 3M PRIBOR over the one-year horizon.

Domestic IRS rates and government bond yields went up slightly at all maturities. They responded initially to the aforementioned communications of some Bank Board members, which reflected a weaker koruna and higher inflation for May compared with the forecast, and subsequently also to the increase in the CNB's key rates. In addition, domestic rates with maturities of over one year were affected by developments on foreign markets, where geopolitical tensions intensified (the political situation in Italy, the USA's withdrawal from the agreement with Iran, tensions in the Middle East, concerns about trade wars and US diplomatic talks with North Korea). Overall, domestic IRS rates have risen by 0.5 percentage point since the start of April 2018 (see Chart III.4.1), whereas rates in the euro area ultimately remained almost unchanged

CHART III.4.1

INTEREST RATES

Financial market interest rates responded to the increase in the CNB's policy rates by rising at all maturities
(percentages)



28 The two-week repo rate was set at 1.25%, the Lombard rate at 2.25% and the discount rate at 0.25% with effect from 3 August 2018.

CHART III.4.2

GOVERNMENT BOND YIELD CURVE

The yield curve moved to a higher level
(percentages)

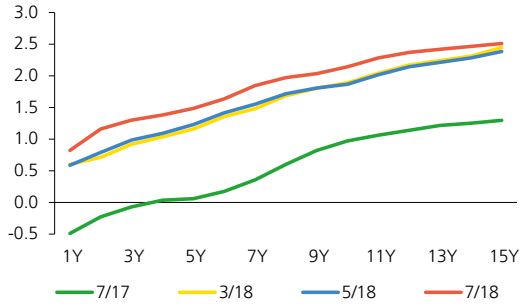


CHART III.4.3

INTEREST RATES ON MORTGAGE LOANS

Unlike long-term financial market rates, interest rates on new mortgage loans stopped rising
(new business, including increases; percentages)

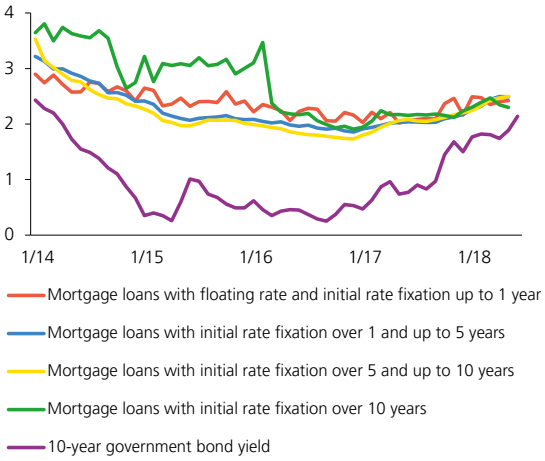
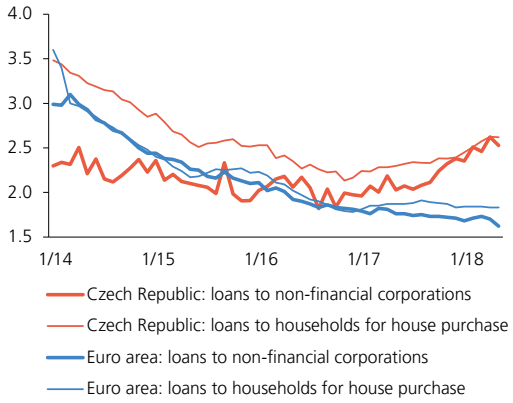


CHART III.4.4

CLIENT INTEREST RATES IN THE CZECH REPUBLIC AND THE EURO AREA

The differences between client interest rates in the Czech Republic and the euro area continue to grow
(cost of borrowing indicators; percentages)



despite showing volatility and those in the USA rose only slightly. Domestic government bond yields also moved higher due to current negative sentiment towards emerging markets and expectations of another early CNB rate hike (see Chart III.4.2).

In the primary market, the government's efforts to raise funds by issuing short-term T-bills at the expense of government bonds weakened noticeably. This was probably due mainly to growth in yields in T-bill auctions, although these were still below the corresponding PRIBOR. However, the relative advantageousness compared to yields on government bonds with longer maturities decreased compared with the previous period.[29] Non-residents' total holdings of government bonds rebounded,[30] probably because of the current weakening of the koruna and speculation on future appreciation. According to Ministry of Finance data, the share of non-residents in total government bond holdings was about 40%, or CZK 580 billion in absolute terms, at the end of June.

Growth in mortgage rates halted – probably temporarily. The average rate on new mortgages stabilised at 2.5% in May (see Chart III.4.3), due mainly to springtime special offers and related competition on the mortgage market. Rates on new mortgage loans rose by 0.7 percentage point compared with the end of 2016, when they reached a historical low. The mortgage rate has thus been rising at a much slower pace than long-term financial market rates.

Growth in the interest rate on loans to non-financial corporations also slowed. In May, the average rate was 2.5%, 0.9 percentage point higher than in the euro area (see Chart III.4.4). Real client rates on loans to Czech corporations and loans to households for house purchase are close to zero due to higher inflation.

Bank financing costs increased due to growth in market interest rates. The financial market yield curve is higher than it was in mid-2017. Banks' costs of external funds are thus now more than twice as high. By contrast, interest rates on total deposits remain very low – at 0.3% for households and 0.1% for non-financial corporations.

III.4.2 The exchange rate

The koruna weakened significantly against the euro and most other world currencies during 2018 Q2. The previous sustained appreciation, observed from the exit from the exchange rate commitment until the end of 2017, switched to relative stability at the start of this year. However, the koruna began to depreciate in mid-April, weakening from around CZK 25.3 to the euro to stand briefly just above CZK 26 to

29 T-bills totalling CZK 131 billion and government bonds with maturities of over one year amounting to CZK 63 billion were issued in 2018 Q1. The volumes in 2018 Q2 were CZK 38 billion and CZK 110 billion respectively.
30 The same is true of non-residents' holdings of short-term deposits at banks.

the euro at the end of June (see Chart III.4.5). The average rate in Q2 was CZK 25.6 to the euro. This still means an appreciation in year-on-year terms, but to a much smaller extent than in the previous period. In the first three weeks of the summer holidays, the koruna stayed just below CZK 26 to the euro.

The change in the koruna exchange rate trend in Q2 was due mainly to global factors. These related to a shift in perceptions of economic and particularly monetary policy developments and the outlook in major world regions. After a period of general optimism stemming from favourable developments in the euro area, financial market participants turned their attention to the continuing divergence of monetary policies in the USA and the euro area. The US Fed raised its policy rate at the end of March and again at the June meeting, whereas the ECB extended its asset purchase programme and announced that rates in the euro area would remain unchanged for more than a year. The political crisis in Italy after the March parliamentary elections there triggered a sell-off of European assets.[31] Domestic factors fostered a depreciation of the koruna at the end of Q2, when weaker GDP growth figures were published for Q1. By contrast, the exchange rate did not weaken any further after the CNB's June decision to raise the repo rate.

The koruna depreciated considerably more against the dollar than it did against the euro in the same period (see Chart III.4.5). This was due to a parallel weakening of the single European currency against the dollar, especially between mid-April and the end of May (see section II.1.3 for details). The koruna depreciated from CZK 20.4 to CZK 22.4 to the dollar in that period. During Q2, it weakened by 8.1% against the dollar. The average exchange rate against the dollar in that quarter was CZK 21.5. Despite that, the koruna remains stronger against the dollar compared to its levels in the previous year (currently 10.7% stronger). In the first few weeks of July, the rate fluctuated around CZK 22.2 to the dollar.

The June hike in the CNB's rates led to a further rise in the short-term interest rate differential against the euro. The difference between 3M money market rates widened to 1.5 percentage point in response to the June decision (see Chart III.4.6). The short-term koruna-dollar interest rate differential, which has been negative for more than two years now, narrowed by the same amount, responding only to the June change in the CNB's interest rates. The hike in US policy rates two weeks earlier did not affect the 3M USD LIBOR significantly, as it had been fully expected. The negative short-term koruna-dollar interest rate differential thus moved to 1.2 percentage point.

The nominal effective exchange rate of the koruna weakened during Q2, but remains stronger in year-on-year terms (see

31 Most European currencies, including the euro, weakened on global markets in the same period.

CHART III.4.5

CZK/EUR AND CZK/USD EXCHANGE RATES

The koruna showed a change in trend in Q2 and depreciated against most world currencies, doing so more strongly against the dollar than against the euro

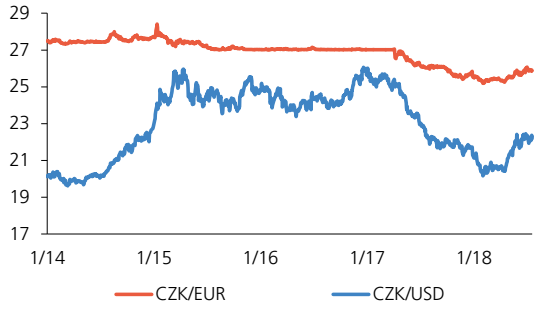


CHART III.4.6

INTEREST RATE DIFFERENTIALS

The interest rate differential of the koruna vis-à-vis the euro increased due to the June increase in CNB rates, while the negative differential vis-à-vis the dollar narrowed by a similar amount

(percentage points)

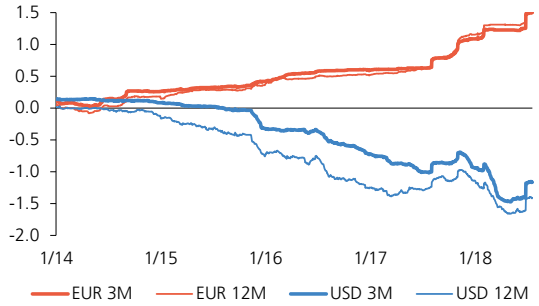
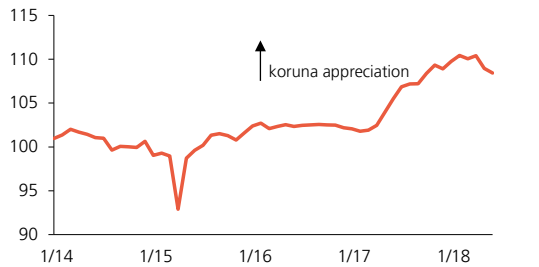


CHART III.4.7

NOMINAL EFFECTIVE KORUNA EXCHANGE RATE

The koruna exchange rate weakened in effective terms in Q2 but remains stronger in year-on-year terms

(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.4.8

LOANS TO THE PRIVATE NON-FINANCIAL SECTOR

Growth in loans to the private sector slowed due to a significant slowdown in growth in corporate loans
(annual percentage rates of growth)

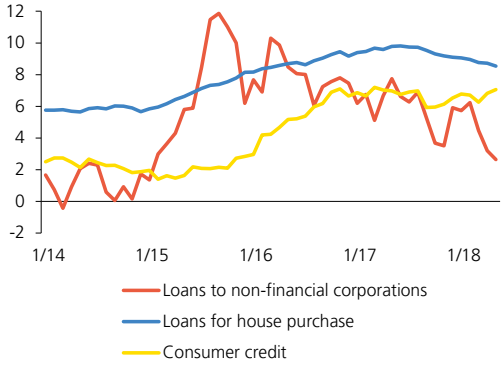


CHART III.4.9

CREDIT STANDARDS OF BANKS

Credit standards for loans for house purchase continue to tighten in response to the CNB's macroprudential measures
(net percentages of banking market; positive value = tightening, negative value = easing)

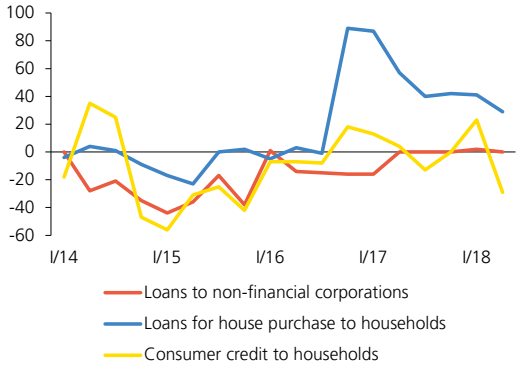


CHART III.4.10

LOANS TO HOUSEHOLDS

The slowdown in growth in loans for house purchase was reflected in slower growth in total loans to households
(annual percentage rates of growth; contributions in percentage points; end-of-quarter data; most recent data are for May 2018)

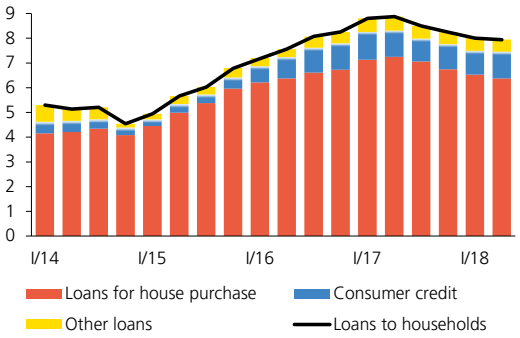


Chart III.4.7). The koruna weakened most strongly against the dollar and Asian currencies (the won, the renminbi and the yen) in Q2. It weakened much less, or even strengthened, against European currencies, which were hit by negative investor sentiment in that period. It strengthened against the zloty, the forint and the rouble, which were affected by the change in global sentiment even more than the koruna. Nonetheless, the nominal effective exchange rate remains stronger than a year ago (by 2.8%). The same goes for the exchange rates of the koruna against the individual currencies of the NEER basket. Given the weights of the currencies in the index, the most significant factor is still the year-on-year strengthening of the koruna against the euro, even though it was one of the most moderate in nominal terms, followed by a significant appreciation against the rouble (by almost 13% year on year).

III.4.3 Credit

Growth in loans to the private sector slowed to 5.5% as a result of a significant slowdown in growth in corporate loans. Growth in loans to households has recently slowed in the case of mortgage loans. By contrast, it has gone up slightly in the consumer credit segment (see Chart III.4.8). According to the Bank Lending Survey, banks further tightened their credit standards for house purchase loans while easing their standards for consumer credit. Standards in the segment of loans to non-financial corporations remain unchanged (see Chart III.4.9). Banks expect slight growth in demand for corporate loans and consumer credit and a drop in household demand for house purchase loans in Q3.

The tightening of credit standards combined with high property prices is slowing down growth in loans for house purchase (see Chart III.4.8). The recent slower growth in loans for house purchase is due mainly to a tightening of the CNB's macroprudential measures and rising mortgage rates. The approaching October date when the CNB's new recommendations setting the DTI and DSTI limits come into force is having the opposite effect. Growth in mortgages thus slowed further to 9% in May. This was reflected in growth in total loans to households (see Chart III.4.10). According to Fincentrum Hypoindex, the estimated number and volume of mortgages provided in June reached the highest levels observed this year. In year-on-year terms, however, they were lower.

Consumer credit is maintaining a high rate of growth of around 7% for the second year now. Demand was positively affected in Q2 by an increase in the consumption expenditure of households, favourable consumer confidence and a decline in interest rates in this credit market segment.

Total household indebtedness remains close to a historical high. The ratio of loans and other household obligations to aggregate disposable income has been close to 66% since mid-2017.

Growth in loans to non-financial corporations slowed to 2.6%, mainly as a result of a drop in loans to developers. Banks also

recorded a decline in loans in mining and energy (see Chart III.4.11). By contrast, credit growth continues to rise apace in manufacturing and wholesale and retail trade. The volume of foreign currency loans remains high and above the long-term average, mainly because of previous increased balance-sheet hedging by firms. Their share in total corporate loans has recently stabilised close to 30%.

III.4.4 Money

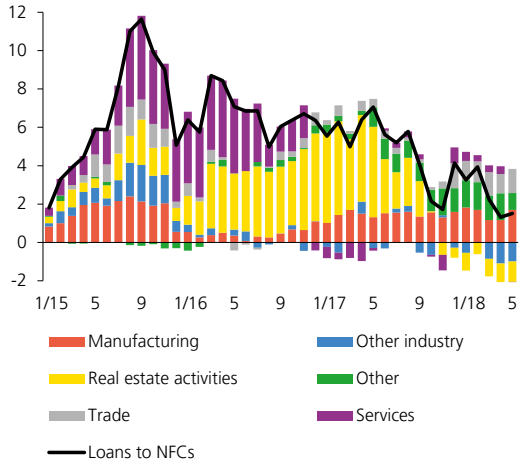
M3 growth slowed further to 6% in Q2 (see Chart III.4.12). M3 growth has thus recently corrected the high levels recorded before the exit from the exchange rate commitment and returned close to the average level observed since 2009. Highly liquid overnight deposits remain the biggest contributor to M3 growth. Turning to the sector breakdown, the biggest contribution came from household deposits, whose growth increased slightly in May after a previous slowdown. By contrast, growth in deposits of non-financial corporations moderated further year on year.

CHART III.4.11

LOANS TO NON-FINANCIAL CORPORATIONS BY SECTOR OF ACTIVITY

The growth in loans to non-financial corporations is being slowed by a drop in loans to developers and loans in mining and energy

(annual percentage changes; contributions in percentage points)



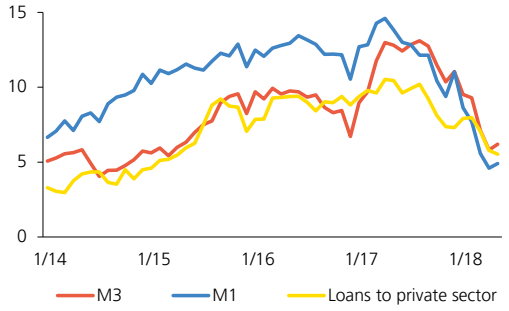
Note: Other comprises transport, construction and agriculture

CHART III.4.12

MONETARY AGGREGATES AND LOANS

Growth in monetary aggregates slowed further, returning close to the credit growth rate

(annual percentage rates of growth)



ABBREVIATIONS

AEIS	Average Earnings Information System
BoE	Bank of England
BoJ	Bank of Japan
CEB	Czech Export Bank
CF	Consensus Forecasts
CNB	Czech National Bank
CPIH	experimental consumer price index incorporating prices of older properties
CPI	consumer price index
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
ESR	electronic sales registration
ESCB	European System of Central Banks
EU	European Union
EUR	euro
EURIBOR	Euro Interbank Offered Rate
FDI	foreign direct investment
Fed	US central bank
FMIE	Financial Market Inflation Expectations
FRA	forward rate agreement
GBP	pound sterling
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
IEA	International Energy Agency
ICT	information and communications technology
ILO	International Labour Organization
IMF	International Monetary Fund
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	Organization of the Petroleum Exporting Countries
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).

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.

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.

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.

Goods and services balance: The sum of the trade balance and the services balance.

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 changes 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.

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. 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 also 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										
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
DEMAND AND SUPPLY												
Gross domestic product												
GDP	CZK bn, constant p. of 2010, seas. adjusted	3958.4	4028.9	3999.6	3980.2	4088.2	4308.3	4409.9	4607.3	**4756.6**	**4916.7**	**5080.0**
GDP	%, y-o-y, real terms, seas. adjusted	2.1	1.8	-0.7	-0.5	2.7	5.4	2.4	4.5	**3.2**	**3.4**	**3.3**
Household consumption	%, y-o-y, real terms, seas. adjusted	1.0	0.3	-1.2	0.5	1.8	3.8	3.5	4.4	**3.8**	**3.2**	**3.2**
Government consumption	%, y-o-y, real terms, seas. adjusted	0.5	-3.2	-2.0	2.5	1.1	1.9	2.7	1.3	**3.8**	**2.9**	**2.3**
Gross capital formation	%, y-o-y, real terms, seas. adjusted	4.2	1.8	-3.9	-5.1	8.5	13.0	-4.3	3.8	**7.2**	**4.1**	**3.9**
Gross fixed capital formation	%, y-o-y, real terms, seas. adjusted	1.0	0.9	-2.9	-2.5	3.9	10.4	-3.3	3.7	**8.3**	**5.1**	**4.6**
Exports of goods and services	%, y-o-y, real terms, seas. adjusted	14.3	9.2	4.5	0.2	8.7	6.2	4.1	7.2	**4.3**	**7.6**	**8.4**
Imports of goods and services	%, y-o-y, real terms, seas. adjusted	14.4	6.7	2.8	0.1	10.1	6.9	2.6	6.3	**6.4**	**8.1**	**8.6**
Net exports	CZK bn, constant p. of 2010, seas. adjusted	121.1	193.5	246.5	250.4	233.8	226.8	283.9	332.7	**276.2**	**280.8**	**293.2**
Coincidence indicators												
Industrial production	%, y-o-y, real terms	8.6	5.9	-0.8	-0.1	5.0	4.3	3.4	6.5	**-**	**-**	**-**
Construction output	%, y-o-y, real terms	-7.4	-3.6	-7.6	-6.7	4.3	6.8	-5.6	3.3	**-**	**-**	**-**
Receipts in retail sales	%, y-o-y, real terms	1.5	1.7	-1.1	1.2	5.5	7.7	6.1	4.5	**-**	**-**	**-**
PRICES												
Main price indicators												
Inflation rate	%, end-of-period	1.5	1.9	3.3	1.4	0.4	0.3	0.7	2.5	**-**	**-**	**-**
Consumer Price Index	%, y-o-y, average	1.5	1.9	3.3	1.4	0.4	0.3	0.7	2.5	**2.3**	**2.3**	**2.0**
Regulated prices (18.70%)*	%, y-o-y, average	2.6	4.7	8.6	2.2	-3.0	0.0	0.2	0.0	**2.0**	**2.1**	**1.4**
Food prices (including alcoholic beverages and tobacco) (24.58%)*	%, y-o-y, average	0.9	4.3	2.9	3.1	1.8	0.0	0.2	3.6	**2.2**	**2.4**	**2.5**
Core inflation (53.32%)*	%, y-o-y, average	-1.2	-0.4	-0.3	-0.5	0.5	1.2	1.2	2.4	**1.9**	**2.2**	**2.1**
Fuel prices (3.39%)*	%, y-o-y, average	12.8	7.2	6.0	-2.1	0.2	-13.5	-8.5	6.7	**6.4**	**4.1**	**-1.5**
Monetary policy inflation (excluding tax changes)	%, y-o-y, average	0.4	1.9	2.1	0.6	0.2	0.2	0.5	2.5	**2.2**	**2.3**	**2.0**
GDP deflator	%, y-o-y, seas. adjusted	-1.4	0.0	1.5	1.4	2.5	1.2	1.3	1.5	**2.3**	**1.7**	**2.2**
Partial price indicators												
Industrial producer prices	%, y-o-y, average	1.2	5.6	2.1	0.8	-0.8	-3.2	-3.3	1.8	**1.8**	**1.5**	**1.1**
Agricultural prices	%, y-o-y, average	7.1	22.1	3.3	-12.1	4.7	-6.2	-6.0	7.4	**-1.5**	**1.9**	**2.0**
Construction work prices	%, y-o-y, average	-0.2	-0.5	-0.7	-1.1	0.5	1.2	1.1	1.7	-	-	-
Brent crude oil (in USD/barrel)	%, y-o-y, average	28.4	38.2	0.7	-2.6	-8.5	-46.1	-16.0	21.7	**35.4**	**0.2**	**-5.6**
LABOUR MARKET												
Average monthly wage	%, y-o-y, nominal terms	2.2	2.5	2.5	-0.1	2.9	3.2	3.7	7.0	**8.6**	**6.8**	**5.4**
Average monthly wage	%, y-o-y, real terms	0.7	0.6	-0.8	-1.5	2.5	2.9	3.0	4.4	**6.4**	**4.5**	**3.4**
Number of employees	%, y-o-y	-2.2	0.0	-0.1	1.6	0.6	2.2	2.1	1.7	**1.6**	**0.9**	**0.6**
Unit labour costs	%, y-o-y	-1.5	0.3	3.4	1.0	0.9	-0.5	3.2	3.8	**7.0**	**4.1**	**2.6**
Unit labour costs in industry	%, y-o-y	-6.2	0.7	5.9	5.1	-0.4	1.8	4.3	-0.4	-	-	-
Aggregate labour productivity	%, y-o-y	3.3	2.1	-1.2	-0.8	2.2	3.8	0.8	2.7	**1.6**	**2.8**	**2.6**
ILO general unemployment rate	%, average, age 15–64	7.4	6.8	7.0	7.1	6.2	5.1	4.0	2.9	**2.3**	**2.1**	**1.9**
Share of unemployed persons (MLSA)	%, average	7.0	6.7	6.8	7.7	7.7	6.5	5.5	4.2	**3.2**	**3.0**	**2.9**
PUBLIC FINANCE												
Government budget balance (ESA2010)	CZK bn, current prices	-166.0	-109.9	-159.6	-51.1	-90.6	-27.9	34.6	80.6	**84.8**	**81.6**	**97.5**
Government budget balance / GDP**	%, nominal terms	-4.2	-2.7	-3.9	-1.2	-2.1	-0.6	0.7	1.6	**1.6**	**1.5**	**1.7**
Government debt (ESA2010)	CZK bn, current prices	1480.2	1606.5	1805.4	1840.4	1819.1	1836.3	1754.9	1749.1	**1726.3**	**1697.6**	**1660.3**
Government debt / GDP**	%, nominal terms	37.4	39.8	44.5	44.9	42.2	40.0	36.8	34.7	**32.4**	**30.4**	**28.1**
EXTERNAL RELATIONS												
Current account												
Trade balance	CZK bn, current prices	40.4	75.5	123.8	167.0	220.0	188.0	245.7	240.9	**225.0**	**235.0**	**250.0**
Trade balance / GDP	%, nominal terms	1.0	1.9	3.0	4.1	5.1	4.1	5.2	4.8	**4.2**	**4.2**	**4.2**
Balance of services	CZK bn, current prices	78.5	81.3	77.6	70.4	55.7	78.0	107.6	122.0	**130.0**	**135.0**	**140.0**
Current account	CZK bn, current prices	-141.8	-84.8	-63.3	-21.8	7.9	11.3	74.2	54.2	**40.0**	**50.0**	**55.0**
Current account / GDP	%, nominal terms	-3.6	-2.1	-1.6	-0.5	0.2	0.2	1.6	1.1	**0.8**	**0.9**	**0.9**
Foreign direct investment												
Direct investment	CZK bn, current prices	-95.0	-46.8	-121.3	7.4	-80.4	49.7	-186.5	-135.3	**-80.0**	**-60.0**	**-60.0**
Exchange rates												
CZK/USD	average	19.1	17.7	19.6	19.6	20.8	24.6	24.4	23.4	**21.4**	**20.5**	**19.7**
CZK/EUR	average	25.3	24.6	25.1	26.0	27.5	27.3	27.0	26.3	**25.5**	**24.6**	**24.2**
CZK/EUR	%, y-o-y, real (CPI euro area), avg.	-4.5	-1.9	1.5	3.5	6.3	-1.2	-1.3	-3.4	**-3.4**	**-3.9**	**-1.0**
CZK/EUR	%, y-o-y, real (PPI euro area), avg.	-3.9	-3.0	2.2	2.4	5.1	-0.2	0.1	-1.7	**-1.8**	**-3.5**	**-0.7**
Foreign trade prices												
Prices of exports of goods	%, y-o-y, average	-1.0	1.7	2.9	1.2	3.5	-1.7	-3.1	-0.1	**-0.6**	**-0.8**	**0.4**
Prices of imports of goods	%, y-o-y, average	2.0	4.3	4.2	-0.2	1.9	-1.9	4.0	0.9	**-1.0**	**-0.7**	**-0.3**
MONEY AND INTEREST RATES												
M3	%, y-o-y, average	0.2	1.0	5.1	5.1	5.1	7.3	9.1	11.7	**7.1**	**8.2**	**9.2**
2W repo rate	%, end-of-period, CNB forecast = average	0.75	0.75	0.05	0.05	0.05	0.05	0.05	0.50	**1.23**	**1.60**	**2.21**
3M PRIBOR	%, average	1.3	1.2	1.0	0.5	0.4	0.3	0.3	0.4	**1.3**	**1.7**	**2.4**

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

2016				2017				2018				2019				2020			
QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV
1095.5	1099.2	1103.3	1112.0	1126.9	1153.4	1159.5	1167.4	1173.8	1183.6	1193.7	1205.4	1216.7	1223.8	1232.9	1243.2	1253.9	1264.2	1275.2	1286.8
3.6	2.4	1.7	1.8	2.9	4.9	5.1	5.0	4.2	2.6	2.9	3.3	3.7	3.4	3.3	3.1	3.1	3.3	3.4	3.5
3.8	3.5	3.6	3.3	3.7	4.8	4.6	4.5	4.3	3.7	3.7	3.5	3.5	3.2	3.1	3.2	3.1	3.2	3.2	3.1
2.5	3.2	2.6	2.5	1.8	1.3	0.8	1.2	3.5	3.4	3.9	4.3	3.0	2.9	3.1	2.7	2.5	2.4	2.2	2.1
1.1	-6.8	-6.1	-5.0	-3.4	2.1	7.6	9.3	9.9	7.8	5.1	6.1	5.0	4.0	3.8	3.6	4.1	4.2	3.9	3.6
1.5	-5.4	-4.4	-4.6	-1.5	6.0	5.2	5.4	9.4	7.4	7.8	8.7	6.2	5.0	4.7	4.3	4.8	4.9	4.5	4.2
6.5	5.4	2.6	2.2	5.5	7.7	7.6	7.9	3.8	2.6	5.4	5.6	7.2	7.9	7.7	7.6	8.0	8.3	8.5	8.6
5.7	2.9	1.2	0.8	3.7	5.8	7.2	8.4	5.7	5.3	7.1	7.3	7.7	8.3	8.2	8.1	8.7	8.8	8.6	8.5
65.9	69.1	71.2	77.8	84.0	89.4	79.3	80.0	70.9	68.0	68.2	69.1	71.6	70.0	69.3	69.9	70.4	71.4	73.9	77.4
3.2	6.1	0.8	3.5	8.4	4.3	5.5	7.8	1.9	-	-	-	-	-	-	-	-	-	-	-
-6.8	-8.8	-6.2	-1.6	0.9	7.2	1.6	3.0	11.9	-	-	-	-	-	-	-	-	-	-	-
7.1	8.5	4.7	4.3	7.0	3.5	3.3	4.6	2.7	-	-	-	-	-	-	-	-	-	-	-
0.4	0.3	0.4	0.7	1.2	1.5	2.0	2.5	2.4	2.3	-	-	-	-	-	-	-	-	-	-
0.5	0.3	0.5	1.4	2.4	2.2	2.6	2.6	1.9	2.3	2.5	2.4	2.7	2.5	2.1	2.0	2.0	2.0	2.0	2.1
0.7	0.2	-0.1	-0.1	-0.5	-0.1	0.2	0.3	1.4	1.8	2.4	2.6	2.8	2.5	1.8	1.5	1.5	1.5	1.4	1.3
-0.4	-0.8	0.2	1.8	3.4	2.9	3.9	4.4	2.5	2.5	2.3	1.7	2.3	2.6	2.4	2.3	2.4	2.4	2.5	2.7
1.3	1.1	1.1	1.4	2.1	2.5	2.7	2.5	1.7	1.9	1.9	2.2	2.5	2.3	2.1	2.1	2.1	2.1	2.1	2.2
-12.4	-12.4	-9.5	0.2	15.1	7.5	1.7	2.6	-1.6	5.0	12.3	10.0	9.5	5.0	1.8	0.0	-1.1	-1.4	-1.6	-1.8
0.3	0.0	0.3	1.3	2.5	2.3	2.7	2.7	1.8	2.2	2.4	2.4	2.7	2.5	2.1	2.0	2.0	2.0	2.0	2.1
1.4	1.1	1.3	1.2	0.7	1.0	1.7	2.4	2.5	2.4	2.6	1.7	1.5	1.8	1.3	2.1	2.4	2.4	2.1	1.9
-4.0	-4.6	-3.3	-1.1	2.7	2.3	1.4	0.9	0.1	1.5	3.0	2.7	2.7	1.7	0.8	0.9	0.9	1.0	1.2	1.4
-3.2	-8.2	-7.0	-4.9	0.2	10.1	11.4	8.2	4.0	-3.4	-3.2	-2.9	-1.3	3.1	3.0	2.6	2.4	1.9	1.9	1.9
1.2	1.1	1.0	1.2	1.4	1.6	1.7	2.0	2.3	2.5	-	-	-	-	-	-	-	-	-	-
-36.3	-26.1	-7.6	16.0	57.6	9.1	11.0	20.8	22.9	47.6	49.4	25.6	13.3	0.1	-5.1	-5.7	-5.7	-5.6	-5.5	-5.4
4.7	4.0	4.7	4.4	4.5	6.9	6.1	7.4	8.6	8.7	8.8	8.5	7.7	6.8	6.5	6.2	5.9	5.6	5.3	5.0
4.2	3.8	4.2	3.0	2.1	4.6	3.5	4.7	6.6	6.5	6.3	6.1	5.0	4.3	4.4	4.2	3.9	3.6	3.3	2.9
2.8	2.0	1.9	1.9	1.1	1.3	2.2	2.1	2.1	2.1	1.3	1.0	1.0	0.9	0.9	0.8	0.7	0.6	0.6	0.7
2.8	1.9	4.0	4.0	3.0	4.6	3.1	4.4	6.7	7.7	7.3	6.4	4.8	4.1	3.8	3.6	3.3	2.8	2.4	2.1
6.4	3.1	5.4	2.5	-1.0	1.9	-2.8	-0.1	5.6	-	-	-	-	-	-	-	-	-	-	-
1.5	2.1	0.1	-0.1	2.1	2.3	2.9	3.5	1.6	0.8	2.0	2.2	2.8	2.8	2.9	2.8	2.8	2.7	2.5	2.4
4.4	4.0	4.0	3.6	3.5	3.0	2.8	2.4	2.4	2.2	2.2	2.1	2.2	2.0	2.0	2.0	2.0	1.9	1.9	1.8
6.3	5.4	5.3	5.0	5.1	4.2	3.9	3.6	3.7	3.1	3.0	3.0	3.3	2.9	2.9	2.9	3.2	2.8	2.7	2.7
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83.1	80.5	44.7	37.4	88.8	71.7	42.7	37.8	81.0	68.0	41.0	35.0	80.0	73.0	43.0	39.0	83.0	77.0	47.0	43.0
7.5	6.7	3.7	3.0	7.7	5.7	3.3	2.8	6.6	5.1	3.0	2.5	6.2	5.2	3.0	2.6	6.1	5.2	3.1	2.8
25.3	26.4	28.7	27.2	28.5	33.3	31.5	28.7	32.0	35.0	33.0	30.0	33.0	36.0	34.0	32.0	34.0	37.0	36.0	33.0
119.5	-10.0	-19.2	-16.1	97.5	-8.1	-34.5	-0.7	58.8	22.0	-36.0	-4.8	94.0	0.0	-42.0	-2.0	92.0	-1.0	-37.0	1.0
10.8	-0.8	-1.6	-1.3	8.4	-0.6	-2.7	-0.1	4.8	1.7	-2.6	-0.3	7.3	0.0	-3.0	-0.1	6.8	-0.1	-2.5	0.1
-1.8	-95.6	-63.0	-26.2	-62.7	-26.2	-12.1	-34.3	-8.5	-	-	-	-	-	-	-	-	-	-	-
24.5	23.9	24.2	25.1	25.4	24.1	22.2	21.8	20.7	21.5	22.0	21.5	21.0	20.5	20.3	20.2	20.2	20.0	19.6	19.0
27.0	27.0	27.0	27.0	27.0	26.5	26.1	25.7	25.4	25.6	25.8	25.3	24.8	24.6	24.5	24.3	24.3	24.2	24.2	24.2
-2.4	-1.5	-0.5	-0.7	-0.7	-2.6	-4.3	-5.9	-6.4	-3.8	-1.4	-1.8	-2.5	-4.2	-5.2	-3.5	-2.1	-1.1	-0.6	-0.2
-1.6	-0.1	0.9	1.1	0.6	-1.2	-2.5	-3.7	-4.3	-1.7	-0.1	-1.0	-2.3	-3.9	-4.7	-3.1	-1.7	-0.8	-0.4	0.0
-4.1	-4.3	-2.6	-1.3	2.2	0.9	-1.1	-2.4	-4.4	-1.5	1.9	1.8	1.1	-0.7	-2.1	-1.2	-0.4	0.3	0.6	0.9
-5.7	-6.3	-3.7	-0.4	5.1	2.9	-0.9	-3.3	-6.1	-2.3	2.6	2.3	2.1	-0.3	-2.5	-1.9	-1.0	-0.3	0.0	0.2
9.7	9.6	9.0	8.0	10.2	12.7	12.7	11.1	8.7	6.3	6.3	7.3	7.4	7.9	8.3	9.0	9.4	9.3	9.2	9.1
0.05	0.05	0.05	0.05	0.05	0.05	0.25	0.50	0.75	1.00	1.48	1.68	1.68	1.56	1.50	1.64	1.90	2.13	2.31	2.48
0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.7	0.9	0.9	1.6	1.8	1.8	1.7	1.7	1.8	2.1	2.3	2.5	2.6

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