

## INFLATION REPORT / II

2018



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This Inflation Report was approved by the CNB Bank Board on 10 May 2018 and – with some exceptions – contains the information available as of 20 April 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





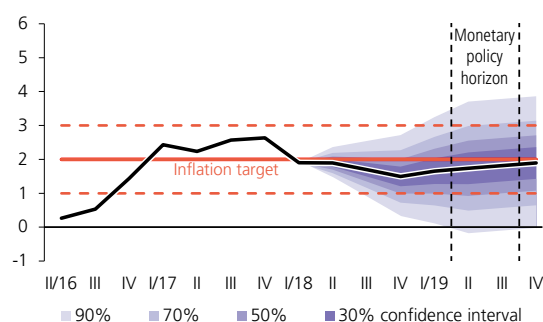
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## I. SUMMARY

CHART I.1

## HEADLINE INFLATION FORECAST

**Inflation will be in the lower half of the tolerance band and return very close 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.

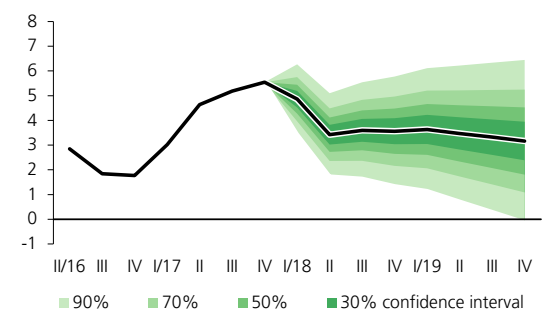
**Inflation will be slightly below the 2% target this year and will return very close to the target at the monetary policy horizon.**

A decline in inflation slightly below the target reflected the fade-out of last year's one-off factors and a fall in import prices. Domestic inflation pressures nonetheless remain strong, reflecting rapid wage growth amid buoyant growth of the domestic economy. The inflation pressures from the domestic economy will gradually ease, but on the other hand the anti-inflationary effect of import prices will weaken as well. Import prices continue to reflect the strengthening koruna this year. In 2019, they will start rising again, reflecting stable growth in foreign prices amid distinctly slower appreciation of the koruna. Inflation will thus return very close to the CNB's 2% target at the monetary policy horizon (see Chart I.1). Core inflation will remain stable this year. Renewed growth in import prices will foster an increase in core inflation next year. Food price inflation will slacken substantially this year owing to an unwinding of the rapid growth in agricultural producer prices and appreciation of the koruna. Growth in food prices will recover in 2019 owing to the outlook for agricultural commodity prices coupled with only gradual appreciation of the koruna. Administered prices will increase at a modest pace, mainly as a result of a rise in electricity prices. Fuel prices will go up slightly in the short term but will decline again year on year in 2019.

CHART I.2

## GDP GROWTH FORECAST

**The growth of the Czech economy will slow from last year's high pace, but will remain well above 3%**  
(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.

**The growth of the Czech economy will slow from last year's high pace, but will remain well above 3% this year and the next** (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 brisk growth in household consumption, reflecting optimism of consumers in an environment of high growth in their income. Rising external demand coupled with an increasingly distinct shortage of available labour force and continued low interest rates are motivating firms to invest in machinery and equipment. This investment is improving labour productivity. Investment 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 via a significant rise in public sector pay and increasing pensions and social benefits. The positive contribution of net exports to GDP growth is decreasing as a result of an acceleration in import-intensive components of domestic demand and appreciation of the koruna. The monetary conditions will tighten in their exchange rate component and later also in their interest rate component, thus acting against an overheating of the domestic economy. 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 much further. This will lead to slower employment growth and continued high wage growth.

**According to the forecast, the koruna will appreciate further, owing mainly to a positive interest rate differential vis-à-vis the euro area.** The exchange rate forecast for 2018 Q2 (at CZK 25.2/EUR) takes into account past foreign exchange market developments. These

reflect prevailing financial market expectations of an only gradual increase in domestic interest rates. In subsequent quarters, the koruna will appreciate due to a positive interest rate differential vis-à-vis the euro area and continued asset purchases by the ECB until September 2018 coupled with solid growth in external demand. The firming of the koruna will simultaneously reflect continued real convergence of the Czech economy to euro area countries, aided by rapid growth in labour efficiency. Next year, the koruna will appreciate much more modestly (to CZK 24.3/EUR in late 2019; see Chart I.3). This will be due to gradually slowing growth in external demand and the ECB's expected return to conventional monetary policy.

**Consistent with the forecast is broad stability of market interest rates initially, followed by further growth in rates from late 2018/early 2019.** Interest rates will thus move towards their long-run neutral level (3% for the 3M PRIBOR) in the course of next year (see Chart I.4). Continued very accommodative monetary policy of the ECB will remain the main barrier to a faster increase in domestic interest rates.

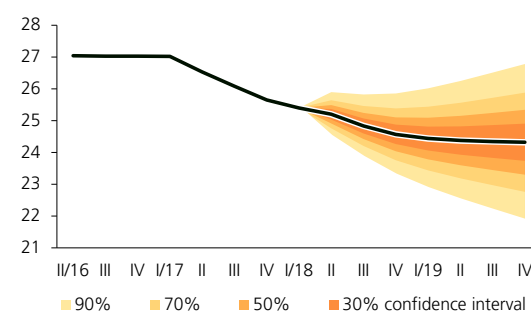
**At its monetary policy meeting in May, the CNB Bank Board decided by a significant majority to keep interest rates unchanged.** The two-week repo rate thus remains at 0.75%, the discount rate at 0.05% and the Lombard rate at 1.50%.

**The Bank Board assessed the risks to the inflation forecast at the monetary policy horizon as being balanced.** At the same time, it stated that there are three main uncertainties of the forecast. The first one is associated with the strength and composition of the overall inflation pressures in conditions of a tight labour market and counteracting productivity growth. The second one remains the exchange rate path. The third uncertainty is connected with developments abroad.

CHART I.3

## EXCHANGE RATE FORECAST

**According to the forecast, the koruna will appreciate further, especially this year**  
(CZK/EUR)

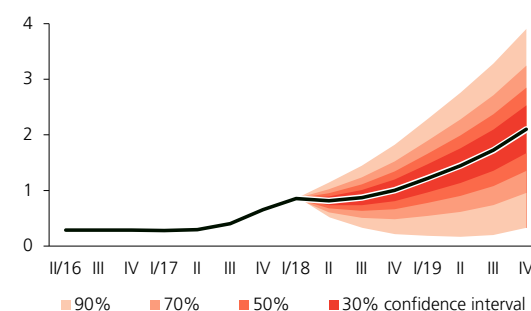


Note: The confidence intervals of the CZK/EUR exchange rate reflect the predictive power of past forecasts (in the period before the exchange rate commitment was adopted). They are symmetric and linearly widening.

CHART I.4

## INTEREST RATE FORECAST

**Consistent with the forecast is broad stability of market interest rates initially, followed by further growth in rates from late 2018/early 2019**  
(3M PRIBOR in %)



Note: The confidence intervals of the 3M PRIBOR forecast reflect the predictive power of past forecasts (in the period before the exchange rate commitment was adopted). They are symmetric, linearly widening and limited below by the zero lower bound.

## II. THE FORECAST, ITS CHANGES AND RISKS

### II.1 DEVELOPMENTS ABROAD AND EXTERNAL ASSUMPTIONS OF THE FORECAST

The growth of the world economy will accelerate slightly further this year, whereas a modest slowdown is expected for 2019. The current robust growth in the euro area will slow gradually, owing partly to the currently stronger euro. A gradually falling path of the Brent crude oil price coupled with a relatively strong euro against the dollar will dampen growth in industrial producer prices. The ECB is responding to persisting subdued inflation in the euro area with continued accommodative monetary policy, but inflation will return to 2% only very slowly. The 3M EURIBOR will thus not turn positive until the end of next year. The euro's negative short-term interest rate differential vis-à-vis the dollar rate will widen further this year and start to narrow again in 2019. The euro should stay broadly stable against the dollar at the forecast horizon according to analysts.

#### II.1.1 Economic developments abroad

The world economy is growing at a solid pace and will accelerate slightly further on average this year.<sup>1</sup> The growth is visible across all the monitored territories, with emerging economies being the biggest contributor to global growth. In the USA, the economy will be supported by a tax reform, while tighter monetary policy of the Fed will have the opposite effect. The UK economy will grow at a stable – albeit only modest – pace. A slight slowdown is expected for China owing to government measures to stabilise credit growth. Overall, the weighted growth of all the monitored economies is expected to rise somewhat to 3.3% this year then fall slightly next year (see Chart II.1.1). Protectionist US trade policy and retaliatory measures by other countries, in particular China, are a downside risk to this outlook in the medium and longer term.

The euro area economy continued to grow at a brisk pace at the close of last year and its growth for the whole of 2017 rose to 2.4%. In 2017 Q4 alone, annual GDP growth stayed at 2.7%. Thanks to the growing world economy, the contribution of net exports exceeded that of household consumption (see Chart II.1.2), despite a stronger euro. In quarter-on-quarter terms, the economy slowed marginally to 0.6%, mainly on account of a negative contribution from change in inventories and slower growth in household consumption. As regards large euro area countries, the annual growth was driven mainly by Germany, which accelerated to 2.9%, followed by Spain and France, where growth reached 3.1% and 2.5% respectively. The Slovak economy continued to grow at a rate of 3.5%.

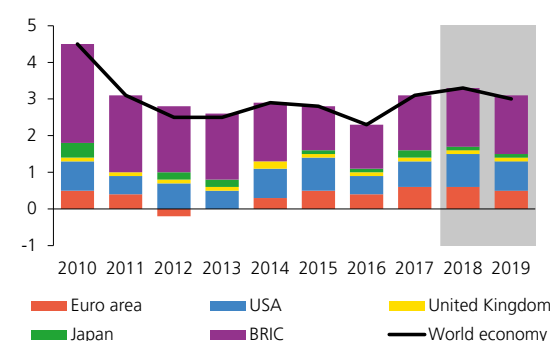
<sup>1</sup> A more detailed description of expected developments abroad, updated every month, is available in [Global Economic Outlook](#).

CHART II.1.1

#### WORLD ECONOMY GROWTH OUTLOOK

The world economy will continue to grow apace on the back of a higher contribution of emerging economies and the USA amid solid growth in the euro area

(annual percentage changes in real GDP; contributions in percentage points; source: EIU, CF, CNB calculation)



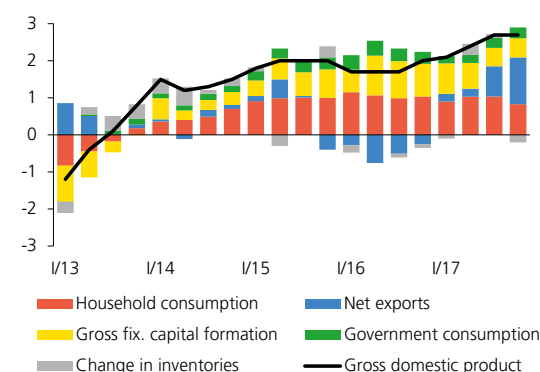
Note: World economy growth is proxied by the growth of the eight largest economies, which account for around 75% of global GDP. The weights of the individual economies are calculated on the basis of nominal GDP in USD over the period 2010–2015; the BRIC group consists of Brazil, Russia, India and China.

CHART II.1.2

#### STRUCTURE OF ANNUAL GDP GROWTH IN THE EURO AREA

GDP growth remained robust in 2017 Q4, with net exports replacing consumption as the main driver of the expansion

(annual percentage changes; contributions in percentage points; seasonally adjusted; source: Datastream, CNB calculation)



### Monthly indicators are signalling a slowdown in euro area economic growth in early 2018.

Year-on-year growth in industrial production slowed by more than 2 percentage points to 2.9% in the first two months. Retail sales growth declined only slightly to 1.8% in February. Leading indicators are also pointing to slower expansion in the euro area. The PMI in manufacturing fell for the third month in a row in March, but remains safely in expansionary territory (see Chart II.1.3). This fall partly reflected one-off factors – mainly weather fluctuations, but also slightly lower optimism about the economic outlook linked mainly with the stronger euro. However, the labour market is continuing to recover. The unemployment rate fell to 8.5% in February, its lowest level since December 2008. Growth in hourly labour costs, however, has yet to accelerate significantly according to the available data (see Box 1). Its year-on-year pace was just 1.7% in 2017 Q4. In Germany, France and Italy, wage growth even slowed.

#### BOX 1 Wage growth in the euro area

**Wage dynamics in the euro area remain subdued even ten years after the financial crisis.** Nominal wage growth<sup>2</sup> has seldom exceeded 2% since 2013 (see Chart 1). Wages have not accelerated significantly even since 2014, when the euro area began to enjoy rising economic growth and falling unemployment. Following tentative signs of increasing wage growth in the first half of 2017, wages slowed in the second half of the year. Wage growth in the non-business economy lagged a touch behind that in the business economy (by 0.4 percentage point).

**At the same time, wage dynamics are very mixed across euro area countries.** In 2017 Q4, the fastest wage growth was recorded in the Baltic countries, followed some way behind by Slovakia, for example (see Chart 2). In Italy, by contrast, hourly wages dropped both in nominal terms and in real terms (i.e. adjusted for consumer price inflation). Spain and Austria also recorded wage decreases in real terms. In the euro area, nominal wage growth was 1.7% in 2017 Q4, while real wages were broadly flat. Wages in Germany and France, i.e. important countries for Czech foreign trade, rose at a similar pace as in the euro area as a whole.

**Low wage growth in countries with high unemployment is not surprising given their economic slack.** Although unemployment has fallen in all the euro area countries in recent years, unemployment rates in the southern countries remain above pre-crisis levels. Owing to involuntary part-time work, moreover, the overall unemployment rate underestimates the spare capacity in the economy. In this respect, the

CHART II.1.3

#### PMI IN MANUFACTURING

**The PMI in the euro area and Germany is signalling a slowdown in the currently high growth rate**

(Purchasing Managers' Index; source: Bloomberg)

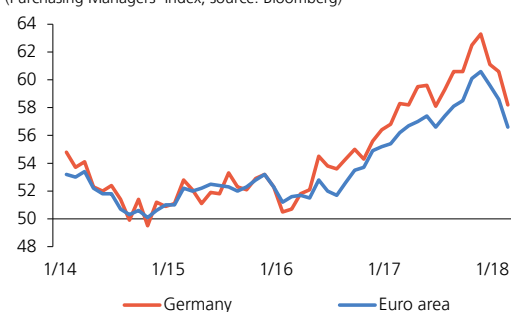


CHART 1 (BOX)

#### NOMINAL HOURLY WAGES IN THE EURO AREA

**Despite rising economic growth and falling unemployment, wage pressures remain subdued**

(annual percentage changes; source: Eurostat)

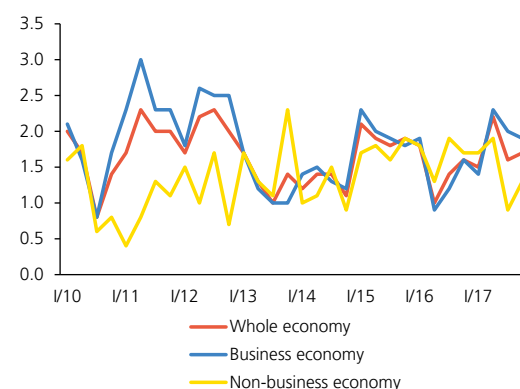
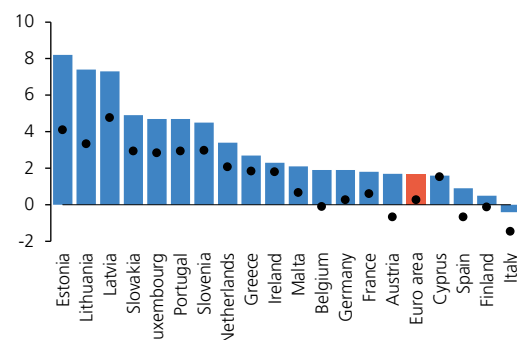


CHART 2 (BOX)

#### HOURLY WAGES IN EURO AREA COUNTRIES IN 2017 Q4

**Wage growth differs significantly across euro area countries**

(annual percentage changes; bars – nominal growth, dots – real growth; source: Eurostat, CNB calculation)



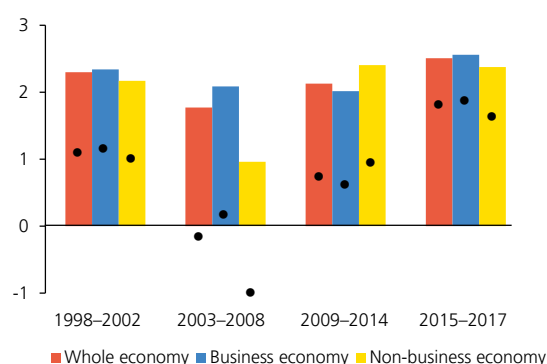
2 Box 1 uses annual growth in hourly labour costs as the measure of wage growth. This indicator is not directly comparable with wage growth in the Czech Republic, which we comment on in section III.3 of the Inflation Report.

CHART 3 (BOX)

## AVERAGE NOMINAL AND REAL HOURLY WAGES IN GERMANY

Owing to low inflation, real wage growth has recently been relatively high from a historical perspective

(annual percentage changes; bars – nominal growth, dots – real growth; source: Eurostat, CNB calculation)



broader unemployment rate in the euro area was about 5 percentage points above the official unemployment rate according to ECB estimates.<sup>3</sup>

**By contrast, the moderate wage growth in Germany, where unemployment is at historical lows, is attracting attention.** From a historical perspective, though, the current wage growth in Germany cannot be regarded as alarmingly low. Comparing wage dynamics in four periods since 1998 (see Chart 3), wages have been rising fastest in the most recent period, especially in real terms owing to low inflation. The period of 1998–2002 was characterised by low economic growth and relatively high unemployment, in response to which labour market reforms (Hartz I–III) were implemented in the following period 2003–2008. This period also saw a real decline in public sector wages. After the financial crisis, Germany paradoxically recorded higher wage growth than before the crisis.

**The wage dynamics in Germany, which are muted despite historically low unemployment rates, can be explained by several factors.** Migration from Eastern Europe, Italy and Spain,<sup>4</sup> which has increased mainly because of the financial and debt crisis, is playing a major role. Workers from these countries are increasing the labour supply and perhaps exerting less upward pressure on wages than incumbents. Part-time workers, who account for almost 30% of the working population, also have less bargaining power and therefore put less upward pressure on wages. In addition, trade unions have recently been putting more emphasis on shorter working hours, and employees often prefer a better work-life balance to higher wage growth. A role is also played by the wage-setting mechanism, which in Germany and elsewhere has backward-looking elements and currently probably reflects the long period of low observed inflation. Last but not least, the slow nominal wage growth also reflects the relatively weak labour productivity growth seen in recent years.

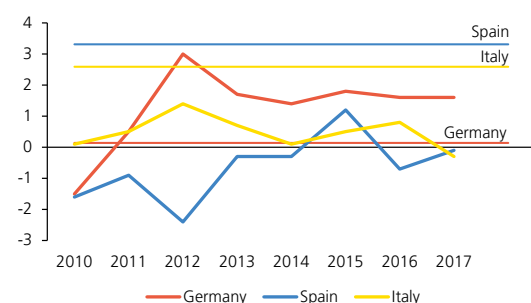
**The heterogeneity in wage dynamics observed across euro area countries reflects a correction of the imbalances that built up before the financial crisis.** Now that the financial and debt crisis has faded away, the countries on the southern periphery are undergoing a gradual process of regaining competitiveness, reflected, among other things, in a decline or only modest growth in unit labour costs (see Chart 4). This process is being aided by labour market reforms implemented in the southern countries. As a result, growth in unit labour costs is higher in Germany than in these countries. This is a reversal of the trend observed in 2002–2008, when the southern countries were losing competitiveness relative to Germany (see the

CHART 4 (BOX)

## UNIT LABOUR COSTS IN SELECTED EURO AREA COUNTRIES

Unit labour cost growth in Germany following the financial crisis is higher than it was before the crisis, unlike in the southern countries

(annual percentage changes; horizontal lines – average growth in 2002–2008; source: Eurostat, CNB calculation)



<sup>3</sup> Economic Bulletin 3/2017, ECB.

<sup>4</sup> According to Destatis (the Federal Statistical Office in Germany), the net migration inflow from these countries was 1.4 million in 2010–2016.

horizontal lines in the chart). In this environment, the return to the ECB's inflation target would speed up if labour cost growth in Germany were to markedly exceed 2%. A shift in this direction is suggested by, for example, the wage increase of 4.3% negotiated in February by the IG Metall trade union, which represents about 3.9 million employees.

**However, the wage growth outlooks available for the euro area and especially for Germany do not see wages accelerating significantly any time soon.** Bearing in mind the constraints on comparing wage measures across countries, the February CF<sup>5</sup> expects growth in hourly labour costs in the euro area to accelerate to 2.0% this year and 2.3% next year. The August CF had expected the same wage growth for this year, indicating that wage expectations are persistent and anchored at a relatively low level. In Germany alone, the April CF expects negotiated wages in the production sector to rise by 2.8% both this year and the next. Rising labour market tightness should foster only a gradual upswing in nominal wage growth, especially in 2019 (to 2.9% for negotiated wages).<sup>6</sup>

**GDP growth in the effective euro area<sup>7</sup> will gradually slow towards 2%** (see Chart II.1.4). From the start of this year, euro area growth is expected to moderate from the high pace recorded in late 2017. Economic activity in the effective euro area will increase by 2.5% this year and slow further to 2.1% next year. Slightly lower growth rates are expected in the euro area proper. The main downside risk to this outlook is a potential increase in protectionist measures in world trade. Given Germany's focus on exports to the USA, this would have a much more adverse effect on the effective euro area than on the euro area proper.

## II.1.2 Price developments abroad

**Geopolitical risks, a decline in global stocks and strong demand kept oil prices elevated in 2018 Q1** (see Chart II.1.5). Other reasons for the high prices included a weaker dollar, high net long positions of speculative funds and continued strict compliance with voluntary production quotas by large producers. Concerns about rising output in

<sup>5</sup> CF publishes an overview of expected productivity and wage trends in selected countries in February and August each year.

<sup>6</sup> Monthly Report, December 2017, Deutsche Bundesbank.

<sup>7</sup> 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 April 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 April 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 effective euro area will gradually slow towards 2%**

(annual percentage changes; seasonally adjusted)

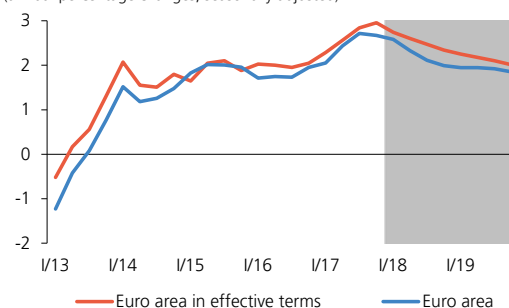


CHART II.1.5

### PRICES OF CRUDE OIL AND OTHER COMMODITIES

**Geopolitical tensions and a decline in global stocks have kept oil prices elevated since the start of this year, but their outlook remains falling**

(oil in USD/barrel; other commodities: index [January 2013 = 100]; average price of natural gas in Europe; source: Bloomberg, World Bank, CNB calculation)

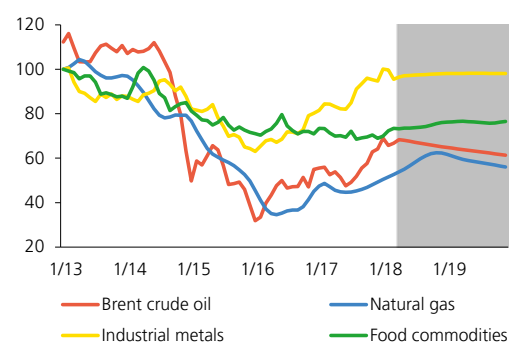


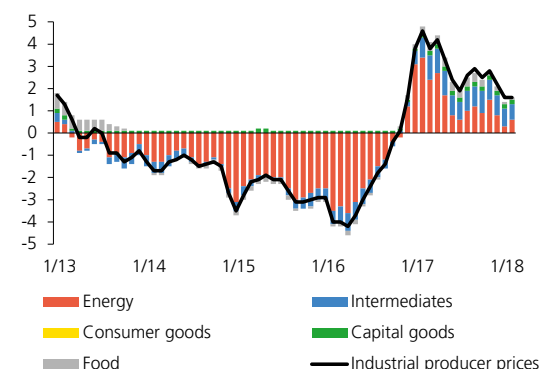


CHART II.1.6

## INDUSTRIAL PRODUCER PRICES IN THE EURO AREA

**Industrial producer price inflation went down in early 2018 owing to a lower contribution of 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 fluctuate around 2%**  
(year on year in %; seasonally adjusted)

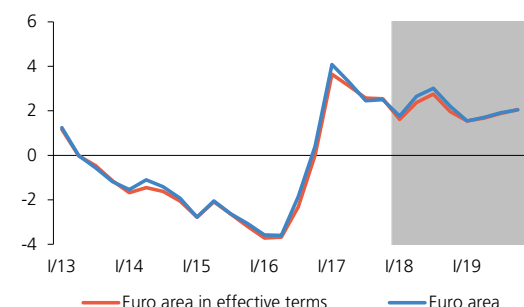
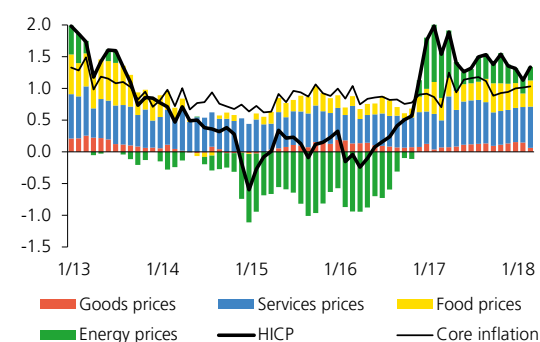


CHART II.1.8

## INFLATION IN THE EURO AREA

**Inflation was driven mainly by services prices in Q1**

(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.

the USA and a potential trade war between the USA and China had the opposite effect. According to the IEA, commercial oil stocks in OECD countries were just 30 million barrels above the five-year average in February (and stocks of oil products were already below it). If OPEC keeps producing at the current level, global stocks will be drawn on at a pace of 0.6 million barrels a day for the rest of this year. The market curve based on Brent oil futures is still downward-sloping and implies an average price of USD 67 a barrel this year and USD 63 a barrel in 2019. The April CF mostly expects stagnation close to USD 65 a barrel. The EIA forecast is also more or less horizontal, expecting an average price of USD 63 a barrel for both this year and the next. It thus evidently does not incorporate the current risk premium stemming from the tense geopolitical situation around the world and is putting more of an emphasis on expected future growth in oil production in the USA.

**The upward trend in the overall non-energy commodity price index came to a halt in 2018 Q1** (see Chart II.1.5). The sub-indices

showed opposite trends. In January, the food commodity price sub-index rebounded from its lowest levels in many years. Its rising outlook is contributing in large part to a growing outlook for the overall index. By contrast, the industrial metals price sub-index declined from the five-year high it recorded in January. This was due to a slowdown in manufacturing, particularly in advanced countries, and uncertainty regarding trade relations between the USA and China. A weaker dollar is acting against a larger decrease in prices of industrial metals. The outlook for the metals price sub-index indicates broad stability close to current levels.

**Euro area industrial producer price inflation went down at the start of this year, owing to slower growth in energy prices.** It stood at 1.6% year on year in both January and February (see Chart II.1.6). Prices of intermediate goods were the biggest contributor to the overall growth. The Czech Republic's most important trading partner countries (Germany and Slovakia) recorded opposite developments: in February, industrial producer price inflation fell further to 1.8% in Germany but rose to 2.7% in Slovakia.

**The outlook for industrial producer prices expects their dynamics to fluctuate around 2%** (see Chart II.1.7). The price growth will continue to reflect demand pressures stemming from robust economic growth in euro area countries. However, these pressures will weaken slightly at the forecast horizon. This, coupled with an expected relatively strong euro against the dollar and a gradually falling Brent crude oil price, will dampen growth in industrial producer prices. The outlook thus expects average producer price inflation in the effective euro area to reach 2.2% this year and 1.8% in 2019.

**Consumer price inflation in the euro area remained broadly stable in 2018 Q1.** In March it edged up to 1.3% (see Chart II.1.8), thus staying below the ECB's definition of price stability. Inflation was driven mainly by services and food prices. Core inflation remained at 1% in March.



**The effective indicator of consumer price inflation in the euro area will be slightly below 2% over the entire forecast horizon** (see Chart II.1.9). Inflation in the Czech Republic's main trading partner countries will be higher than in the rest of the euro area, so the effective inflation indicator will exceed the standard indicator for the euro area proper. The standard indicator will stay below the definition of price stability, so the ECB's monetary policy will return to normal only slowly.

### II.1.3 Financial developments abroad

**According to the market outlook, the 3M EURIBOR interest rate will not approach zero from below until the end of 2019** (see Chart II.1.10). During 2018, it will stay at the current level of -0.3%, in line with the expectations of the April CF analysts. The outlook reflects the ECB's intention to leave its key rates at the current levels for an extended period of time past the horizon of the asset purchase programme, which will not be ended before September 2018.<sup>8</sup> At the March meeting, the ECB did not change its monetary policy stance, but the accompanying statement no longer mentioned a possible increase in the pace of monthly asset purchases. According to the April CF, the ten-year German government bond yield will rise gradually to 1.5% at the end of 2019 (see Chart II.1.11).

**According to the market outlook, the 3M USD LIBOR will rise on the back of a further tightening of US monetary policy** (see Chart II.1.10). As expected, the Fed raised the target range for its policy rate by 25 basis points to 1.50%–1.75% at its meeting in March. A further two 25 basis point increases can be expected this year according to the FOMC members' median estimates. The current market outlook expects the 3M USD LIBOR to go up gradually to 2.8% at the end of 2019. However, the monetary policy tightening could be even more pronounced in 2019, as indicated by the FOMC members' outlooks and the minutes of the March meeting. The April CF expects the ten-year US government bond yield to rise to 3.4% (see Chart II.1.11). The yield differential vis-à-vis German government bonds of the same maturity should be around 2 percentage points.

**According to the April CF, the euro-dollar rate will be close to its current strengthened level** (see Chart II.1.12). During 2018 Q1, it hovered between USD 1.22 and 1.25 to the euro, affected in the short run by a marked rise in US stock market volatility and growth in geopolitical risks. Speculation regarding a possible more pronounced monetary policy tightening by the Fed supported the dollar. By contrast, import tariffs imposed by the USA and China fostered a weaker dollar. However, a weaker dollar (stronger euro) is a substantial anti-inflationary risk for the ECB in a situation where the euro area recovery is not being

CHART II.1.9

#### CONSUMER PRICE INFLATION OUTLOOK IN THE EURO AREA

**Inflation will remain below the ECB's target**  
(HICP, year on year in %; seasonally adjusted)

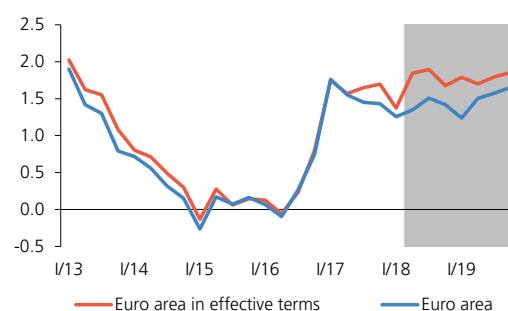


CHART II.1.10

#### 3M EURIBOR AND 3M USD LIBOR

**US monetary policy tightening will further increase the spread between money market rates in the USA and the euro area**  
(in %, differences in percentage points)

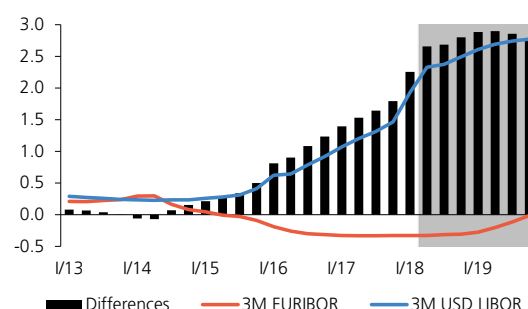
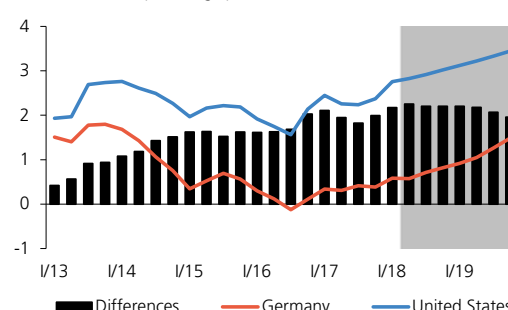


CHART II.1.11

#### 10Y GOVERNMENT BOND YIELDS

**The differential between ten-year government bond yields in the USA and Germany will narrow only slightly over the two-year horizon**  
(in %, differences in percentage points)



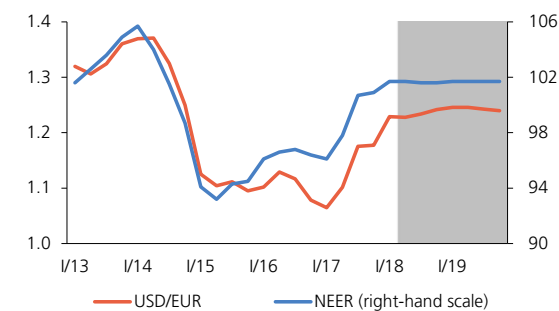
<sup>8</sup> As in previous forecasts, this prediction takes into account the ECB's asset purchase programme through expert adjustments using shadow interest rates, which are lower than market rates.

CHART II.1.12

## EURO EXCHANGE RATE

**The April CF expects the dollar-euro exchange rate to be stable close to USD 1.24/EUR**

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



accompanied by a rise in inflation pressures. In nominal effective terms, the euro is expected to remain stable at its current level against the currencies of the euro area's main trading partners.

## II.2 THE FORECAST

Inflation will be slightly below the 2% target this year. At the monetary policy horizon, it will return very close to the target. Administered prices will rise only modestly. By contrast, a tight labour market situation will continue to generate inflationary tendencies in an environment of rapid economic and wage growth. The economy will be supported by stable growth in external demand, buoyant household consumption and strong investment activity. GDP growth will slow but will still significantly exceed 3% this year and the next. Rising labour demand coupled with an increasingly distinct shortage of available labour will manifest itself in continued robust wage growth. According to the forecast, the koruna will appreciate further, owing mainly to a positive interest rate differential vis-à-vis the euro area and to continuing long-term real convergence. Consistent with the forecast is broad stability of market interest rates initially, followed by further growth in rates from late 2018/early 2019.

### II.2.1 Inflation and monetary policy

**Inflation will be in the lower half of the tolerance band around the 2% target and return to the target by the end of 2019** (see Chart II.2.1). The slowdown in inflation at the start of this year was due primarily to food prices and core inflation. Growth in administered prices went up, by contrast, but remains relatively low (see Chart II.2.2). Appreciation of the koruna will continue to foster a slight slowdown in inflation this year. In 2019, by contrast, import prices will support a return of inflation to the target from below. Overall, headline inflation will remain in the lower half of the tolerance band this year and the next. 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.<sup>9</sup>

**Core inflation will remain broadly stable in the near future and go up next year.** Its decline to just below 2% in late 2017/early 2018 was due partly to fading one-off factors. It is also being affected by falling import prices, reflecting appreciation of the koruna coupled with currently lower foreign producer inflation. The fall in import prices will continue to affect primarily prices of tradables. However, it will be offset by strong inflation pressures from the domestic economy, which will drive up prices in services in particular. In 2019, core inflation will start to edge up to just over 2% (see Chart II.2.3). The inflationary effect of the domestic economy will persist, albeit to a lesser extent, and will be joined by renewed growth in import prices.

**Food price inflation will slacken further this year owing to an unwinding of the rapid growth in agricultural producer prices.**

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
Headline inflation	2.5	1.7	1.8
GDP	4.6	3.9	3.4
Average nominal wage	7.0	7.9	5.6
Exchange rate (CZK/EUR)	26.3	25.0	24.4
3M PRIBOR (in %)	0.4	0.9	1.6

CHART II.2.1

#### HEADLINE INFLATION AND MONETARY POLICY-RELEVANT INFLATION

**Inflation will be in the lower half of the tolerance band and return to the target by the end of 2019**  
(annual percentage changes)

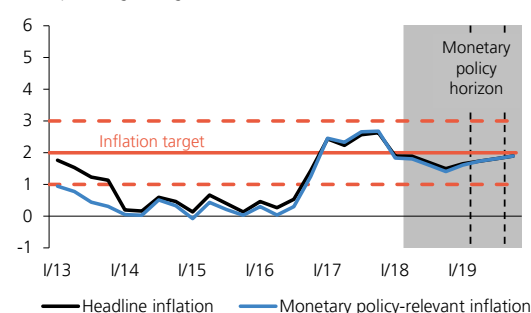
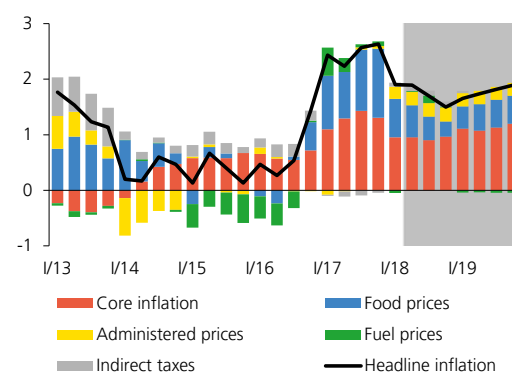


CHART II.2.2

#### STRUCTURE OF INFLATION AND THE INFLATION FORECAST

**Core inflation and, to a lesser extent, food prices will remain the biggest contributors to inflation**  
(annual percentage changes; contributions in percentage points)



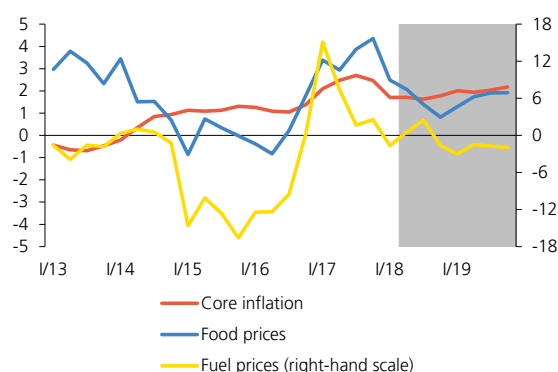
Note: Food prices also include prices of alcoholic beverages and tobacco. Indirect taxes relate to non-administered prices.

9 The impact of changes to indirect taxes on inflation will be negligible. The only expected change is the already implemented harmonisation increase in excise duty on tobacco products in January 2018 with a total impact on headline inflation of 0.1 percentage point.

CHART II.2.3

## COMPONENTS OF INFLATION

**Food price inflation will slacken this year, while core inflation will remain broadly stable and then go up somewhat**  
(annual percentage changes)



Additionally, the slowdown in food price inflation will continue to be fostered by appreciation of the koruna. At the close of this year, therefore, food price inflation will fall below 1%. Next year, it should gradually return to 2% as a result of an expected recovery in agricultural commodity price growth coupled with only gradual appreciation of the koruna (see Chart II.2.3).

**Fuel prices will briefly rally but will then decline again year on year.** According to short-term indicators,<sup>10</sup> fuel prices increased slightly in April 2018 compared with the previous month. The forecast expects them to continue rising in the months ahead owing to the observed growth in prices of oil and petrol, which will be only partly offset by appreciation of the koruna against the dollar. From the end of this year onwards, however, fuel prices should fall year on year again owing to an expected decline in world prices of fuels (see Chart II.2.3).

**Higher electricity prices will foster modest growth in administered prices.** The forecast predicts that gas prices for households will keep falling slightly year on year in 2018, with appreciation of the koruna against the dollar and, in the previous period, higher margins still offsetting the observed growth in global prices of this commodity. To a lesser extent, the same applies to heat prices, for which modest year-on-year growth is expected in the second half of the year. Counteracting this will be rapid growth in prices of electricity, food service activities and health care. Overall, administered prices will rise by 1.6% this year (see Table II.2.2). By 2019, the negative contributions of all components will have faded away, but administered price inflation will slow somewhat owing to an expected slowdown in electricity price growth.

**According to the forecast, the koruna will appreciate further, owing mainly to a positive interest rate differential vis-à-vis the euro area.** The exchange rate forecast for 2018 Q2 (at CZK 25.2/EUR) takes into account past foreign exchange market developments. These reflect prevailing financial market expectations of an only gradual increase in domestic interest rates. In subsequent quarters, the koruna will appreciate due to a positive interest rate differential vis-à-vis the euro area and continued asset purchases by the ECB until September 2018 coupled with solid growth in external demand. The firming of the koruna will simultaneously reflect continued real convergence of the Czech economy to euro area countries, aided by rapid growth in labour efficiency. Next year, the koruna will appreciate much more modestly (to CZK 24.3/EUR in late 2019; see Chart II.2.4). This will be due to gradually slowing growth in external demand and the ECB's expected return to conventional monetary policy.

**Consistent with the forecast is broad stability of market interest rates initially, followed by further growth in rates from late**

TABLE II.2.2

## FORECAST OF ADMINISTRATIVE EFFECTS

**Administered prices will increase slightly, driven by most components**  
(annual average percentage changes; contributions to headline inflation in percentage points)

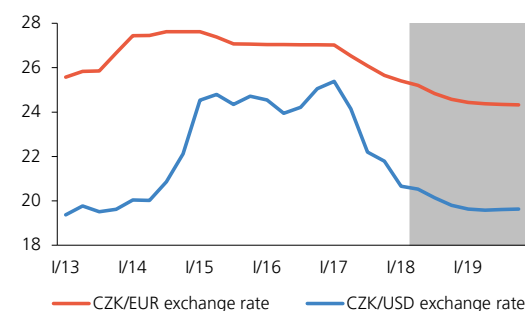
	2017 actual		2018 forecast		2019 forecast	
ADMINISTERED PRICES <sup>a)</sup>	0.0	0.00	1.6	0.24	1.5	0.24
of which (main changes):						
electricity	0.3	0.01	2.9	0.12	2.0	0.09
natural gas	-2.8	-0.08	-0.5	-0.01	0.0	0.00
heat	-1.6	-0.03	-0.1	0.00	0.8	0.01
water	1.4	0.01	1.7	0.01	1.9	0.02
health care	4.4	0.05	4.5	0.05	2.6	0.03

a) Including effects of indirect tax changes

CHART II.2.4

## EXCHANGE RATE FORECAST

**According to the forecast, the koruna will appreciate further, especially this year**  
(CZK/EUR and CZK/USD)



<sup>10</sup> CCS payment cards portal data and the CZSO's weekly surveys of fuel prices.

**2018/early 2019.** Interest rates will thus move towards their long-run neutral level (3% for the 3M PRIBOR) in the course of next year (see Chart II.2.5). Continued very accommodative monetary policy of the ECB will remain the main barrier to a faster increase in domestic interest rates.

## II.2.2 Costs and the labour market

**The overall inflation pressures remain relatively strong despite the anti-inflationary effect of import prices.** The recent fall in growth in total costs in the consumer sector reflected a strengthening anti-inflationary effect of import prices (see Chart II.2.6) linked with appreciation of the koruna and a marked decline in inflation abroad. Growth in total costs rose slightly again in early 2018 as the anti-inflationary effect of import prices weakened and domestic inflation pressures strengthened as a result of continued strong growth of the real economy and a further rise in wage growth. Growth in total costs will increase further in the short term. It will then fluctuate around 2% due to an appreciating koruna and a gradual moderation of domestic inflation pressures. The contribution of import prices will turn positive again during 2019, reflecting stable growth in foreign prices amid distinctly slower appreciation of the koruna. By contrast, inflation pressures from the domestic economy will continue to weaken gradually owing to a gradual slowdown in economic growth and wage growth in parallel with continued growth in labour efficiency. The contribution of price convergence will rise slowly from its currently reduced level.

**The currently significant domestic cost pressures, reflecting rapid growth of the economy and wages, will gradually ease.** Growth in domestic nominal marginal costs in the intermediate goods sector reached high levels at the start of this year, markedly exceeding its long-run equilibrium pace. This was due to rapid nominal wage growth in market sectors. The dynamics of the price of capital also increased, reflecting the evolution of total economic activity and external demand in an upward phase of the cycle. However, these inflation pressures were partly dampened by rising labour efficiency due to higher investment activity by private firms. A slowdown in wage growth will emerge in the quarters ahead, but it will be only gradual given persisting labour market tightness, which is also visible in the results of collective bargaining in firms. Growth in economic activity will slow at the same time, owing among other factors to a tightening of the monetary conditions. Sharply rising labour efficiency driven by continued high growth in investment in machinery and equipment will have an anti-inflationary effect over the entire forecast horizon. Growth in domestic costs will thus slow overall to 2% at the end of 2019 (see Chart II.2.7).

**Employment growth will slow due to a shortage of available labour force.** Nevertheless, employment growth will remain at high levels until mid-2018 (see Chart II.2.8). Growing tightness in the labour market, linked with a record-low unemployment rate, will be reduced only partially by sluggish growth in the labour force. The latter will continue to be fostered by a gradual increase in the statutory retirement age. Growth in the number of employees converted into full-time

CHART II.2.5

### INTEREST RATE FORECAST

**Consistent with the forecast is broad stability of market interest rates initially, followed by further growth in rates from late 2018/early 2019**

(percentages)

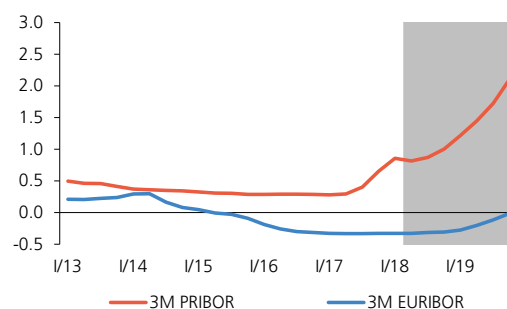


CHART II.2.6

### COSTS IN THE CONSUMER SECTOR

**The structure of inflation pressures will gradually change; growth in domestic costs will slow and the anti-inflationary effect of import prices will subside**

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

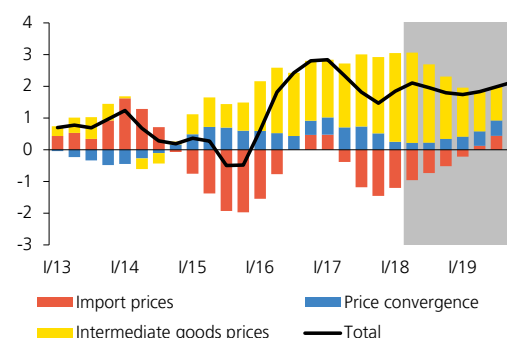


CHART II.2.7

### COSTS IN THE INTERMEDIATE GOODS SECTOR

**Domestic costs will grow at a slower pace than at present, due mainly to gradually decreasing contributions of wages and the price of capital**

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

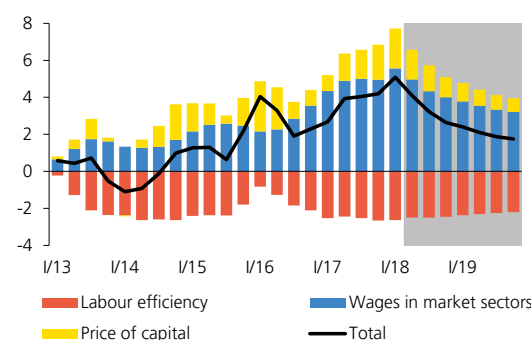
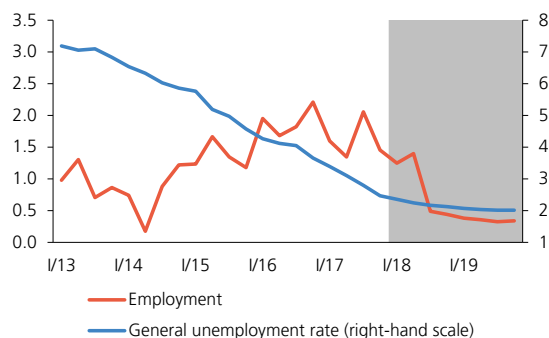


CHART II.2.8

## LABOUR MARKET FORECAST

**Total employment will continue to rise, although at a substantially slower pace than before, while the decline in the unemployment rate will almost come to a halt**  
(annual percentage changes in employment; general unemployment rate in per cent; seasonally adjusted)



equivalents will slacken. This will be due to slowing growth in the number of employees, which, moreover, will be accompanied in the first half of 2018 by a slight decline in average hours worked. The effect of cyclical tightness in the labour market will then prevail and average hours worked will start to rise moderately.

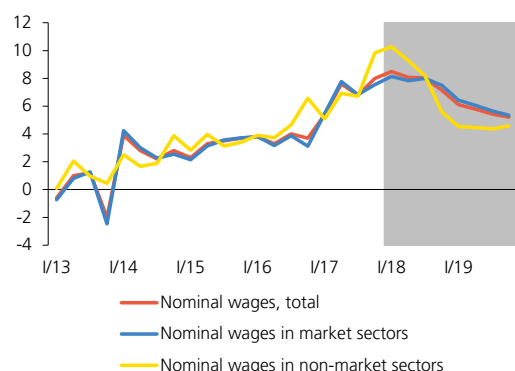
**The current record-low unemployment rate will not decrease significantly further.** The general unemployment rate will go down only slightly, nearing 2% in 2019 (see Chart II.2.8). The forecast also expects a slight decline in the share of unemployed persons. This will reflect a slowing decrease in the number of registered job applicants amid a gradual decline in the population aged 15–64.

**The tightness in the labour market will keep wage growth in market sectors at high levels this year, but wages will then slow.** According to the forecast, wage growth picked up further at the start of this year. In addition to the tight labour market, this was fostered by a further increase in the minimum wage.<sup>11</sup> As a result, wage growth in market sectors was just above 8% in early 2018 (see Chart II.2.9). Wage growth will slow gradually in the quarters ahead, due, among other things, to tightening monetary conditions and firms' efforts to maintain price competitiveness. However, wage growth will remain above its assumed long-run equilibrium 5% level.<sup>12</sup> At the same time, the forecast predicts continued strong annual wage growth in non-market sectors this year, reflecting a pay increase introduced by the government in November 2017. However, the forecast expects no repeat of this sizeable rise in wages at the end of 2018, so wage growth in the non-market segment of the economy will slow to just above 4% in 2019.

CHART II.2.9

## AVERAGE NOMINAL WAGES

**Wage growth in market and non-market sectors will peak this year and later slow gradually**  
(annual percentage changes; total wages – source: CZSO; wages in market and non-market sectors – source: CNB calculation)



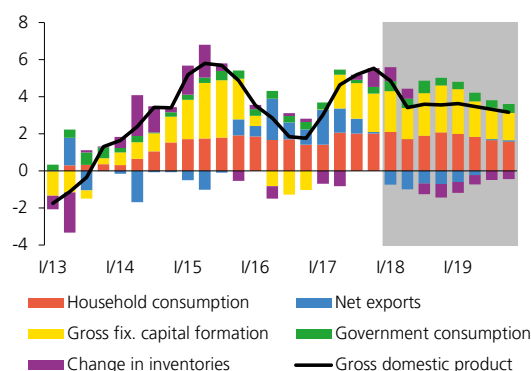
## II.2.3 Economic activity

**GDP growth will slow from last year's high levels, but will still significantly exceed 3% this year and the next.** Domestic economic activity has long been driven mainly by household consumption, which was joined by higher investment growth during 2017 (see Chart II.2.10). Both components reflect persisting optimism of consumers and firms in an environment of high growth in wages and salaries, buoyant growth in external demand and related positive expectations regarding future economic growth. These components are expected to make large positive, albeit gradually slightly declining, contributions to economic activity growth this year and the next. By contrast, net exports will dampen GDP growth. This will be linked with further appreciation of the koruna and an import-increasing rise in domestic demand (except for

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 be negative**  
(annual percentage changes; contributions in percentage points; seasonally adjusted)



11 The minimum wage was increased from CZK 11,000 to CZK 12,200 in January 2018. This fostered an increase in the average wage in market sectors of around 0.4 percentage point. The unwinding of this effect will foster slower wage growth in 2019.

12 The forecast thus incorporates stronger wage growth in 2018 H2, partly persisting into 2019. However, the ensuing inflationary effect is dampened significantly by an expert increase in labour efficiency growth in line with the current high growth in private investment in machinery and equipment and whole-economy labour productivity.



inventories). GDP will grow by 3.9% overall in 2018 and slow to 3.4% in 2019.

**Household consumption growth will reflect strong growth in wages and salaries and other income.** According to the forecast, annual household consumption growth picked up slightly at the start of 2018 and will remain buoyant – with some fluctuations – over the entire forecast horizon (see Chart II.2.11). Household expenditure will be driven by strong growth in disposable income connected with the 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 average 4.1 % this year and slow only slightly to 3.7% next year. 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 grow, mainly due to growth in current expenditure and wage growth in the government sector.** Its pace will accelerate significantly above 2% this year and stay there in 2019 (see Chart II.2.11). Nominal government consumption will be driven mainly by growth in compensation of employees in the government sector, but will be reduced in real terms by an increase in the government consumption deflator. The government consumption forecast also includes the planned public transport fare discount for students and senior citizens.<sup>13</sup>

**Growth in gross capital formation will be driven by both private and government investment.** Investment activity picked up significantly last year due to a combination of strong growth in private fixed investment, renewed growth in government investment and, at the end of the year, substantial additions to inventories. Investment will continue to grow this year and the next, albeit at weaker rates (see Chart II.2.13). Rising external demand and the tight labour market will spur additional private investment in the business sector, fostering an increase in labour efficiency. A gradual increase in interest rates will have a slightly dampening effect on investment from late 2018/early 2019. 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 8% this year. Growth in private and government investment will slow slightly in 2019 and the contribution of additions to inventories will stay negative. Total investment will thus increase by 5%.

**Growth in exports of goods and services will slow slightly at first and will later return to rates consistent with external demand.** The temporary decline in export growth in 2018 H1 is due, among other things, to slower growth in exports in the automotive industry. The

CHART II.2.11

## REAL HOUSEHOLD AND GOVERNMENT CONSUMPTION

**Buoyant growth in household consumption will outpace growth in real government consumption**  
(annual percentage changes; seasonally adjusted)

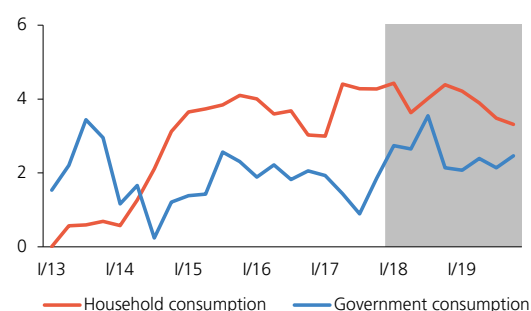
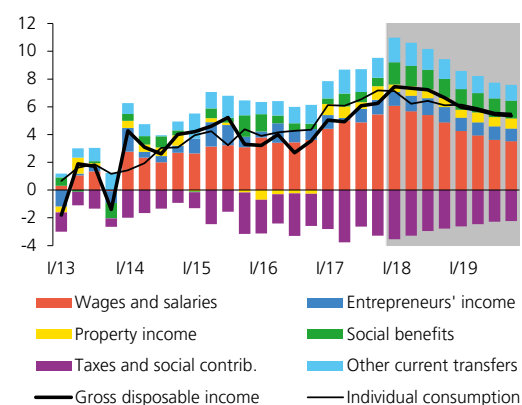


CHART II.2.12

## NOMINAL DISPOSABLE INCOME

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



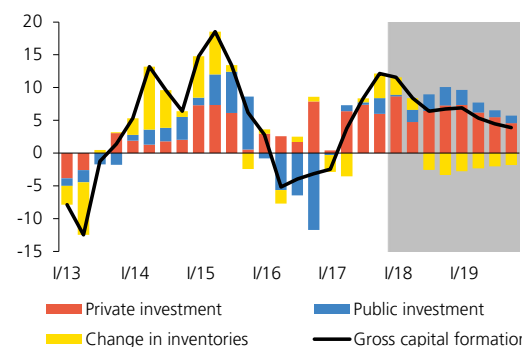
Note: Entrepreneurs' income comprises gross operating surplus and mixed income.

CHART II.2.13

## INVESTMENT DECOMPOSITION

**Investment will rise significantly due to continued growth in private investment and drawdown of EU funds in the government sector**

(annual percentage changes; contributions in percentage points; constant prices; seasonally adjusted; source: CZSO; contributions of private and public investment: CNB calculation)



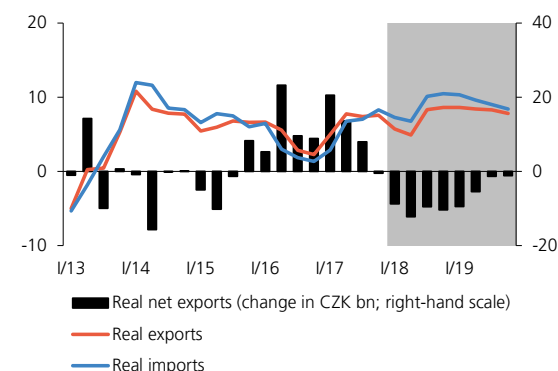
<sup>13</sup> A postponement of the applicability of this measure from June to September 2018 is a risk to the forecast for government consumption in 2018.

CHART II.2.14

## REAL EXPORTS AND IMPORTS

Growth in both exports and imports will reach high rates, reflecting the positive external demand outlook on the one hand and strong domestic demand on the other

(annual changes in per cent and CZK billions; seasonally adjusted)



forecast expects no repeat of the exceptionally strong figures observed in this sector in early 2017. In addition to a temporary slowdown in demand, this reflects a shortage of available labour force and production capacity. This effect will gradually fade away and exports of goods and services will pick up again, but they will continue to be dampened by appreciation of the koruna and an increase in domestic personnel costs. Exports of goods and services will thus grow by almost 7% in 2019 and more than 8% in 2019 (see Chart II.2.14).

**The rapid growth in aggregate domestic demand will result in a further increase in import growth.** It will be driven by growth in import-intensive investment and household consumption. The appreciating koruna will also have some effect. Overall, imports of goods and services will grow by almost 9% this year. They will rise at a similar rate next year, too (see Chart II.2.14).

**The contribution of net exports to GDP growth will be negative due to a sizeable rise in investment and appreciation of the koruna.** The contribution of net exports apparently turned negative at the start of 2018 and will remain so until mid-2019, reflecting import growth outpacing export growth.

## II.2.4 The balance of payments

**The current account surplus fell significantly in 2017 compared to 2016, due mainly to growth in the secondary income deficit.**

According to preliminary figures, the current account surplus totalled CZK 54.2 billion (see Table II.2.3), or 1.1% of GDP. The trade surplus recorded a negligible year-on-year decline due mainly to higher oil prices. The services surplus conversely increased thanks to a slight improvement in all its component balances. A small year-on-year rise in the primary income deficit was associated mainly with an estimated increase in the investment income deficit. Sharp growth in the secondary income deficit linked with a fall in income from EU funds and a rise in other (especially private) transfers abroad was the strongest factor fostering a decrease in the current account surplus.

**The forecast expects the current account balance to be stable this year.** The current account surplus will amount to 1% of GDP. The goods surplus will remain at the 2017 level, with a slight improvement in the terms of trade for machinery and equipment being offset mainly by faster growth in domestic demand. The services surplus will rise somewhat due to a slight improvement in all its component balances. A decline in the secondary income deficit due to higher net drawdown of EU funds will also foster an increase in the current account surplus. On the other hand, the primary income deficit will grow slightly because of expected growth in the direct investment income deficit.

**A higher current account surplus at just above 1% of GDP is forecasted for 2019.** The expected slight improvement in the output balance will mainly reflect slower growth in domestic demand and, to a lesser extent, a fall in energy commodity prices on global markets.

TABLE II.2.3

## BALANCE OF PAYMENTS FORECAST

The current account surplus will remain stable this year and rise slightly in 2019

(CZK billions)

	2017 actual	2018 forecast	2019 forecast
<b>A. CURRENT ACCOUNT</b>	54.2	55.0	65.0
Goods	240.9	240.0	250.0
Services	122.0	125.0	130.0
Primary income	-260.8	-270.0	-280.0
Secondary income	-47.9	-40.0	-35.0
<b>B. CAPITAL ACCOUNT</b>	46.5	20.0	30.0
<b>C. FINANCIAL ACCOUNT<sup>a)</sup></b>	131.3	-255.0	-65.0
Direct investment	-135.3	-100.0	-70.0
Portfolio investment	-268.3	-190.0	-55.0
Financial derivatives	-14.2	-	-
Other investment	-711.5	-40.0	-40.0
Reserve assets	1246.4	75.0	100.0

a) forecast excluding operations of banking sector and financial derivatives



However, the total extent of this improvement will be reduced 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 capital account surplus will continue to be affected mainly by drawdown of EU funds.** Last year's balance was significantly affected by final payments for the 2007–2013 programme period. However, the total capital account surplus was reduced by purchases of emission allowances by residents. These one-off factors will fade out this year. The effect of the slow start to the drawdown of EU funds in the current programme period will manifest itself at same time. The capital account surplus will therefore shrink considerably. In 2019, it will rise only moderately.

**The financial account was affected in 2017 by the massive inflow of short-term capital observed before the exchange rate commitment was ended.** It was channelled mainly into Czech koruna government bonds and short-term koruna deposits by non-residents in domestic banks. There were relatively significant shifts between koruna assets held by non-residents in the second half of the year and even a modest decline in total koruna assets held by non-residents at the year-end. Domestic firms' interest in foreign debt financing increased slightly as a result of a higher interest rate differential vis-à-vis the euro and balance-sheet exchange rate hedging.

**The amount of financial account transactions will drop significantly and non-residents' koruna assets will decline slightly this year.** The net inflow within the direct investment sub-item will moderate considerably due to a limited inflow of debt capital into the Czech Republic.<sup>14</sup> By contrast, the expected disinvestment by ČEZ in Bulgaria will act against a decrease in the deficit. The net inflow of portfolio investment will moderate significantly. 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, albeit not to the same extent as in 2017. The forecast also incorporates expected banking sector accounting operations at the end of the year aimed at optimising contributions to the Resolution Fund.<sup>15</sup> Turning to other investment, the net capital inflow in the business sector will continue due to domestic export firms' interest in foreign-currency loans<sup>16</sup> and the willingness of firms owned by non-residents to maintain

<sup>14</sup> A reversal in direct investment debt capital flows had already been visible in 2017 H2.

<sup>15</sup> These operations are recorded on the other investment account of the banking sector in the same amount but with the opposite sign. However, this account is not part of the forecast.

<sup>16</sup> The conversion of these funds into koruna will create room for a gradual exit of non-residents from koruna positions without major impacts on the exchange rate.

financial capital to a greater extent 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 expected net financial account surplus will shrink in 2019.** The net inflow of direct investment will be affected by the dissipation of this year's extraordinary factors. The inflow of portfolio investment will drop sharply, due mainly to lower holdings of government bonds by non-residents. At the same time, residents' interest in investing abroad will increase owing to a moderation of expectations regarding the appreciation of the koruna. However, the net inflow of debt capital will continue to be supported by a relatively high positive differential between domestic and euro area interest rates. The forecasted higher growth in reserve assets than in 2018 is associated with an expected increase in returns on the CNB's reserves and a year-on-year increase in the surplus on operations vis-à-vis the EU.

## II.2.5 Fiscal developments

**The government budget surpluses primarily reflect growth in tax revenues.** Public budgets achieved a record-high surplus of 1.6% of GDP last year. The general government surplus will record a similar result both this year and the next (see Table II.2.4). In addition to the economic growth effect, the general government revenue side is being bolstered by the positive impact of VAT control statements and the first two phases of ESR introduced in recent 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,<sup>17</sup> a package of new social measures<sup>18</sup> 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 30% of GDP in 2019 owing to the general government primary surpluses, low interest rates on government debt and relatively buoyant nominal GDP growth.

17 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. 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.

18 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.

TABLE II.2.4

### FISCAL FORECAST

**The government sector balance will remain in a sizeable surplus**

(% of nominal GDP)

	2017 actual	2018 forecast	2019 forecast
Government revenue	40.4	40.5	40.6
Government expenditure	38.8	39.0	39.1
of which: interest payments	0.7	0.7	0.6
<b>GOVERNMENT BUDGET BALANCE</b>	<b>1.6</b>	<b>1.5</b>	<b>1.5</b>
of which:			
primary balance <sup>a)</sup>	2.3	2.2	2.1
one-off measures <sup>b)</sup>	0.1	0.0	0.1
<b>ADJUSTED BUDGET BALANCE<sup>c)</sup></b>	<b>1.5</b>	<b>1.5</b>	<b>1.4</b>
Cyclical component (ESCB method) <sup>d)</sup>	0.1	0.5	0.5
Structural balance (ESCB method) <sup>d)</sup>	1.4	1.1	1.0
Fiscal stance in pp (ESCB method) <sup>e)</sup>	0.6	-0.3	-0.1
Cyclical component (EC method) <sup>d)</sup>	0.1	0.3	0.4
Structural balance (EC method) <sup>d)</sup>	1.4	1.2	1.1
Fiscal stance in pp (EC method) <sup>e)</sup>	0.5	-0.2	-0.2
<b>GOVERNMENT DEBT</b>	<b>34.6</b>	<b>32.2</b>	<b>30.1</b>

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

**Fiscal policy will remain expansionary** (see Table II.2.5). The fiscal impulse this year will be distinctly positive – at 0.4 percentage point – after last year's slightly positive effect. The fiscal expansion will relate mainly to measures supporting household consumption and to 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 0.3 percentage point for next year, reflecting a sharp rise in old-age pensions and continued growth in government investment.

TABLE II.2.5

**FISCAL IMPULSE**

**The fiscal impulse will stay positive, 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
FISCAL IMPULSE <sup>a)</sup>	0.2	0.4	0.3
of which impact through:			
private consumption	0.2	0.3	0.1
private investment	-0.1	0.0	0.0
government investment, domestic	0.0	0.1	0.0
government investment, EU funded	0.0	0.1	0.1

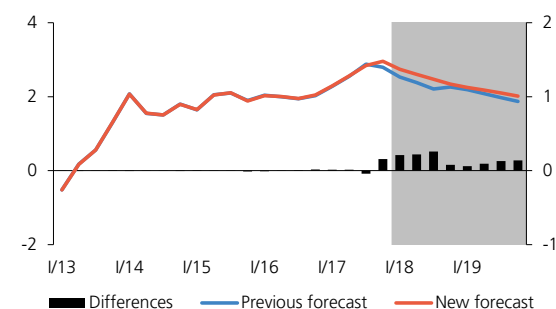
a) Figures may not add up owing to rounding.

CHART II.3.1

**CHANGE IN THE FORECAST FOR EFFECTIVE GDP IN THE EURO AREA**

**The external economic activity outlook has shifted upwards due to higher observed levels**

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

**II.3 COMPARISON WITH THE PREVIOUS FORECAST**

The biggest change compared to the previous forecast is a lowering of the inflation outlook for this year despite slightly higher fundamental inflation pressures. This is due to a deeper fall in import prices at the end of last year, lower inflation observed at the start of this year and a lowered outlook for administered prices. Overall, these factors outweigh the slightly stronger inflation pressures stemming from higher wage growth, brisker growth in domestic economic activity and a weaker koruna-euro exchange rate this year. Next year, by contrast, the koruna will appreciate slightly more by comparison with the previous forecast. Wage growth will be higher compared to the previous forecast. However, this will be largely offset by faster growth in labour efficiency. The inflation forecast at the monetary policy horizon is thus unchanged overall, as is the interest rate outlook.

As regards foreign variables, growth in economic activity in the euro area has been revised upwards (see Chart II.3.1). The outlook for 2018 and 2019 is 0.2 and 0.1 percentage point higher respectively than in the previous forecast. This shift takes into account in particular the higher growth observed in the euro area, which is also reflected in the outlook for the exchange rate of the euro against the dollar. That outlook is distinctly stronger compared to the previous forecast for this year and the next. The stronger euro will outweigh the stronger price demand pressures stemming from higher economic growth in euro area countries next year, amid a slightly higher outlook for Brent crude oil prices. The forecast for industrial producer prices next year has thus shifted 0.5 percentage point lower. The expectation of more subdued inflation is reflected in a lower market outlook for 3M EURIBOR interest rates, in particular at its longer end. As there has been no change in the parameters of the ECB's asset purchase programme, the outlook for shadow 3M EURIBOR rates has shifted in the same direction and to the same extent as the market outlook.

CHART II.3.2

**CHANGE IN THE GDP FORECAST**

**The forecast for domestic economic activity is slightly higher**

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

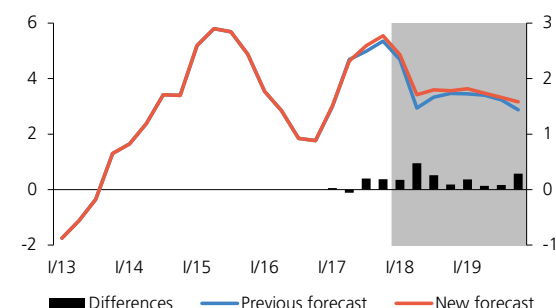
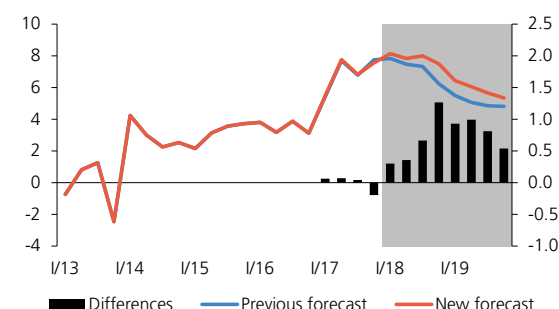


CHART II.3.3

**CHANGE IN THE FORECAST FOR NOMINAL WAGES IN MARKET SECTORS**

**The substantially higher wage forecast for 2018 and 2019 takes the observed labour market developments and a related expert adjustment into account**

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



The domestic economic growth forecast for the next two years is slightly higher (see Chart II.3.2). The forecast for this year is higher due mainly to a more robust external demand outlook, which will increase the contributions of net exports and private investment. Higher government consumption will also contribute positively to the slightly increased growth forecast. By contrast, the contribution of household consumption will be lower this year as a result of the slightly weaker levels observed at the end of last year. A stronger fiscal impulse to household consumption and government investment via EU funds is expected next year. Private investment will also keep rising faster than in the previous forecast. A lower contribution of net exports, reflecting stronger domestic demand and a stronger koruna, will have the opposite effect on GDP growth.

Wage growth will be substantially higher than in the previous forecast, taking the tighter labour market into account (see Chart II.3.3). This change reflects the more robust economic growth and higher external demand outlook. In addition, it incorporates an expert adjustment taking the upward wage pressures and expected faster labour

efficiency growth into account. The forecast thus expects stronger wage growth in 2018 H2. This growth will be more persistent and continue into 2019. However, the ensuing inflationary effect is dampened significantly in the forecast by an expert increase in labour efficiency growth, in line with the current high growth in private investment in machinery and equipment. Overall, domestic inflation pressures will thus be slightly stronger this year and the next than in the previous forecast.

**The inflation forecast is lower for this year but remains unchanged at the monetary policy horizon** (see Chart II.3.4). The lower outlook for inflation this year is due to the surprisingly low inflation levels observed at the start of this year. The greater-than-expected slowdown was mainly a result of the fade-out of last year's one-off factors, which had been larger than assumed in the previous forecast. By contrast, the fundamental inflation pressures are increasing slightly, reflecting higher domestic and foreign economic activity, more gradual appreciation of the koruna in the coming quarters and growth in total costs as a result of wage growth; the latter, however, will be significantly offset by higher labour efficiency. Administered price inflation has been revised downwards for 2018 due to lower growth in gas prices early this year. The inflation forecast for 2019 is almost unchanged, as faster growth in domestic wages and demand will counteract the expected lower growth in import prices. The assumptions regarding the first-round effects of changes to indirect taxes are unchanged, so the outlook for monetary policy-relevant inflation for both years has been revised to the same extent as that for headline inflation.

**The exchange rate of the koruna is slightly weaker at the start of the forecast period but then moves to slightly stronger levels** (see Chart II.3.5). The change in the koruna exchange rate outlook in the short term is in line with current market developments. These reflect a revision of financial market expectations towards only a gradual increase in domestic interest rates. In the longer term, a stronger exchange rate will be fostered by more robust domestic and external economic activity coupled with higher growth in labour efficiency, and also by more accommodative ECB monetary policy in 2019.

**The path of market interest rates is little changed** (see Chart II.3.6). The slightly lower interest rates for the first two quarters of the forecast are due mainly to a more anti-inflationary initial state, which outweighs the change in the short-term exchange rate forecast and higher external demand. The effect of the initial state is due mainly to the lower inflation observed in 2018 Q1. From the end of this year onwards, the interest rate path is moderately affected by an expert increase in wage growth and efficiency, reflecting the situation observed in the labour market and growth in private investment in machinery and equipment. This faster labour efficiency growth reduces the impact of the cost pressures arising from wage growth while simultaneously exerting stronger appreciation pressures on the koruna. The effect of higher wage growth will slightly predominate in late 2018/early 2019, whereas faster labour efficiency growth will slightly prevail in 2019 H2.

CHART II.3.4

## CHANGE IN THE HEADLINE INFLATION FORECAST

The headline inflation forecast for this year is lower due to observed data, while the changes for next year are negligible (year on year in %; differences in pp – right-hand scale)

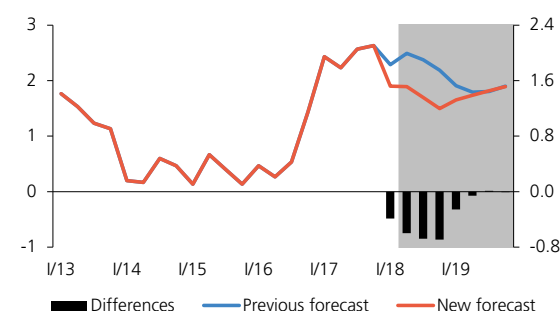


CHART II.3.5

## CHANGE IN THE EXCHANGE RATE FORECAST

The exchange rate will be slightly weaker at first due to developments observed at the start of Q2; it will strengthen slightly more than indicated by the previous forecast at the longer horizon

(CZK/EUR; differences in CZK – right-hand scale)

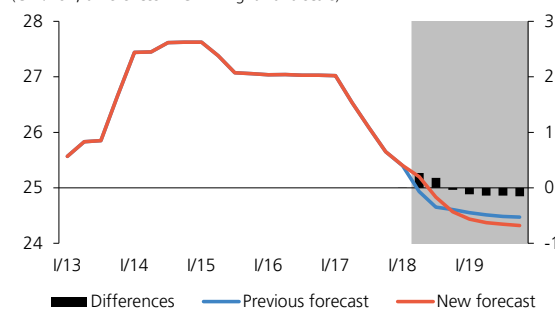
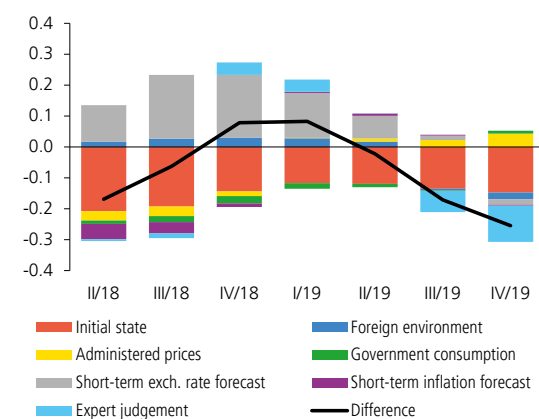


CHART II.3.6

## DECOMPOSITION OF CHANGES IN THE INTEREST RATE FORECAST

The initial state in particular is having a downward effect on the interest rate outlook; its effect is roughly offset by the short-term exchange rate forecast

(3M PRIBOR, percentage points)



## II.4 RISKS AND UNCERTAINTIES OF THE FORECAST

At its monetary policy meeting in May, the Bank Board assessed the risks to the inflation forecast at the monetary policy horizon as being balanced. Two main uncertainties were identified during the preparation of the forecast, uncertainties which the Bank Board subsequently agreed with. The first one is associated with the strength and composition of the overall inflation pressures in conditions of a continuing inflationary effect of the domestic economy and rising labour efficiency. This uncertainty was described in a labour efficiency sensitivity scenario. The second uncertainty, which is captured by a standard exchange rate sensitivity scenario, remains the path of the exchange rate. Moreover, the Bank Board identified uncertainty connected with developments abroad. The outlooks of other entities expect a weaker exchange rate at the one-year horizon than the CNB forecast amid similar interest rates and a moderately higher inflation outlook.

## II.4.1 Risks perceived by the CNB

The strength and composition of overall inflation pressures in conditions of rising labour efficiency represents the main uncertainty of the forecast. The forecast incorporates the significant impacts of the tight labour market and rising labour efficiency on wage growth. Both the labour market and efficiency are having a positive impact on wage growth, but with different impacts on inflation and the real economy. The effect of the tight labour market is inflationary, as it is increasing costs in addition to stimulating demand, whereas the rising efficiency represents a favourable supply-side shock and is anti-inflationary. Wage growth offset by higher efficiency may thus not represent an upside risk to inflation. The forecast captures the most likely evolution of both factors. It is, however, subject to uncertainty. A labour efficiency sensitivity scenario has therefore been prepared. It aims to determine the impacts of a different structure of wage growth sources. In the sensitivity scenario, their composition is expertly adjusted towards a higher contribution of the tight labour market and a lower contribution of efficiency.

The tight labour market amid lower efficiency growth in the sensitivity scenario generates higher inflation pressures compared to the forecast. Monetary policy responds by raising interest rates. Overall, these developments are subsequently reflected in slightly lower real economic activity compared to the forecast. The exchange rate path is little changed in the sensitivity scenario, as the effects of higher domestic interest rates and lower labour efficiency almost offset each other. The simulation results, expressed as deviations from the forecast, are given in Table II.4.1. The sensitivity scenario variant with higher efficiency growth has the same results but with the opposite sign.

The exchange rate path represents a general uncertainty surrounding the forecast, as captured by a standard sensitivity

TABLE II.4.1

## LABOUR EFFICIENCY SENSITIVITY SCENARIO

Lower labour efficiency in the sensitivity scenario generates higher inflation compared to the forecast, to which monetary policy responds by raising interest rates  
(deviations from baseline scenario paths)

	CPI inflation (in pp)	3M PRIBOR (in pp)	GDP growth (in pp)	Labour efficiency growth (in pp)
II/18	0.1	0.1	0.0	-0.1
III/18	0.2	0.2	-0.1	-0.2
IV/18	0.2	0.3	-0.2	-0.4
I/19	0.2	0.3	-0.2	-0.5
II/19	0.1	0.3	-0.3	-0.5
III/19	0.1	0.3	-0.3	-0.5
IV/19	0.1	0.3	-0.2	-0.5

TABLE II.4.2

## EXCHANGE RATE SENSITIVITY SCENARIO

A depreciation of 3% in the sensitivity scenario leads to temporarily higher inflation and faster GDP growth compared to the forecast; interest rates are also higher 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)
II/18	0.0	0.0	0.2	0.8
III/18	0.1	0.3	0.2	0.3
IV/18	0.1	0.4	0.1	0.1
I/19	0.2	0.3	0.0	0.0
II/19	0.2	0.1	-0.2	0.0
III/19	0.1	0.0	-0.3	0.1
IV/19	0.1	0.0	-0.2	0.1

**scenario.** This symmetric sensitivity scenario assumes a deviation of the nominal exchange rate of  $\pm 3\%$  in the first quarter of the forecast. Interest rates in that quarter are the same as in the forecast. The exchange rate is thus set at CZK 26.0/24.4 to the euro in 2018 Q2, as against CZK 25.2 in the forecast. The simulation results for the weaker exchange rate variant, expressed in terms of deviations from the forecast, are given in Table II.4.2. The variant with a stronger nominal exchange rate has the same results but with the opposite sign.

**The temporarily weaker exchange rate in the sensitivity scenario leads to a 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 goes up by about 0.2 percentage point at the one-year horizon, i.e. less than one-tenth of the initial depreciation. However, GDP growth then dips slightly below the forecasted level in response to tighter monetary policy and an exchange rate correction. The stabilising effect of monetary policy thus eventually leads to inflation returning to the forecast.

**The Bank Board assessed the risks to the inflation forecast at the monetary policy horizon as being balanced.** At the same time, it stated that there are three main uncertainties of the forecast. The first one is associated with the strength and composition of the overall inflation pressures in conditions of a tight labour market and counteracting productivity growth. The second one remains the exchange rate path. The third uncertainty is connected with developments abroad. The uncertainty stems among other things from protectionist measures in global trade. However, their impacts are still difficult to quantify. In addition, the Bank Board discussed the drop in some foreign leading indicators of real economic activity.

## 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 slightly.** 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 has also moved lower. 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.

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)

	12/17	1/18	2/18	3/18	4/18
<b>FMIE:</b>					
CPI	2.1	2.1	2.1	2.1	2.1
CPI, 3Y horizon	2.0	1.9	2.0	2.0	2.0
Real GDP in 2018	3.2	3.4	3.5	3.4	3.5
Real GDP in 2019		2.9	2.8	2.9	2.9
Nominal wages in 2018	7.0	7.2	6.9	7.1	7.2
Nominal wages in 2019		5.0	5.0	5.2	5.2
CZK/EUR exchange rate (level)	24.9	24.8	24.7	24.7	24.6
2W repo rate (in per cent)	1.3	1.3	1.4	1.4	1.3
1Y PRIBOR (in per cent)	1.7	1.8	1.8	1.8	1.8
<b>Corporations:</b>					
CPI	2.1			2.1	
CPI, 3Y horizon	2.6			2.6	
<b>CF:</b>					
Real GDP in 2018	3.2	3.3	3.4	3.5	3.5
Real GDP in 2019		2.8	3.0	3.0	3.0
Nominal wages in 2018	6.9	6.9	7.0	7.0	7.1
Nominal wages in 2019		5.2	5.4	5.5	5.6
CZK/EUR exchange rate (level)	25.0	25.0	24.9	24.8	24.8
3M PRIBOR (in per cent)	1.3	1.4	1.5	1.5	1.4

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)

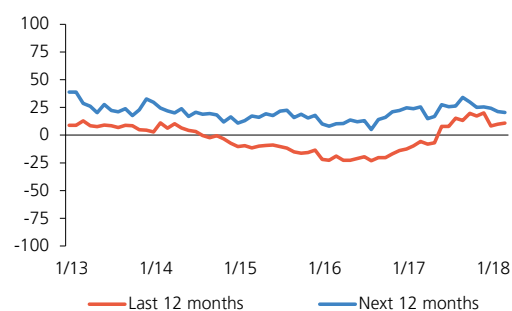


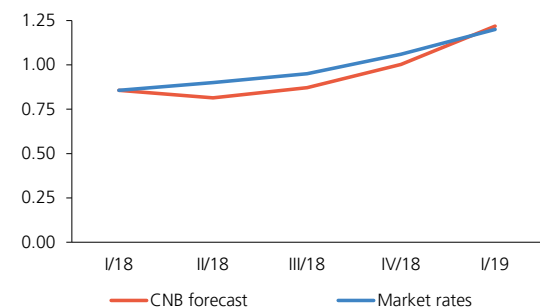


CHART II.4.2

## 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 Q1 and 2018 Q2 the 3M PRIBOR and for 2018 Q3–2019 Q1 the average values of the FRA 3\*6, 6\*9 and 9\*12 rates for the last 10 trading days as of 20 April 2018.

The analysts expect the Czech economy to show growth of over **3% this year** (see Table II.4.3). The growth will, the analysts believe, continue to be supported by both domestic and external demand. The growth rate will slacken further next year. Nominal wages are expected to rise by about 7% this year and slow markedly next year. The current overheating of the Czech economy – as some analysts are assessing the present economic situation in the Czech Republic – is expected to be moderated by tighter monetary conditions. The analysts on average forecast the koruna to appreciate below CZK 25 to the euro at the one-year horizon.<sup>19</sup> Before the May CNB Bank Board meeting, all the FMIE analysts were expecting the CNB to keep its key interest rates unchanged at that meeting. Their average estimate of the 2W repo rate at the one-year horizon is 1.3%.

**Compared to the CNB, the analysts expect slightly slower GDP growth amid slightly higher inflation.** The analysts' wage expectations are lower by comparison with the CNB, especially for this year. The interest rate outlook is similar, while the exchange rate at the one-year horizon is weaker on average in the analysts' predictions than in the CNB forecast.

**The current market outlook for 3M rates implies only a gradual increase over the one-year horizon.** Consistent with the CNB forecast is broad stability of market interest rates initially, followed by further growth in rates from late 2018/early 2019. The market outlook at the one-year horizon is thus in line with the interest rate level contained in the CNB forecast (see Chart II.4.2).

<sup>19</sup> The expected range is relatively wide: CZK 24.0–25.0/EUR in the FMIE survey and CZK 24.3–25.3/EUR in the CF survey.



### III. CURRENT ECONOMIC DEVELOPMENTS

#### III.1 PRICE DEVELOPMENTS

Compared to the autumn 2016 forecast, a retrospective assessment of which is relevant for evaluating the current fulfilment of the inflation target, the effect of the domestic economy was more inflationary in 2017. This, coupled with one-off price effects, led to an earlier-than-expected increase in inflation above the 2% target. However, these one-off effects faded quickly at the start of 2018 and inflation fell to 1.9% on average, i.e. just below the target. With the benefit of hindsight, therefore, the CNB's monetary policy in the previous period can be assessed as having been appropriate. The decline in inflation in Q1 was due mainly to more subdued food price inflation and lower core inflation. However, core inflation continues to reflect domestic inflation pressures most strongly. Growth in administered prices was fostered by an increase in electricity prices at the start of the year. The appreciation of the koruna against the dollar outweighed the effect of fast increasing global oil prices, leading to a modest decrease in domestic fuel prices. The decline in import prices deepened owing to appreciation of the koruna against the euro and lower growth in producer prices in the euro area. This was reflected both in consumer prices and in a halt in industrial producer price growth. On the other hand, the inflationary effect of the domestic economy led to faster growth in construction work prices and prices of services for the business sector.

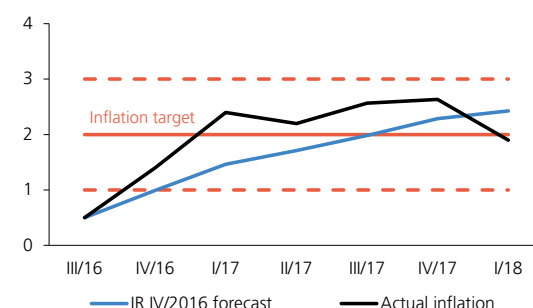
##### III.1.1 Fulfilment of the inflation target

**Inflation fell below the IR IV/2016 forecast<sup>20</sup> and also slightly below the CNB's 2% target in 2018 Q1** (see Chart III.1.1). The IR IV/2016 forecast was 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. The forecast expected inflation to rise and exceed slightly the 2% target at the monetary policy horizon. The growing economy and wages were expected to continue to foster higher domestic costs and hence also higher consumer prices. The anti-inflationary effect of import prices was expected to gradually disappear.

CHART III.1.1

#### FORECAST VERSUS ACTUAL HEADLINE INFLATION

**Inflation was above the forecast, moving below it only this year**  
(year on year in %)



<sup>20</sup> 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 inflation target in 2018 Q1, we have to examine the period from summer 2016 to mid-2017, which takes into account the different lengths of transmission of interest rates and the exchange rate. This is because monetary policy passed through to inflation with a substantially shorter lag in the regime where the exchange rate was used as a monetary policy instrument than when interest rates were used. For the sake of clarity, however, the analysis of the fulfilment of the forecasts is limited here to a comparison of Inflation Report IV/2016 with subsequent inflation.

TABLE III.1.1

## FULFILMENT OF THE INFLATION FORECAST

**All components of inflation except for the impacts of changes to indirect tax deviated downwards from the forecast in Q1**  
(annual percentage changes; contributions in percentage points)

	IR IV/2016 forecast	2018 Q1 outturn	Contribution to total difference
CONSUMER PRICES	2.4	1.9	-0.5
of which:			
administered prices	1.7	1.4	-0.1
first-round impacts of changes to indirect taxes <sup>a)</sup>	0.1	0.1	0.0
core inflation <sup>b)</sup>	2.0	1.8	-0.1
food prices <sup>b)</sup>	3.5	2.5	-0.3
fuel prices <sup>b)</sup>	1.8	-1.6	-0.1

a) impact on headline inflation except administered prices

b) excluding the first-round effects of changes to indirect taxes

TABLE III.1.2

## FULFILMENT OF THE EXTERNAL ASSUMPTIONS

**Industrial producer price inflation in the euro area recovered more strongly than forecasted, as did external economic activity**

(annual percentage changes unless otherwise indicated;  
p – prediction, o – outturn)

		IV/16	I/17	II/17	III/17	IV/17	I/18
GDP in euro area <sup>a), b), c)</sup>	p	1.8	1.5	1.6	1.7	1.8	1.8
	o	2.0	2.3	2.6	2.8	3.0	-
PPI in euro area <sup>b), c)</sup>	p	-1.0	1.2	1.7	1.7	1.8	1.9
	o	0.0	3.6	3.1	2.6	2.5	-
3M EURIBOR (percentages)	p	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3
	o	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3
USD/EUR exchange rate (levels)	p	1.11	1.10	1.09	1.09	1.09	1.09
	o	1.08	1.06	1.10	1.18	1.18	1.23
Brent crude oil price (USD/barrel)	p	53.8	55.2	56.0	56.5	56.8	57.2
	o	51.1	54.6	50.8	52.2	61.5	67.2

a) at constant prices

b) seasonally adjusted

c) IR IV/2016 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 in 2017, thus fostering higher inflation**  
(p – prediction, o – outturn)

		IV/16	I/17	II/17	III/17	IV/17	I/18
Consumer price index (annual perc. changes)	p	1.0	1.5	1.7	2.0	2.3	2.4
	o	1.4	2.4	2.2	2.6	2.6	1.9
3M PRIBOR (percentages)	p	0.3	0.3	0.3	0.9	1.2	1.3
	o	0.3	0.3	0.3	0.4	0.7	0.9
CZK/EUR exchange rate <sup>a)</sup> (levels)	p	27.0	27.0	27.0	26.3	26.0	25.8
	o	27.0	27.0	26.5	26.1	25.7	25.4
Real GDP <sup>b)</sup> (annual perc. changes)	p	3.1	3.4	3.1	2.7	2.4	2.5
	o	1.8	3.0	4.6	5.2	5.5	-
Nominal wages <sup>c)</sup> (annual perc. changes)	p	4.4	4.7	5.0	5.0	5.0	4.7
	o	3.1	5.5	7.8	6.8	7.6	-

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

**Headline inflation was above the forecast for almost the entire period and then moved below it in early 2018.** The difference between the two reached 0.5 percentage point in 2018 Q1 (see Table III.1.1). This negative deviation from the forecast was recorded for all consumer basket items (except for the first-round effects of changes to indirect taxes). Primarily food price inflation and, to a lesser extent, core inflation and administered price inflation were lower than expected. Fuel prices fell slightly, whereas they had been expected to rise negligibly.

**Turning to external factors, foreign producer prices recorded the biggest deviation from the forecast.** Their decline subsided faster than expected and they subsequently rose more strongly than forecasted (see Table III.1.2). This mainly reflected stronger demand pressures stemming from higher growth in economic activity in the euro area. Nevertheless, industrial producer price inflation has been dampened since mid-2017 by a stronger euro against the dollar. The forecast that foreign interest rates would stabilise at slightly negative levels<sup>21</sup> materialised. Overall, according to the assessment based on the CNB's core prediction model, the effect of external developments on domestic inflation was broadly in line with the forecast. As regards the monetary conditions, however, they fostered greater appreciation of the koruna and lower domestic interest rates.

**Domestic economic activity fostered higher inflation in 2017 compared to the forecast.** More robust growth in household consumption and nominal wages was recorded in 2017. This was due to the labour market situation being tighter than forecasted.

**The duration of the exchange rate commitment was shortened by almost one quarter relative to the assumption of the forecast contained in Inflation Report IV/2016.** The exchange rate stayed close to the CNB's commitment until 6 April 2017, when the CNB ended the commitment; the koruna then appreciated gradually. Market interest rates were stable at first, responding later only to the CNB's trio of key rate increases starting in August 2017 (see Table III.1.3). Compared to the forecast, the exchange rate component of the monetary conditions tightened earlier, while the interest rate component neutralised more gradually.

**Overall, the monetary policy pursued by the CNB between July 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 the mildly inflationary direction. Observed

21 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.

inflation was above the CNB's 2% target (though within the tolerance band) for almost the entire period and then fell just below the target in Q1. The deviations of observed inflation from the CNB's target over the last two years are explained in Box 2. In addition to comparing the forecast for headline inflation in IR IV/2016 with actual headline inflation, it offers an alternative view of the fulfilment of the inflation target.

## BOX 2 Sources of the deviations of inflation from the CNB's 2% target

**This box describes the main sources of the deviations of observed monetary policy-relevant inflation from the 2% inflation target.**

The analysis is based on the data used to prepare the forecast for IR II/2018 and focuses on the most recent eight quarters, i.e. 2016 Q2 to 2018 Q1. The g3 core prediction model was used for the analysis, so the results are fully consistent with the assessment of the initial state of the current forecast. At the same time, the results provide another view of the origin of the inflation pressures faced by monetary policy over the last two years. The deviations of inflation are presented in the form of a decomposition into the contributions of categories of factors (see Chart 1).<sup>22</sup>

**External shocks have been the most important continual source of negative deviations from the target over the last two years.** Of those shocks, the ECB's ongoing unconventional monetary policy, which is exerting upward pressure on the koruna's exchange rate against the euro, is still having a significant effect. A decline in foreign producer prices in the effective euro area also had an anti-inflationary effect in 2016. However, this trend reversed quickly in early 2017 and producer prices started to foster a rise in inflation. The overall anti-inflationary effect of external variables therefore diminished somewhat.

**The aggregate effect of the domestic economy started to drive inflation above the target at the end of 2016.** The Czech economy found itself in an environment of continued economic growth in 2016. The previous anti-inflationary price and wage cost-push effects thus gradually disappeared. The rapid switch of the contribution of price shocks to inflationary at the end of 2016 was related, among other things, to one-off factors (the introduction of ESR and faster growth in imputed rent). Food prices also grew rapidly. These factors initially increased the upward pressure on inflation in 2017 but had the opposite effect at the start of this year. Administered prices, whose growth was

CHART 1 (BOX)

## DEVIATIONS OF MONETARY POLICY-RELEVANT INFLATION FROM THE 2% TARGET

The effect of external shocks has continually been pushing domestic inflation below the 2% target; monetary policy, which is being tightened at a prudent pace, and more gradual appreciation of the koruna compared to the core model have recently been acting in the opposite direction

(percentage points)

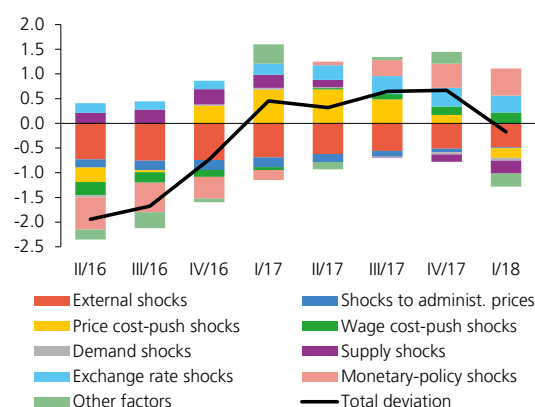
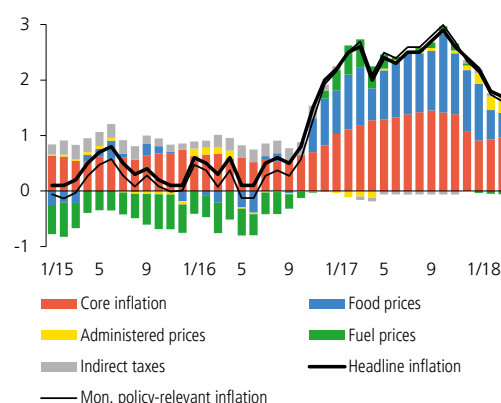


CHART III.1.2

## STRUCTURE OF INFLATION

**Growth in consumer prices slowed further in Q1, due mainly to slower growth in food prices**

(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.

<sup>22</sup> When the forecast is prepared, the observed data are interpreted using the g3 core prediction model, which captures the structural linkages between economic variables. Deviations of the observed data from levels consistent with these linkages are assessed by the model as unexpected structural shocks. These shocks are aggregated by type into categories called factors. Chart 1 shows the contributions of these factors to the deviations of monetary policy-relevant inflation from the target.

CHART III.1.3

## CORE INFLATION

**Core inflation fell owing to slower growth in non-tradables prices and a halt in tradables price growth**  
(annual percentage changes)

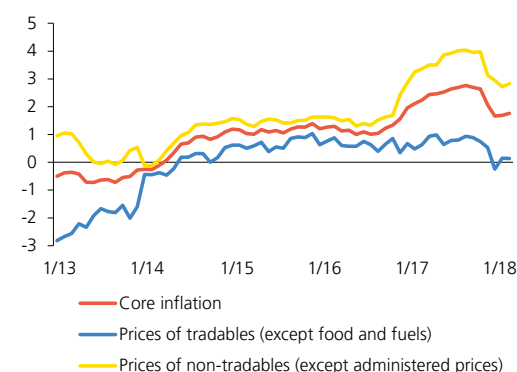


CHART III.1.4

## FOOD PRICES, ADMINISTERED PRICES AND FUEL PRICES

**Food price growth fell sharply and fuel prices went down slightly, whereas administered price inflation increased**  
(annual percentage changes)

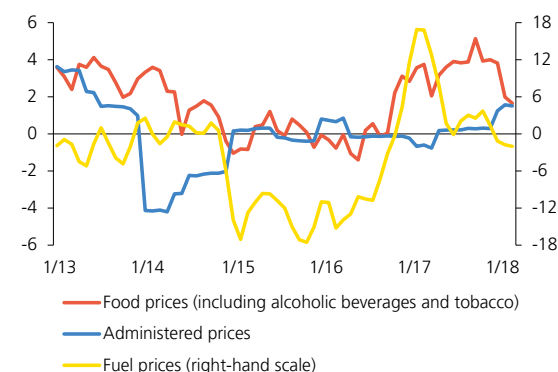
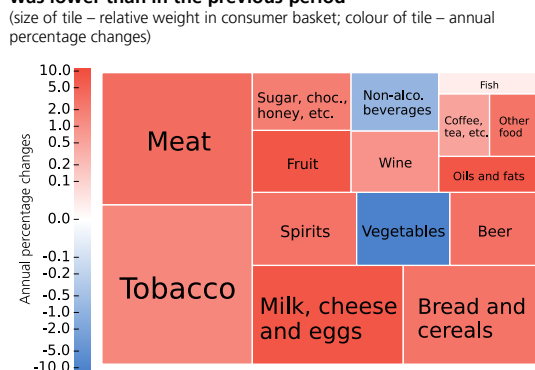


CHART III.1.5

## STRUCTURE OF FOOD, BEVERAGES AND TOBACCO PRICE INFLATION IN 2018 Q1

**The growth in food prices remained mostly broad-based, but was lower than in the previous period**  
(size of tile – relative weight in consumer basket; colour of tile – annual percentage changes)



well below 2% over almost the entire period under review, dampened inflation until the end of 2017.<sup>23</sup> Fundamental supply shocks, which helped inflation rise above the target until mid-2017, are currently acting in the opposite direction. This is reflected mainly in rising labour efficiency growth. Growing labour market tightness caused by labour shortages has recently been reflected in higher wage growth, whose inflationary effect is gradually intensifying.

**Monetary policy and only gradual appreciation of the koruna have offset the anti-inflationary external pressures in recent quarters.**

As monetary policy was still limited by the zero lower bound on interest rates in 2016, the interest rate component of the monetary conditions did not ease sufficiently and thus had an anti-inflationary effect. However, the extension of the use of the exchange rate as an additional monetary policy instrument until spring 2017 partly offset the effect of the insufficiently low interest rates.<sup>24</sup> The decomposition indicates that – with the benefit of hindsight – monetary policy should have been a touch easier at the time of the exchange rate commitment. The contribution of the exchange rate remained inflationary in 2017 H2 despite the observed appreciation of the koruna against the euro, as the koruna strengthened more gradually than indicated by the core prediction model, probably due to overboughtness of the koruna market. In this context, the increase in interest rates in 2017 H2 was less sharp than the standard reaction function of monetary policy. This can be attributed in part to the prudential approach naturally taken in monetary policy decision-making in the year of the exit from the exchange rate commitment.

## III.1.2 Consumer prices and property prices

**Annual consumer price inflation fell gradually further in 2018 Q1, reaching 1.7% in March.** This slowdown was due mainly to substantially lower growth in food prices, but core inflation also decreased (see Chart III.1.2). Conversely, administered prices showed faster growth in Q1, due mainly to higher electricity prices. The growth rate of domestic fuel prices was slightly negative owing to appreciation of the koruna against the dollar, which outweighed oil price growth. Monetary policy-relevant inflation was around 0.1 percentage point lower than headline inflation.<sup>25</sup>

<sup>23</sup> Administered price inflation was even negative in 2016.

<sup>24</sup> Exchange rate shocks are deviations of observed inflation from levels consistent with the model equation describing the path of the exchange rate (“uncovered interest rate parity”). According to uncovered interest rate parity, the expected path of the exchange rate is based on other variables, in particular the interest rate differential in domestic and foreign rates and the country risk premium.

<sup>25</sup> The tax impact is due to rises in excise duty on cigarettes and tobacco in January 2017 and 2018. Given the gradual pass-through to consumer prices, these tax impacts materialise during the first three months of each year. In January and February 2018, these effects

The decline in core inflation at the start of the year was due mainly to a decrease in non-tradables price inflation (see Chart III.1.3). This reflected a gradual fading of the one-off effects of ESR in late 2016 and early 2017 and lower growth in imputed rent owing to a slowdown in prices of new apartments. Growth in net rents and prices of recreational and cultural services has been stable over recent months. Tradables prices stopped going up. This reflected a gradual pass-through of the stronger exchange rate to prices in this segment of the consumer basket, which, however, was partially offset by the intensifying inflationary effect of the domestic economy.

Food prices went up by almost 4% in January, but their growth then fell sharply (see Chart III.1.4). The slowdown of around 2 percentage points was driven by a decrease in the previous rapid growth in prices of dairy products, cheese and eggs, oils and fats and bread. Growth in prices of meat and fruit also slowed slightly. Moreover, the decline in prices of vegetables, which has been going on for many months now, was joined by a fall in prices of non-alcoholic beverages in Q1 (see Chart III.1.5). Growth in prices of tobacco products and alcohol stayed at around 2% in 2018 Q1.

Administered price inflation went up at the start of 2018, mainly due to an increase in electricity prices (see Chart III.1.4). This reflected higher electricity generation prices on exchanges and an increase in the administered component. Prices in health care and school catering recorded increases exceeding 3%, responding with a lag to last year's rapid growth in food prices. However, still falling prices of gas and heat for households and subdued price growth in education and transport prevented a more pronounced increase in administered prices.

The appreciating koruna outweighed the rapidly rising dollar price of oil, and fuel prices went down slightly as a result (see Chart III.1.4). Although oil prices in global markets rose by more than 20% year on year on average in 2018 Q1, they declined slightly in the Czech Republic, by 1.6% on average, due to appreciation of the koruna against the dollar.

Growth in property transaction prices slowed in 2017 Q4 for the second time in a row. Transaction prices of housing and transaction prices of apartments both recorded slowdowns (to 8.4% and 12.7% respectively; see Chart III.1.6). This applied to both Prague and the rest of the Czech Republic. By contrast, asking prices showed more mixed trends. The brisk growth in asking prices of apartments in Prague, which was observed at almost 19% during 2017 H2, slowed slightly in 2018 Q1. Conversely, growth in asking prices of apartments outside Prague rose again after a previous slowdown. On average, asking prices of apartments maintained a broadly flat growth rate exceeding 12%.

were only partly offset by a reduction in the VAT rate on newspapers and magazines introduced in March 2017.

CHART III.1.6

## TRANSACTION AND ASKING PRICES OF HOUSING

Growth in property transaction prices slowed slightly  
(annual percentage changes)

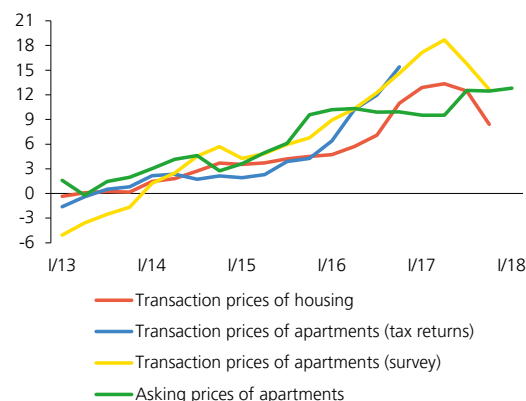


CHART III.1.7

## THE EXPERIMENTAL CPIH PRICE INDEX

Growth in the CPIH index slowed in 2017 Q4, but was still well above CPI inflation  
(annual percentage changes)

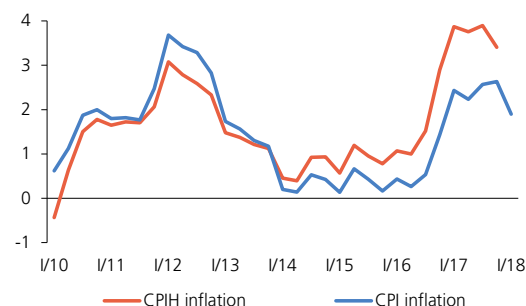
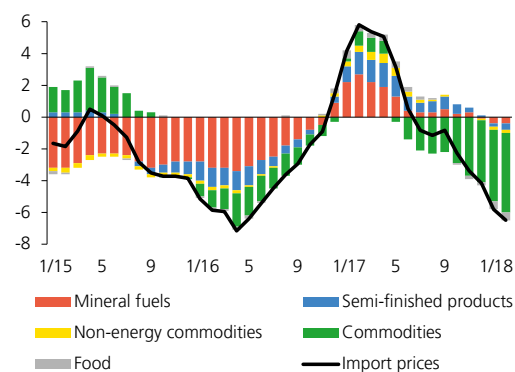


CHART III.1.8

## IMPORT PRICES

The year-on-year decline in import prices continued to deepen, with commodities prices falling in particular  
(annual percentage changes; contributions in percentage points)



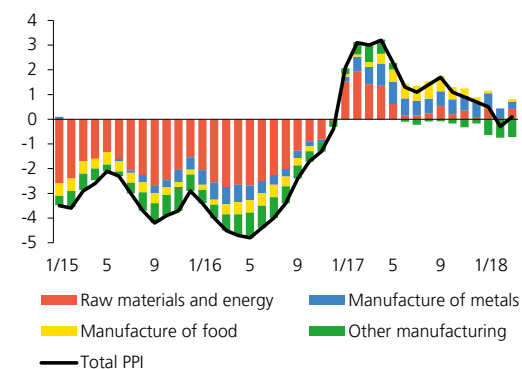
Note: Food also includes beverages and tobacco.

CHART III.1.9

## INDUSTRIAL PRODUCER PRICES

**Industrial producer price growth halted due mainly to a decline in prices in manufacturing**

(annual percentage changes; contributions in percentage points)



**Growth in the experimental CPIH index slowed sharply to 3.5% in 2017 Q4** (see Chart III.1.7). 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 moved closer to the consumer price index, but is still almost 1 percentage point above it.

## III.1.3 Import prices and producer prices

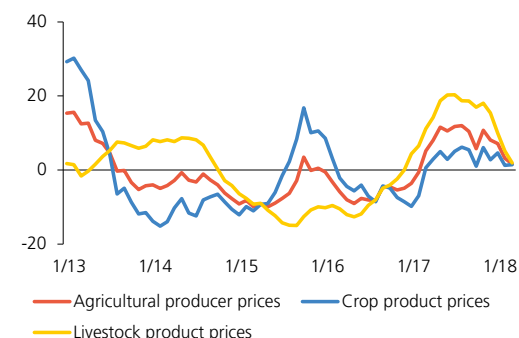
**The decline in import prices deepened further due to appreciation of the koruna and weakening growth in euro area producer prices.** Import prices declined year on year across all the monitored categories at the start of 2018 (see Chart III.1.8). However, their decline was due mainly to a fall in product prices, most notably in the categories of machinery and transport equipment, miscellaneous manufactured articles and chemicals. Import prices of mineral fuels also made a slightly negative contribution since, in koruna terms, the appreciating exchange rate outweighed the annual growth in global oil prices.

CHART III.1.10

## AGRICULTURAL PRODUCER PRICES

**The pronounced decline in agricultural producer prices was due mainly to livestock production**

(annual percentage changes)



**The declining import prices of inputs were reflected in a fall in industrial producer price inflation to zero** (see Chart III.1.9). As in the case of import prices, this was due mainly to falling prices of transport equipment in recent months. However, a decline in prices in the chemical industry also had a significant effect. By contrast, prices went up in the areas of manufacture of metals, raw materials and energy and slightly also in the food sector. In terms of use, prices of energy and intermediate goods showed the strongest growth in 2018 Q1. Conversely, durable goods and, above all, capital goods recorded a constant year-on-year decline in prices.

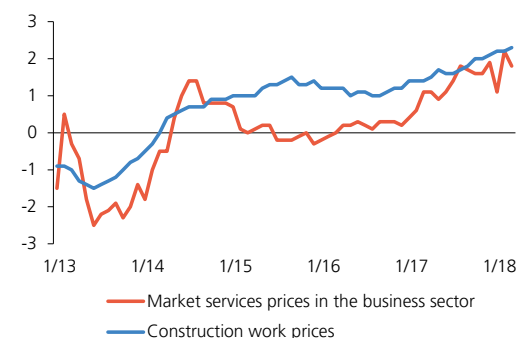
**Agricultural producer price inflation fell sharply at the start of 2018 in both its main components** (see Chart III.1.10). The effect of last year's recovery in global demand for agricultural commodities, associated with a temporary decline in stocks, faded away. This had previously been reflected in a sharp increase in prices of milk and meat in particular. At the same time, domestic producer prices increasingly reflected the effect of the appreciating koruna. Overall, this led to a pronounced and general slowdown in price growth, especially in livestock production. Only prices of milk rose visibly in this category, while the other major commodities showed marked year-on-year decreases. Growth in most main components of crop production, except for fruit, also moderated.

CHART III.1.11

## MARKET SERVICES PRICES IN THE BUSINESS SECTOR AND CONSTRUCTION WORK PRICES

**Growth in market services prices and construction work prices is continuing to rise**

(annual percentage changes)



**Prices of market services for the business sector and construction work prices continued to accelerate at the start of the year** (see Chart III.1.11). In market services, marked price growth was recorded by employment placement services, private security agencies and building and landscape activities. Constantly falling prices of telecommunication services and storage and transport services had the opposite effect. 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 accelerating 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 less pronounced growth in exports led to a decrease in the contribution of net exports to GDP growth. Favourable trends in economic activity can be observed in most sectors. Growth in gross value added is due increasingly to trade and market services. Despite a slight slowdown, manufacturing is also continuing to grow robustly. The positive trend is confirmed by still high business confidence. Increasing personnel costs are being offset by declining prices of imported inputs. Labour shortages remain 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 2% in 2017 Q4 (see Chart III.2.1). This is consistent with the still tight labour market situation and strong domestic and 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 a temporary return to the potential output level from above. However, this effect faded out last year and the output gap started to open up again. The output gap will gradually close over the forecast horizon and tighter monetary conditions will be felt. 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, expects the output gap to be open 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 significantly, 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 forecasted.

### III.2.2 The expenditure side of the economy

**Annual GDP growth amounted to 5.5% in 2017 Q4** (see Chart III.2.3). The growth in economic activity is being supported by

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, it will remain open

(% of potential output)

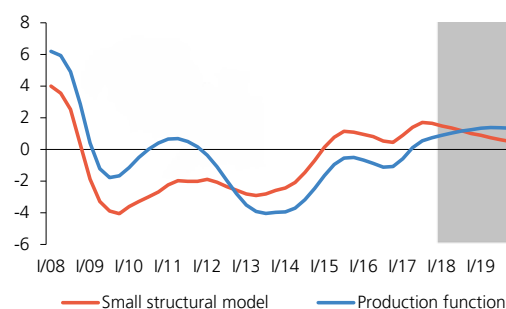


CHART III.2.2

#### POTENTIAL OUTPUT

According to the small structural model, potential output growth will rise to 4% and later slow; according to the production function, it will fluctuate around 3%

(annual percentage changes)

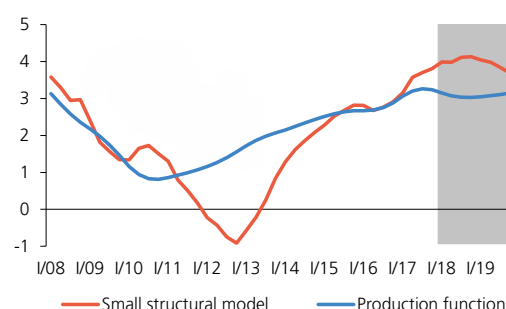


CHART III.2.3

#### GROSS DOMESTIC PRODUCT

The growth rate of the Czech economy picked up further in 2017 Q4, due mainly to a rise in inventories and also to growth in fixed investment and government consumption

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

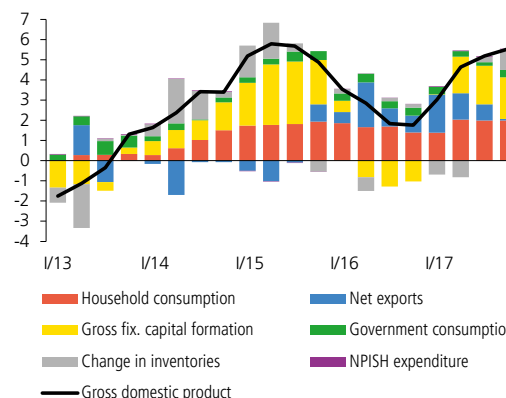
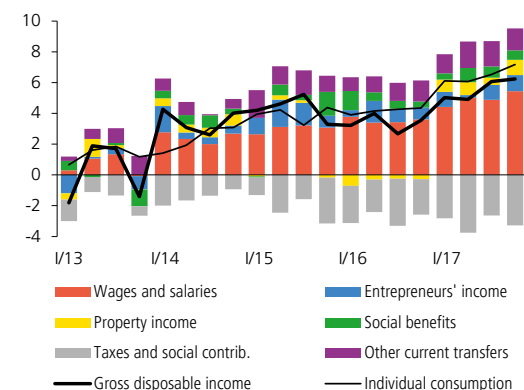


CHART III.2.4

## DISPOSABLE INCOME

The growth in disposable income was linked mainly with a higher contribution of wages and salaries and property income

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



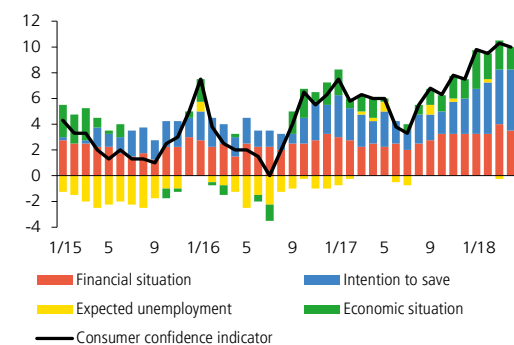
Note: Entrepreneurs' income comprises gross operating surplus and mixed income.

CHART III.2.5

## CONSUMER CONFIDENCE BALANCE

Consumer confidence is strong due to good expectations of the financial situation of households and record-low unemployment

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



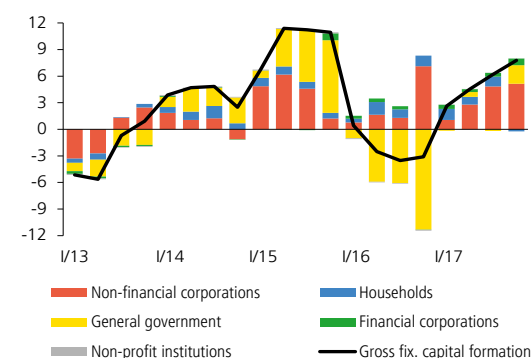
Note: Expectations 12 months ahead.

CHART III.2.6

## INVESTMENT BY SECTOR

Investment growth was driven by non-financial corporations; government investment also increased for the first time in quite a while, whereas household investment growth came to a halt

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



constantly strong household consumption and a still increasing contribution of gross fixed capital formation. The growth rate of private investment went up and government investment saw renewed growth. The contribution of additions to inventories also rose significantly. On the other hand, strong growth in import-intensive private investment, including inventories, resulted in a lower contribution of net exports.

**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 favourable growth in gross disposable income due to robust wage growth.** The further pick-up in gross disposable income was due mainly to an increase in the contribution of wages and salaries and property income. Entrepreneurs' income also continued to have a positive effect. Conversely, growth in gross disposable income was dampened by higher collection of taxes and social contributions (see Chart III.2.4).

**Consumer confidence remains strong.** Its growth is being fostered by a positive outlook for the overall economic situation and by expectations of a good financial situation of households. These indicators are exceeding historical highs (see Chart III.2.5). Consumer optimism was confirmed by continued strong growth in retail sales in both the food and non-food segments. Although households are simultaneously declaring an increased willingness to save, the saving rate has continued to decrease year on year, as household consumption is rising somewhat faster than disposable income.

**Real government consumption growth went up and government investment started rising again.** The stronger government consumption growth recorded at the end of last year was linked with wage growth in the public sector and probably also with growth in non-wage government health care expenditure. Government investment, where drawdown of EU funds is recovering gradually, also saw renewed year-on-year growth. This was reflected in an increasing contribution of fixed investment in buildings and structures, which, in terms of the material breakdown of investment activity, typically captures growth in large-scale infrastructure investment.

**The growth in private investment was due predominantly to investment by non-financial corporations** (see Chart III.2.6). As regards the material breakdown, investment in machinery and equipment accelerated further. In addition to rising external demand, this may indicate further progress in automation of production by firms in an environment of labour shortages and fast growing wages and may simultaneously lead to an upswing in labour efficiency growth. The surveys conducted by the CNB and the Confederation of Industry suggest continued solid growth in private investment in the quarters ahead.



On the other hand, growth in household investment, a large proportion of which is property investment, subsided. Supply as expressed by the number of housing completions continues to be limited; the number even declined slightly at the end of the year. Amid strong wage growth and sharp growth in loans for house purchase, this led to an increase in property prices, which slowed households' demand. The downswing in household investment was also due to rising interest rates and tightening credit standards. However, the rising number of housing starts in recent quarters should increase household investment again.

Additions to inventories recorded a sharp year-on-year increase at the year-end, especially in large manufacturing firms. Increases were recorded mainly for inventories of materials and work-in-progress. By contrast, growth in stocks of products and finished goods slowed slightly.

Export growth stagnated while import growth increased, reducing the positive contribution of net exports to GDP growth to zero. Year-on-year export growth stayed close to the previous quarter's levels despite a further acceleration in external economic activity (see Chart III.2.7). Compared to 2017 H1, export growth was lower in the automobile industry in particular. Rising demand for import-intensive investment (including inventories) meanwhile led to an upswing in imports. The contribution of net exports to GDP growth fell further as a result.

### III.2.3 The output side of the economy

Growth in gross value added strengthened slightly further in 2017 Q4, owing mainly to the services sector (see Chart III.2.8). Its aggregate contribution exceeded the previously dominant contribution of manufacturing for the third consecutive quarter. This was due mainly to growth in trade and market services. The upswing in value added growth was also driven by the energy sector. By contrast, the contribution of manufacturing decreased slightly. Overall, growth in gross value added remains high and broad-based, indicating that the Czech economy is faring well across all sectors.

Significant growth in sales was recorded in transport and storage and in information and communication activities. Sales in administrative and support service activities also grew strongly. Unlike in 2017 H1, the significant growth in sales, accommodation and food service activities moderated, but it nonetheless remains robust.

Growth in industrial production accelerated in Q4, due mainly to faster growth in manufacturing (see Chart III.2.9). This was observed in all major manufacturing sectors. A year-on-year increase in output was also recorded in the energy sector. Production in mining and quarrying also rose slightly. Output growth in manufacturing remained brisk according to the January figures but cooled slightly in February. Production growth in energy and mining turned negative again at the start of the year.

CHART III.2.7

#### EXPORTS AND IMPORTS

**Import growth exceeded export growth for the first time in two years**

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

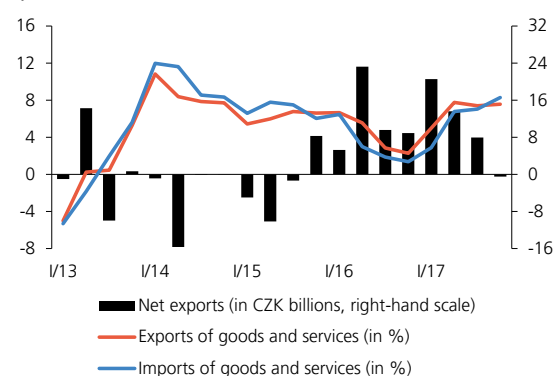
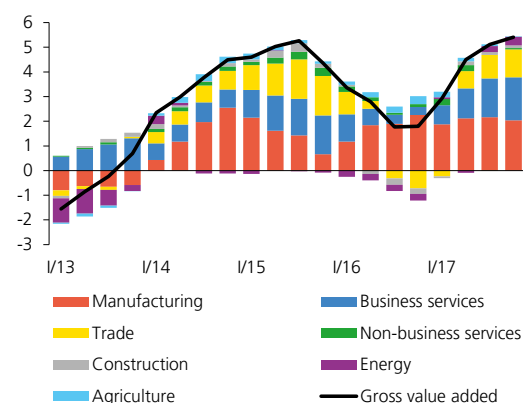


CHART III.2.8

#### CONTRIBUTIONS OF BRANCHES TO GVA GROWTH

**The upswing in gross value added growth in 2017 Q4 was due to trade, market services and energy**

(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

**After accelerating in 2017 Q4, industrial production growth slowed in early 2018; by contrast, construction output growth increased further**

(annual percentage changes)

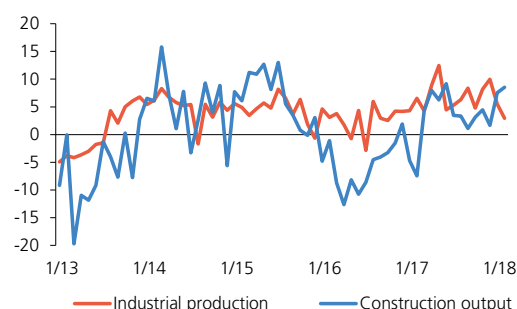
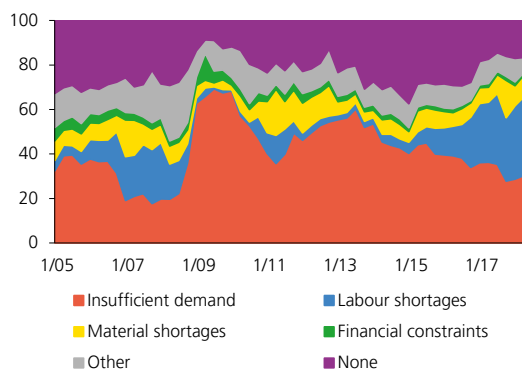


CHART III.2.10

## BARRIERS TO GROWTH IN INDUSTRY

According to the most recent survey, labour shortages are still the main barrier to growth in industrial production (percentages)



**Labour shortages continue to be the most important constraint on the production potential of industrial corporations.** According to the results of the CZSO's April 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 insufficient demand and those facing material shortages. Capacity utilisation in industry remained at around 85%.

**The construction industry also recorded faster output growth in Q4** (see Chart III.2.9). This was due mainly to rising growth in building construction, which also rose rapidly in January and February. As a result of renewed growth in government investment, civil engineering also started to grow year on year in the first two months of 2018.

**Business confidence remains high.** Positive sentiment prevails in industry, trade and services (see Chart III.2.11). Moreover, renewed growth in construction output is gradually reducing pessimism in construction, which long faced falling demand.

**The operating surplus of non-financial corporations rose slightly, despite high growth in personnel costs.** The operating surplus rose by 1.1% in 2017 Q4 (see Chart III.2.12). Its renewed growth was linked with higher growth in book value added. It increased to just above 6% in Q4, due mainly to a year-on-year decrease in prices of imported inputs. By contrast, output growth slowed slightly.

CHART III.2.11

## BUSINESS CONFIDENCE BALANCES

Business confidence remains positive; the pessimistic sentiment in construction is fading quickly

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

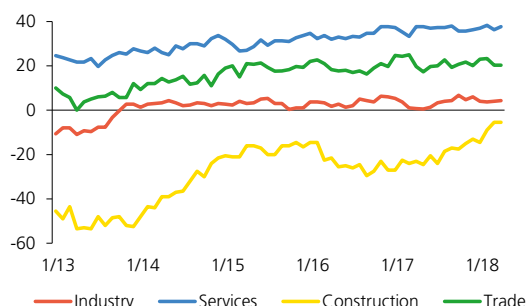
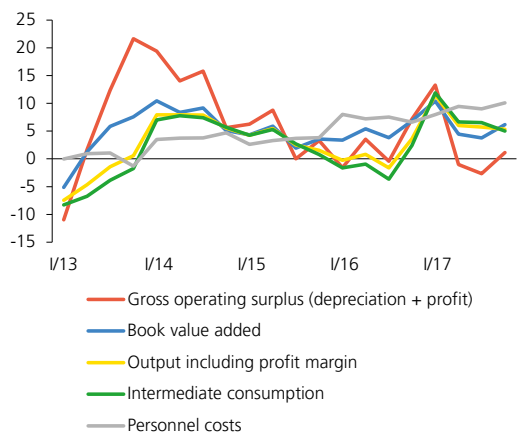


CHART III.2.12

## KEY FINANCIAL INDICATORS

The modest recovery in growth in the gross operating surplus of non-financial corporations was due mainly to a year-on-year decrease in prices of imported inputs (annual percentage changes)



### 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 2017 Q4 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. Despite slowing somewhat in the previous period, average wage growth in market sectors accelerated again to 7.6%. Wages in non-market sectors rose even faster. Growth in whole-economy labour productivity strengthened markedly in 2017 Q4. Growth in nominal unit labour costs was thus little changed.

#### III.3.1 Employment and unemployment

The fast growing economic activity is pushing up employment and further increasing labour market tightness (see Chart III.3.1). Despite a perceived shortage of available labour force, employment growth remained sizeable in 2017 Q4 (at 1.5%; see Chart III.3.2). It was driven solely by an increase in the number of employees, which was partly offset by a fall in the number entrepreneurs. As regards age structure, around three-fifths 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. The growth in employment was due predominantly to the services sector in 2017 Q4. Public administration and health care recorded the highest growth in non-market services. The growth in employment in market services was driven by trade, transport, storage and real estate activities. Employment also increased in industry, especially in manufacturing sectors. By contrast, employment in cultural, entertainment and recreational activities, agriculture and construction decreased slightly.

The converted number of employees increased markedly further due to strong growth in the number of employees. Unlike in 2017 H1, the growth in employee numbers in 2017 H2 was partly offset by a modest decline in average hours worked (see Chart III.3.3). This reflected a significant contribution of part-time work to employment growth. The growth in the converted number of employees was mostly broad-based across economic sectors. Given its large weight, manufacturing was the biggest contributor.

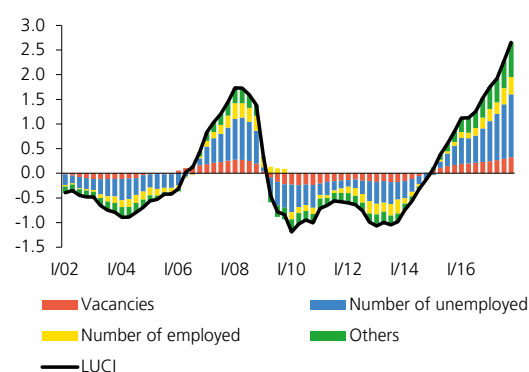
A decrease in the number of unemployed persons pushed the general unemployment rate down to new historical lows (see Chart III.3.4). The Czech unemployment rate was 2.4% in February and remains the lowest in the EU. This is due mainly to a continued decline in the number of long-term unemployed. The 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 76.6% in February. According to labour offices, the share of

CHART III.3.1

#### LUCI – LABOUR UTILISATION COMPOSITE INDEX

The current labour market tightness 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 further growth in employment was mostly due to the services sector

(contributions in percentage points to annual change; selected branches; source: LFS)

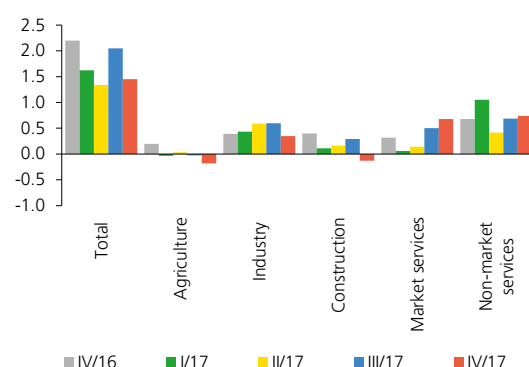


CHART III.3.3

#### NUMBER OF EMPLOYEES (FULL-TIME EQUIVALENT)

The increase in the number of employees was accompanied by a modest drop in average hours worked

(annual percentage changes; contributions in percentage points)

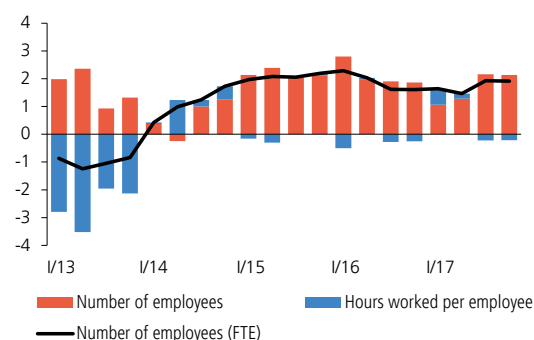


CHART III.3.4

## UNEMPLOYMENT INDICATORS

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

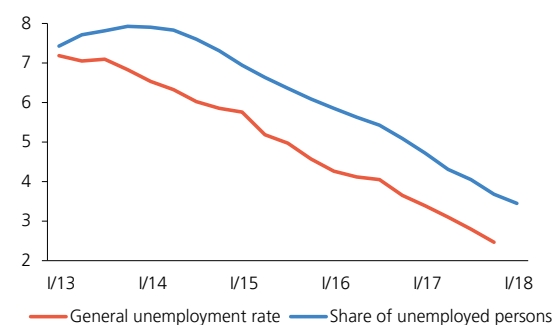


CHART III.3.5

## BEVERIDGE CURVE

The fall in the number of unemployed persons slowed slightly, while the number of vacancies reached record highs (numbers in thousands; seasonally adjusted; annual percentage changes for core inflation; source: MLSA, CZSO)

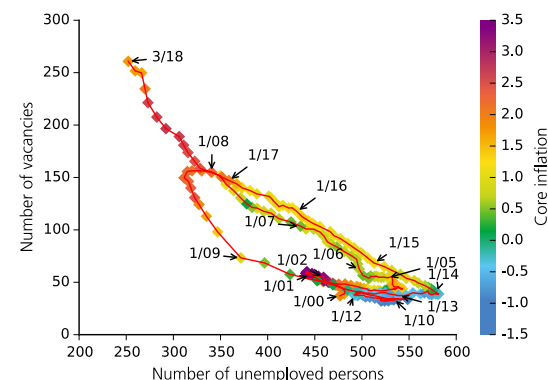
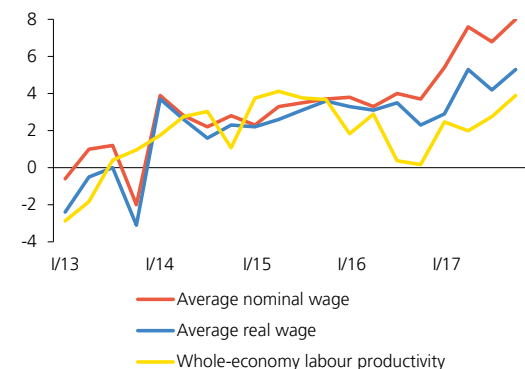


CHART III.3.6

## AVERAGE WAGE AND WHOLE-ECONOMY LABOUR PRODUCTIVITY

Labour productivity accelerated but grew much more slowly than real wages in 2017 (annual percentage changes)



unemployed persons dropped further to 3.5% in March. This reflected a decreasing number of available job applicants amid very modest growth in the population aged 15–64.

**Growth in the number of vacancies and the decline in the number of unemployed slowed slightly in 2018 Q1.** The number of vacancies offered via labour offices exceeded 260,000 in March (seasonally adjusted), a significant proportion of which were in manufacturing. There was also strong demand for new employees in wholesale and retail trade and construction. The robust economic growth meanwhile led to a further year-on-year decline in the number of registered unemployed persons, although this decline moderated at the start of this year. 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 keep core inflation distinctly positive even after one-off factors subsided.

## III.3.2 Wages and productivity

**Average wage growth accelerated again at the end of 2017.** Both market and non-market sectors recorded strong earnings growth in Q4. Nominal wages in market sectors rose by 7.6% year on year. Wages in mining and quarrying,<sup>26</sup> trade, accommodation and food service activities, real estate activities, administration and health care increased at an above-average rate. The significant rise in wage growth in non-market sectors to 9.8% was linked with a pay rise in the general government sector introduced in November 2017. Wages in public administration and culture grew by more than 10%. However, wages in education also increased markedly. As for 2018 Q1, new monthly data from industry suggest that average nominal wage growth will accelerate slightly further.

**The higher productivity growth reflected faster economic growth, which significantly outpaced employment growth.** Whole-economy labour productivity rose by 3.9% year on year in Q4 (see Chart III.3.6), the highest growth rate recorded since mid-2015. However, the individual sectors recorded mixed productivity trends (see Chart III.3.7). In industry and market services, productivity growth strengthened further, mainly on the back of significantly higher GVA growth. The situation in non-market services was just the opposite, as the decline in productivity in that sector deepened. Labour productivity in construction increased slightly year on year.

**Growth in nominal unit labour costs increased only marginally but remained quite high.** This reflected higher growth in both GDP and the

<sup>26</sup> The relatively high year-on-year growth in wages in mining and quarrying was due largely to the decline they recorded in late 2016.

wage bill. Nominal unit labour costs increased by 3.5% year on year (see Chart III.3.8). Nevertheless, very mixed trends were observed across the economy. Labour costs per unit of output rose the fastest in non-market services (by more than 11%). The growth in other sectors was significantly slower. Nominal unit labour costs rose by more than 4% in construction and by about 2% in market services. In industry they grew by less than 0.5% despite strong growth in the wage bill.

CHART III.3.7

## PRODUCTIVITY BY SECTOR

**The growth in whole-economy labour productivity continued to be driven primarily by industry**  
(annual percentage changes)

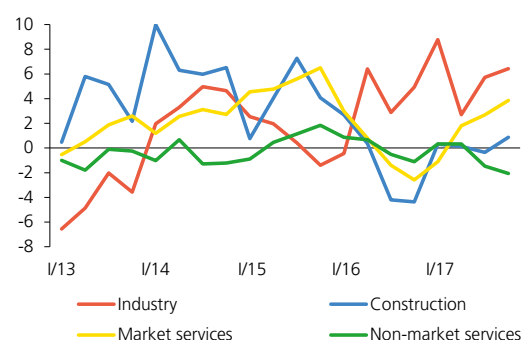
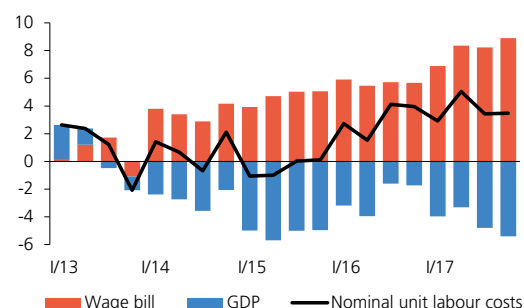


CHART III.3.8

## UNIT LABOUR COSTS

**Growth in nominal unit labour costs stayed broadly stable, as higher GDP growth offset faster growth in the wage bill**  
(annual percentage changes; contributions in percentage points)



### III.4 FINANCIAL AND MONETARY DEVELOPMENTS

The February 2018 increase in the CNB's monetary policy rates represents a further step towards the gradual return of monetary policy to normal. Interest rates on the financial market, and gradually also client interest rates, responded to the raising of the two-week repo rate. The koruna strengthened moderately further. Growth in loans to the private sector increased somewhat due to slightly faster growth in loans to non-financial corporations. By contrast, the high growth in loans for house purchase slowed amid a tightening of credit conditions. M3 growth slowed further at the start of this year.

#### III.4.1 Monetary policy and interest rates

After raising its monetary policy rates in February 2018, the CNB left them unchanged at its March and May meetings.<sup>27</sup> The February decision was the third increase in domestic interest rates after the exit from the CNB's exchange rate commitment in early April 2017. The overall monetary conditions thus continue to move towards neutral.

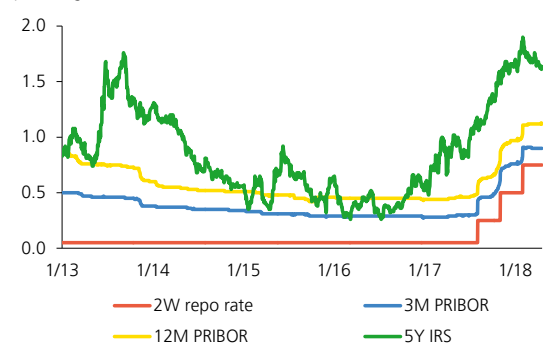
**Money market interest rates responded to the hike in the CNB's policy rates** (see Chart III.4.1). The 3M PRIBOR rose to 0.9% on average in 2018 Q1 and was at the same level at the end of April. The money market premium, as measured by the spread between the 3M PRIBOR and the 2W repo rate, decreased slightly and stabilised at 0.15 percentage point. By contrast, FRA derivative rates went down after the February CNB Board meeting. Before this meeting, the market had been expecting the CNB's key rates to increase at a faster pace in the months ahead than that indicated by the published interest rate forecast and the related communications. The end-April outlook for FRA rates implies expectations of only gradual growth in the 3M PRIBOR in the year ahead.

**Domestic interest rates with longer maturities (IRS) have recently fallen slightly at all maturities.** Like FRA rates, domestic interest rates with maturities of over one year responded mainly to the communications of Bank Board members after the February monetary policy meeting. Domestic rates have in recent months been affected most strongly by domestic factors, including the drop in inflation. These factors have led domestic rates to deviate partially from those on the main foreign markets. This is true particularly of the USA, where rates are responding to strong economic data and related expected monetary policy tightening. Medium- and long-term rates in the euro area are also rising gradually, although much more slowly than those in the USA. Overall, domestic IRS rates have fallen by 0.1–0.2 percentage point since

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)



<sup>27</sup> The two-week repo rate was set at 0.75% and the Lombard rate at 1.50% with effect from 2 February 2018. The discount rate was left unchanged at 0.05%. The changes in the CNB's key interest rates (in particular the raising of the 2W repo rate from technical zero) caused the composition of sterilised liquidity to change: the size of the deposit facility decreased in favour of better remunerated repo operations.

the start of this year (see Chart III.4.1), as against a rise of about 0.5 percentage point in the USA and 0.1 percentage point in the euro area. Domestic government bond yields have recorded a rather different trend to IRS rates. Their yield curve has moved up slightly compared to the end of last year (see Chart III.4.2).

**The government continued its efforts to raise funds to a greater extent by issuing short-term T-bills in the primary market.** Since January, yields in T-bill auctions have been positive but well below the corresponding PRIBOR.<sup>28</sup> T-bills totalling CZK 141.8 billion and government bonds with maturities of over one year amounting to about half that amount have been issued since the start of this year. Non-residents' total holdings of government bonds are continuing to fall: since the exit from the exchange rate commitment they have dropped by about CZK 200 billion. At the end of March, they stood at CZK 518 billion.

**The mortgage interest rate increased slightly.** The rate on new mortgage loans was 2.4% in February (see Chart III.4.3). According to the latest Fincentrum Hypoindex data, the mortgage interest rate increased further to 2.5% in March, reflecting banks' continued response to the previous policy rate hike. However, the mortgage rate has been rising at a slower pace than long-term financial market rates (see Box 3).

**The interest rate on loans to non-financial corporations also kept rising.** In February, the average rate reached 2.5%, 0.8 percentage point higher than in the euro area (see Chart III.4.4).<sup>29</sup> Real client rates on loans to Czech corporations and loans to households for house purchase are slightly positive for the first time in a long time due to growth in nominal rates and a simultaneous drop in inflation.

**Bank financing costs were affected by the increased financial market interest rates.** The financial market yield curve is higher than it was in mid-2017 and banks' costs of funds are thus now roughly twice as high. By contrast, interest rates on total deposits remain very low – at 0.32% for households and at 0.07% for non-financial corporations.

CHART III.4.2

## GOVERNMENT BOND YIELD CURVE

The yield curve moved to a higher level, despite having recorded a slight downward correction in recent months (percentages)

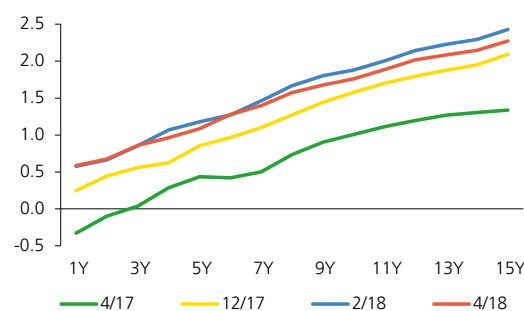


CHART III.4.3

## INTEREST RATES ON MORTGAGE LOANS

Interest rates on new mortgage loans gradually responded to the growth in financial market interest rates (new business, including increases; percentages)

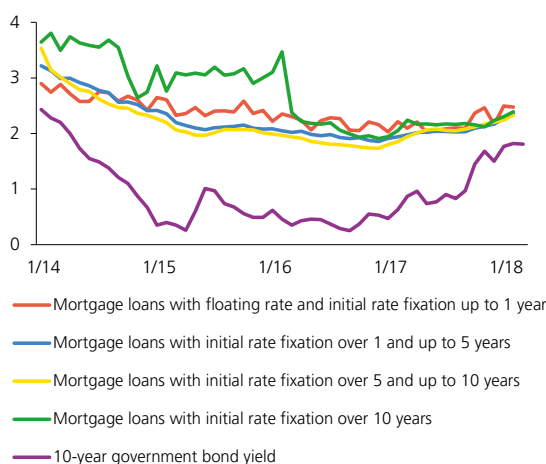
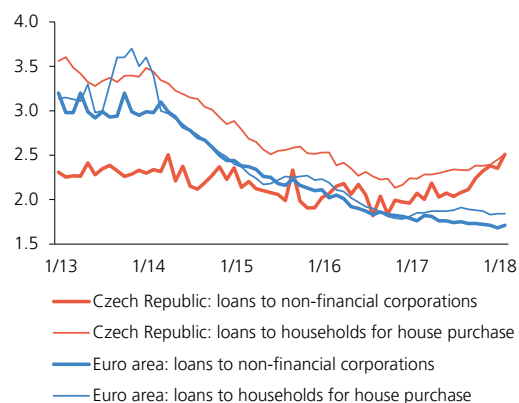


CHART III.4.4

## 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 are growing (cost of borrowing indicators; percentages)



<sup>28</sup> The average yields in government bond auctions were higher than PRIBOR rates, ranging between 0.9% and 2.4% depending on the bonds' parameters and investors' interest.

<sup>29</sup> The situation remains different in the consumer credit segment, where the large gap between domestic and euro area rates observed in the past has narrowed to around 3 percentage points due to the long-running decline in domestic interest rates (which are now below 9%).



CHART 1 (BOX)

## THE MONETARY POLICY RATE AND FINANCIAL MARKET RATES

The monetary policy rate hikes have passed through as usual to financial market rates (percentages)

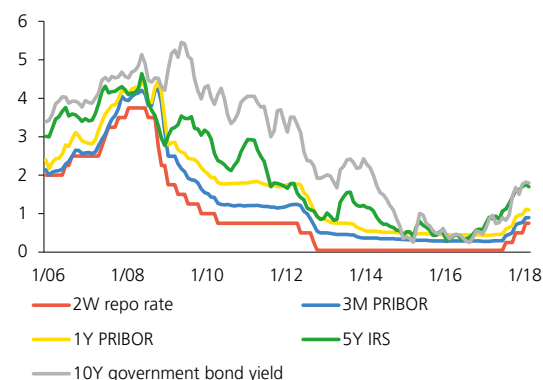


TABLE 1 (BOX)

## CLIENT INTEREST RATES ON LOANS AND DEPOSITS

The growth in the monetary policy rate is also gradually passing through to client interest rates

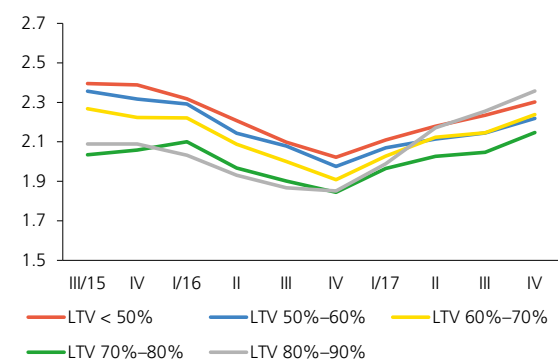
(interest rates in percentages; changes in percentage points)

	Interest rate	Change since	
		November 2016	August 2017
<b>HOUSEHOLDS</b>			
Mortgages	2.3	0.4	0.2
Mortgages with rates fixed for 1–5 years	2.3	0.3	0.2
Mortgages with rates fixed for 5–10 years	2.3	0.5	0.2
New mortgages	2.4	0.5	0.3
Refinanced mortgages	2.3	0.5	0.3
Consumer credit	8.8	-1.4	-0.7
<b>Deposits</b>			
Overnight deposits	0.1	0.0	0.0
New deposits with agreed maturity	0.9	-0.2	0.4
<b>NON-FINANCIAL CORPORATIONS</b>			
Total new loans	2.4	0.5	0.5
Small loans (up to CZK 30 million)	2.9	0.5	0.7
Large loans (over CZK 30 million)	2.2	0.5	0.4
Total outstanding loans	2.8	0.3	0.3

CHART 2 (BOX)

## INTEREST RATES ON NEW MORTGAGE LOANS BY LTV CATEGORIES

Mortgage rates have risen in all LTV categories and most of all in the 80%–90% band due to macroprudential measures (percentages)



## BOX 3 The impact of the CNB's interest rate hikes on client rates

The CNB raised the two-week repo rate by a total of 0.7 percentage point to 0.75% in three steps between August 2017 and February 2018. This box examines in more detail the impacts of the increase in the monetary policy rate on client interest rates.

The upward shift in the financial market yield curve has been reflected most strongly in loans to non-financial corporations. The monetary policy rate hikes passed through first to financial market rates, doing so to the usual extent observed in the past (see Chart 1). The vast majority (83%) of new corporate loans are provided with a floating rate tied to the money market rate or with a rate fixed for up to three months. The transmission of changes on the financial market to client rates is therefore fast in this segment. The rate on corporate loans has recently been rising at much the same pace as the 3M PRIBOR and both are currently at their September 2012 levels. The rate on small loans of up to CZK 30 million has meanwhile increased more sharply than that on large loans. However, the spread between the rates on small and large loans remains below the long-term average due to a previous sharper decline in the rate on small loans than that on large ones. The increase in market interest rates has also been reflected in average interest rates calculated from outstanding corporate loans (see Table 1). The rate on short-term loans has gone up by 0.5 percentage point and that on loans with longer maturities by 0.3–0.4 percentage point. The broad decrease in interest margins on loans to non-financial corporations recorded in the past has thus halted and these margins have started to rise gradually.

By contrast, the interest rate on loans for house purchase is rising at a slower pace than financial market rates. The share of house purchase loans with longer rate fixation periods has recently increased. The share of loans with rates fixed for over five years and up to ten years is 39%, although loans with rates fixed for over one year and up to five years still account for the largest share (52%). The mortgage interest rate depends mainly on the long-term government bond yield. The ten-year government bond yield is currently 1.8% and has increased by 0.9 percentage point in more than six months. The mortgage rate has gone up by just 0.2 percentage point in the same period and by 0.4 percentage point since it hit a historical low in November 2016 (see Table 1). The ten-year government bond yield is currently at the April 2014 level, whereas the mortgage rate was then around one percentage point higher than it is now. Mortgage rates have risen in all LTV categories and most of all in the 80%–90% band due to the CNB's macroprudential measures (see Chart 2).

In addition to concerns about losing market share, banks' liquidity situation is a factor behind the slower transmission to housing loan rates. Bank financing costs on the financial market have gone up since last autumn. However, given the assumed high sensitivity



of demand to changes in the mortgage rate, banks are raising their mortgage rates only gradually for fear of losing market share. This is why the higher financing costs of some banks have yet to feed through fully to mortgage rates (see Chart 3). Interest margins, which affect banks' profitability, remain low by historical standards (see Chart 4). Moreover, the negotiation of interest rates on new as well as refinanced mortgage loans for a longer period ahead may also be one of the factors behind the slower transmission.<sup>30</sup>

**The consumer credit rate has fallen further even though financial market rates have risen** (see Table 1). This mainly reflects the ongoing long-run downward trend in rates in this credit market segment, which had a partly structural<sup>31</sup> and partly cyclical explanation. The interest margin on consumer credit is therefore continuing to shrink (see Chart 4). Market activity is concentrated mainly in refinancing (consolidating) existing loans and extending their maturity. Rates with longer fixation periods, which account for 94% of all new consumer credit, are falling. The rate with a short fixation period has conversely gone up, but the share of loans bearing this rate is negligible.

**Deposit rates remain very low** (see Chart 3). Banks have less incentive to raise deposit rates significantly in an environment of low interest margins and high liquidity. The rate on new household deposits with agreed maturity has risen to 0.9% in response to the changes in market rates. However, the share of these deposits in total deposits is low (around 10%). Medium-sized banks have increased their rates on deposits with agreed maturity to 1.5% in the case of households. In large banks, which account for the bulk of such deposits, the rate is fluctuating close to 0.3%. The rate on overnight current account deposits remains close to zero (see Table 1). In the past, this rate usually reflected changes in the monetary policy rate only very gradually. The share of overnight deposits in total deposits is 83% and has risen markedly compared to the pre-2008 period.

**To sum up, the rise in the monetary policy rate is being reflected via market rates mainly in loan rates.** This is most apparent for corporate loans; the transmission to house purchase loans is slower. Deposit rates remain very low in an environment of compressed interest margins.

CHART 3 (BOX)

#### INTEREST RATES ON HOUSEHOLDS' MORTGAGE LOANS AND DEPOSITS

**The mortgage rate is rising at a slower pace than financial market rates; deposit rates remain very low**  
(percentages)

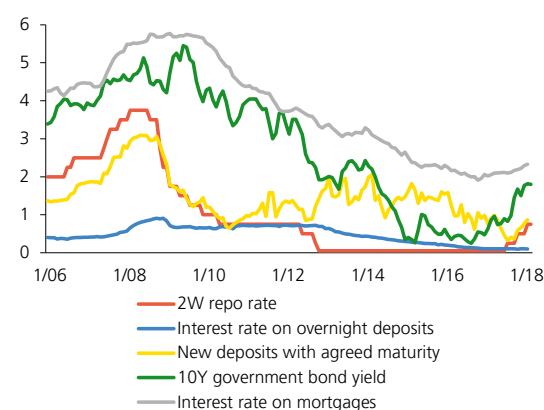
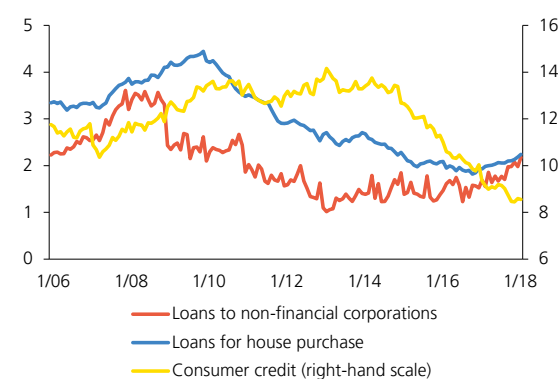


CHART 4 (BOX)

#### INTEREST MARGINS ON NEW BANK LOANS

**Banks' interest margins remain low, although margins on corporate loans and house purchase loans have recently risen slightly**  
(percentage points)



Note: Interest margins are calculated using the interest rate on new loans and the weighted rate on total deposits of the non-financial sector.

<sup>30</sup> According to some information, clients are even trying to refinance mortgage loans in advance. When refinancing, some lenders offer a guaranteed rate for a fixed period ahead before the current fixation period ends.

<sup>31</sup> According to a forthcoming CNB Working Paper by Brož and Hlaváček (2018), falling concentration/rising competition has been the main driver of the decline in client rates on consumer credit.

CHART III.4.5

## CZK/EUR AND CZK/USD EXCHANGE RATES

The koruna continued to appreciate in Q1, doing so more strongly against the dollar than against the euro

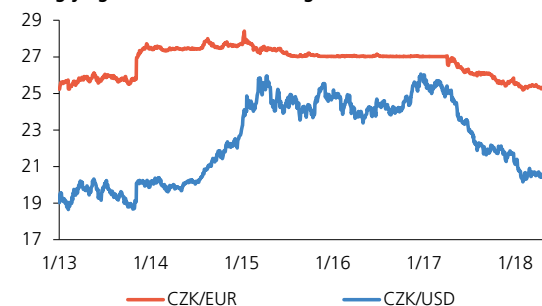


CHART III.4.6

## INTEREST RATE DIFFERENTIALS

The interest rate differential of the koruna vis-à-vis the euro increased due to the February increase in CNB rates, while the negative differential vis-à-vis the dollar widened markedly due to a rise in short-term rates in the USA

(percentage points)

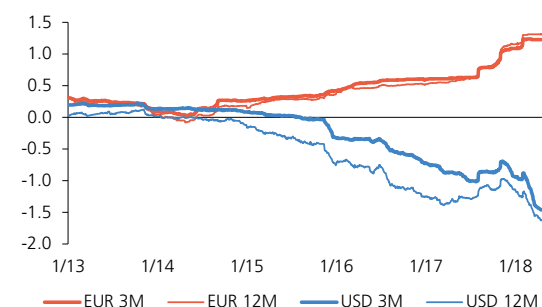
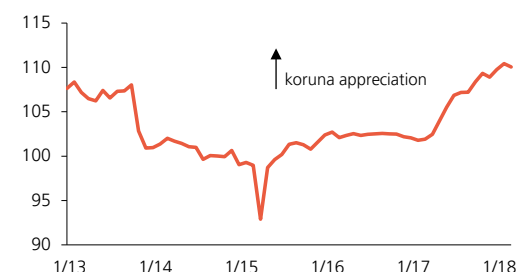


CHART III.4.7

## NOMINAL EFFECTIVE KORUNA EXCHANGE RATE

The koruna exchange rate strengthened further in effective terms in Q1

(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.

## III.4.2 The exchange rate

**The koruna strengthened slightly further against the euro in 2018 Q1 due to domestic factors.** The koruna appreciated mainly in January (see Chart III.4.5) on expectations of an increase in the CNB's key interest rates at the Bank Board's policy meeting in February and over the rest of the year. In this context, the exchange rate was affected by the continued strong growth of the Czech economy in a situation of a tight labour market and with inflation in the upper half of the tolerance band. The effect of domestic information was strong enough to outweigh the sharp appreciation of the euro on global markets. However, market expectations regarding the pace of further growth in interest rates were revised in early February based on the published CNB forecast and Bank Board members' communications. Risk aversion on global markets meanwhile increased due to a fall on US stock markets. The koruna reacted to these developments by erasing part of its previous gains. It remained broadly stable in March, with a faster-than-expected slowdown in inflation acting against appreciation. The average exchange rate in Q1 was CZK 25.4 to the euro, which represents a year-on-year appreciation of 6%. The koruna strengthened slightly against the euro to CZK 25.3 in the first two-thirds of April.

**The koruna also strengthened against the dollar.** However, the January appreciation of the koruna against the dollar was much stronger than that against the euro due to a concurrent depreciation of the dollar on global markets (see Chart III.4.5). There were several reasons for this. One of them was growing optimism about economic developments in Europe and Asia and related confidence in currencies of these regions, in stark contrast to the uncertainty stemming from the unpredictability of current US economic policy. The second factor was a shift in expectations about the future course of monetary policies – the expected upward path of key interest rates in the USA remained unchanged, while expectations for the euro area were revised towards earlier monetary policy normalisation due to positive economic developments. The third reason was the rising trade deficit in the United States. US economic growth has long been driven mainly by domestic demand, which supports import growth. GDP growth in the euro area, which was the same as that in the USA last year, has instead been driven largely by net exports. This has also contributed to the weakening of the dollar against the euro. The exchange rate of the dollar nonetheless stabilised at the end of January. The koruna subsequently depreciated slightly in February and has stayed close to CZK 20.6 to the dollar since March. The average exchange rate in Q1 was CZK 20.7 to the dollar. The koruna appreciated by a sizeable 18.6% against the dollar in year-on-year terms.

**The CNB's February rate hike further widened the short-term interest rate differential against the euro, while the differential against the dollar was affected mainly by the increase in rates in the USA.** The differential between 3M PRIBOR and 3M EURIBOR money market rates widened to 1.2 percentage points as a result of the February hike in Czech monetary policy rates (see Chart III.4.6). The short-term koruna-dollar interest rate differential responded similarly (by moving

upwards) to the CNB's step, although it has been negative for more than two years now. However, this differential then widened substantially and is currently at -1.4 percentage points. This was due to growth in the 3M USD LIBOR in February and March. It responded mainly to higher-than-expected wage growth and fiscal expansion in the USA, which affected expectations about the future path of the Fed's key rates. The Fed then raised its key rates at its March meeting as expected and released an outlook foreseeing a faster pace of growth in policy rates in the years ahead than the previous December estimate had.

**The koruna's nominal effective exchange rate continues to appreciate** (see Chart III.4.7). Its year-on-year rate of appreciation was 8% in March. Given the weights of the currencies in the index, the key factor was the strengthening of the koruna against the euro, although it was one of the most moderate. The koruna has strengthened against all currencies of the NEER basket over the last year, doing so most strongly against the dollar (by almost 19%) and the rouble (by more than 17%). It also recorded double-digit appreciation against the Korean won, the Swiss franc, the Japanese yen, the Swedish krona and the Chinese renminbi. The appreciation against the remaining European currencies of the basket was more modest. Even so, the least strong appreciation (against the Polish zloty) exceeded 4%.

### III.4.3 Credit

**Growth in loans to the private sector picked up slightly to 8% at the start of this year.** Growth in loans to households recently slowed but remains buoyant. By contrast, growth in loans to non-financial corporations increased slightly (see Chart III.4.8). According to the [Bank Lending Survey](#), banks expect little change in household demand for house purchase loans and slight growth in corporate demand in 2018 Q2. Banks further tightened their credit standards for loans to households while leaving their standards for loans to non-financial corporations unchanged (see Chart III.4.9).

**The tightening of credit standards combined with high property prices is slowing down growth in loans for house purchase** (see Chart III.4.8). Demand for loans for house purchase has recently declined owing mainly to growth in residential property prices, the CNB's macroprudential measures and rising mortgage rates. Consumer confidence has been supporting growth in demand for loans much less than in the past, although it remains strong. Growth in mortgages thus slowed further to 9.4% in February. This has recently been reflected in growth in total loans to households (see Chart III.4.10). The volume of new mortgage loans declined.

**Consumer credit growth remains buoyant** (see Chart III.4.8). Demand for new loans to finance consumer spending is rising only moderately. The consumer credit market is characterised mainly by the refinancing and consolidation of existing loans in conditions of a long-running decline in interest rates in this segment. Growth in consumer credit has thus been fluctuating around 7% since November 2016.

CHART III.4.8

#### LOANS TO THE PRIVATE NON-FINANCIAL SECTOR

**The high growth in loans for house purchase slowed, while growth in corporate loans picked up slightly**  
(annual percentage rates of growth)

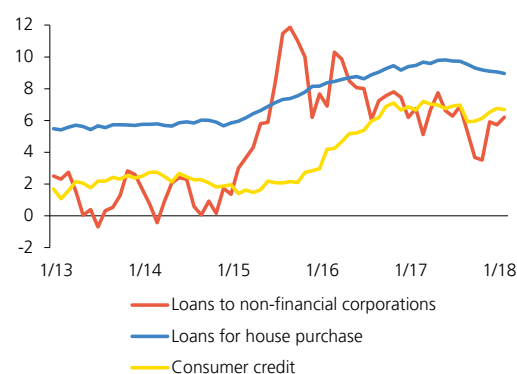


CHART III.4.9

#### CREDIT STANDARDS OF BANKS

**Credit standards for loans for house purchase continue to tighten, while those for non-financial corporations are unchanged**

(net percentages of banking market; positive value = tightening, negative value = easing)

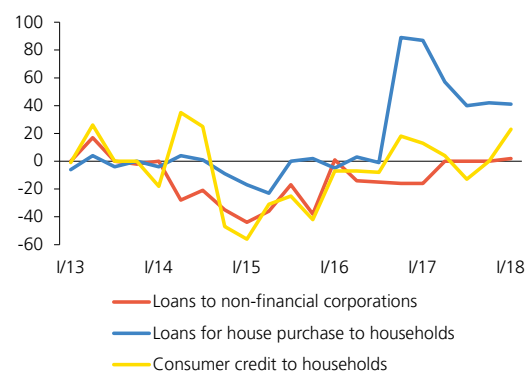


CHART III.4.10

#### LOANS TO HOUSEHOLDS

**The slowdown in the high 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 February 2018)

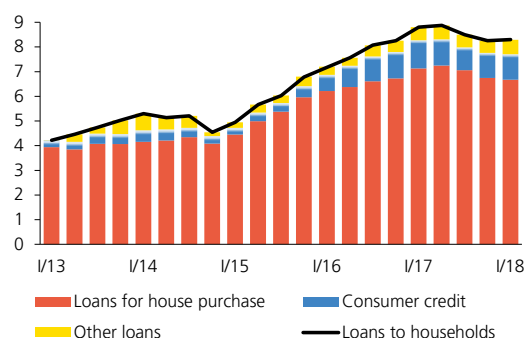
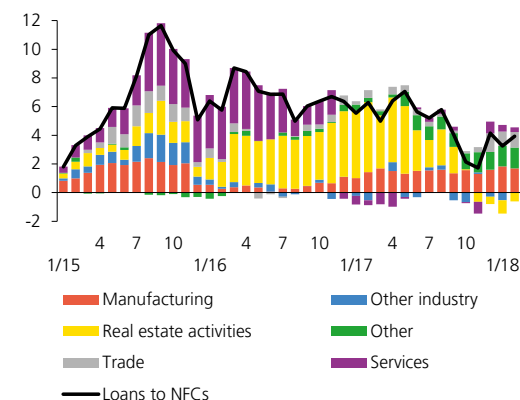


CHART III.4.11

### LOANS TO NON-FINANCIAL CORPORATIONS BY SECTOR OF ACTIVITY

The growth in loans is quite broad-based across sectors, but loans to the real estate sector are falling  
(annual percentage changes; contributions in percentage points)

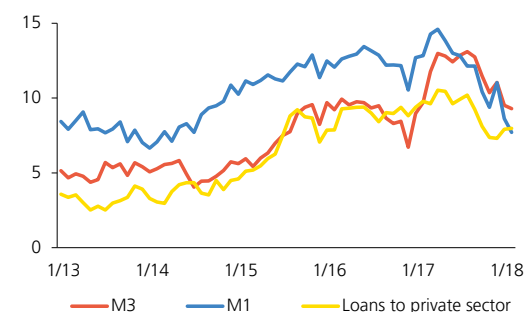


Note: Other comprises transport, construction and agriculture

CHART III.4.12

### MONETARY AGGREGATES AND LOANS

Growth in monetary aggregates slowed further, coming close to the credit growth rate  
(annual percentage rates of growth)



**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 corporations rose to around 6% on the back of favourable credit conditions and economic growth.** The year-on-year growth in loans is being driven by loans to manufacturing, trade and, to an increasing extent, construction (see Chart III.4.11). By contrast, loans to the real estate sector are falling moderately. Corporate demand for loans grew slightly due mainly to financing of fixed investment and working capital. By contrast, it is being dampened by the use of internal funding sources by corporations and by issuance of debt securities.

**The high growth in foreign currency corporate loans slowed, while currency hedging of exports by financial instruments increased.** Growth in foreign currency loans slowed to around 16%. It thus reflects a gradual fading of the effect of previous balance-sheet hedging against exchange rate risk and higher prices of traditional hedging instruments in the period around the exit from the exchange rate commitment. The share of such loans in total corporate loans thus stabilised around 30%. By contrast, currency hedging of exports using financial instruments has been increasing since the exit. It reached 46% in 2018 Q1, the highest level recorded in the last few years (according to the survey of non-financial corporations conducted by the CNB and the Confederation of Industry of the Czech Republic).

#### III.4.4 Money

**M3 growth slowed further to 9.3% in Q1** (see Chart III.4.12). This was due to a continuing reversal of the previous M3 surge caused by specific market conditions related to the exit from the exchange rate commitment. Given the upward shift in the financial market yield curve, this is being reflected in lower growth in financial investors' overnight deposits with banks, i.e. deposits in repo transactions with banks. This is being accompanied by lower growth in deposits of households and non-financial corporations. However, growth in household deposits is close to its long-term average.

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

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](http://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 consists 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.

**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 moneyiness 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 by labour efficiency. It can be understood as a concept similar to total factor productivity, e.g. in the Cobb-Douglas production function. 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
<b>DEMAND AND SUPPLY</b>											
<b>Gross domestic product</b>											
GDP	CZK bn, constant p. of 2010, seas. adjusted	3958.1	4028.6	3999.6	3980.2	4088.2	4308.5	4415.8	4619.0	4796.9	4959.8
GDP	%, y-o-y, real terms, seas. adjusted	2.1	1.8	-0.7	-0.5	2.7	5.4	2.5	4.6	3.9	3.4
Household consumption	%, y-o-y, real terms, seas. adjusted	1.0	0.3	-1.2	0.5	1.8	3.8	3.6	4.0	4.1	3.7
Government consumption	%, y-o-y, real terms, seas. adjusted	0.5	-3.2	-2.0	2.5	1.1	1.9	2.0	1.5	2.8	2.3
Gross capital formation	%, y-o-y, real terms, seas. adjusted	4.0	1.8	-3.8	-5.1	8.5	13.1	-2.4	5.4	8.2	5.1
Gross fixed capital formation	%, y-o-y, real terms, seas. adjusted	1.0	0.9	-2.9	-2.5	3.9	10.4	-2.5	5.9	8.6	7.4
Exports of goods and services	%, y-o-y, real terms, seas. adjusted	14.2	9.2	4.5	0.2	8.7	6.2	4.3	6.9	6.9	8.3
Imports of goods and services	%, y-o-y, real terms, seas. adjusted	14.3	6.7	2.8	0.1	10.1	7.0	3.1	6.2	8.7	9.3
Net exports	CZK bn, constant p. of 2010, seas. adjusted	121.6	193.7	245.8	249.7	233.1	224.9	271.8	313.5	272.6	255.3
<b>Coincidence indicators</b>											
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	-	-
<b>PRICES</b>											
<b>Main price indicators</b>											
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	1.7	1.8
Regulated prices (18.70%)*	%, y-o-y, average	2.6	4.7	8.6	2.2	-3.0	0.0	0.2	0.0	1.6	1.5
Food prices (including alcoholic beverages and tobacco) (24.58%)*	%, y-o-y, average	0.9	3.9	2.9	3.1	1.8	0.0	0.2	3.6	1.7	1.7
Core inflation (53.32%)*	%, y-o-y, average	-1.2	-0.7	-0.3	-0.5	0.5	1.2	1.2	2.4	1.7	2.0
Fuel prices (3.39%)*	%, y-o-y, average	12.8	9.9	6.0	-2.1	0.2	-13.5	-8.5	6.7	-0.1	-2.0
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	1.7	1.8
GDP deflator	%, y-o-y, seas. adjusted	-1.4	0.0	1.5	1.4	2.5	1.2	1.2	1.4	2.1	1.7
<b>Partial price indicators</b>											
Industrial producer prices	%, y-o-y, average	1.2	5.6	2.1	0.8	-0.8	-3.2	-3.3	1.8	0.5	1.0
Agricultural prices	%, y-o-y, average	7.1	22.1	3.3	5.0	-12.4	-6.2	-6.0	7.4	-0.4	0.7
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	21.9	-5.6
<b>LABOUR MARKET</b>											
Average monthly wage	%, y-o-y, nominal terms	2.2	2.5	2.5	-0.1	2.9	3.2	3.7	7.0	7.9	5.6
Average monthly wage	%, y-o-y, real terms	0.7	0.6	-0.8	-1.5	2.5	2.9	3.0	4.4	6.1	3.9
Number of employees	%, y-o-y	-2.2	0.0	-0.1	1.6	0.6	2.2	2.1	1.7	1.2	0.6
Unit labour costs	%, y-o-y	-1.5	0.3	3.4	1.0	0.9	-0.5	3.1	3.7	4.8	2.6
Unit labour costs in industry	%, y-o-y	-6.2	0.7	5.9	5.1	-0.4	1.8	1.0	1.8	-	-
Aggregate labour productivity	%, y-o-y	3.3	2.1	-1.2	-0.8	2.2	3.8	1.3	2.8	2.9	3.0
ILO general unemployment rate	%, average, age 15–64	7.4	6.8	7.0	7.1	6.2	5.1	4.0	2.9	2.2	2.0
Share of unemployed persons (MLSA)	%, average	7.0	6.7	6.8	7.7	7.7	6.5	5.5	4.2	3.3	3.2
<b>PUBLIC FINANCE</b>											
Government budget balance (ESA2010)	CZK bn, current prices	-166.0	-109.9	-159.6	-51.1	-90.6	-27.9	34.6	80.6	81.3	85.5
Government budget balance / GDP**	%, nominal terms	-4.2	-2.7	-3.9	-1.2	-2.1	-0.6	0.7	1.6	1.5	1.5
Government debt (ESA2010)	CZK bn, current prices	1480.2	1606.5	1805.4	1840.4	1819.1	1836.3	1754.9	1749.1	1726.7	1697.2
Government debt / GDP**	%, nominal terms	37.4	39.8	44.5	44.9	42.2	40.0	36.8	34.6	32.2	30.1
<b>EXTERNAL RELATIONS</b>											
<b>Current account</b>											
Trade balance	CZK bn, current prices	40.4	75.5	123.8	167.0	220.0	188.0	245.7	240.9	240.0	250.0
Trade balance / GDP	%, nominal terms	1.0	1.9	3.0	4.1	5.1	4.1	5.1	4.8	4.5	4.4
Balance of services	CZK bn, current prices	78.5	81.3	77.6	70.4	55.7	78.0	107.6	122.0	125.0	130.0
Current account	CZK bn, current prices	-141.8	-84.8	-63.3	-21.8	7.9	11.3	74.2	54.2	55.0	65.0
Current account / GDP	%, nominal terms	-3.6	-2.1	-1.6	-0.5	0.2	0.2	1.6	1.1	1.0	1.2
<b>Foreign direct investment</b>											
Direct investment	CZK bn, current prices	-95.0	-46.8	-121.3	7.4	-80.4	49.7	-186.5	-135.3	-100.0	-70.0
<b>Exchange rates</b>											
CZK/USD	average	19.1	17.7	19.6	19.6	20.8	24.6	24.4	23.4	20.3	19.6
CZK/EUR	average	25.3	24.6	25.1	26.0	27.5	27.3	27.0	26.3	25.0	24.4
CZK/EUR	%, y-o-y, real (CPI euro area), avg.	-4.5	-1.9	1.5	3.5	6.2	-1.2	-1.3	-3.4	-5.0	-2.4
CZK/EUR	%, y-o-y, real (PPI euro area), avg.	-3.9	-3.0	2.5	2.4	4.9	-0.4	-0.1	-1.5	-3.5	-1.7
<b>Foreign trade prices</b>											
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	-2.5	-0.3
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	-3.4	-0.7
<b>MONEY AND INTEREST RATES</b>											
M3	%, y-o-y, average	0.2	1.0	5.1	5.1	5.1	7.3	9.1	11.7	7.0	8.0
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	0.73	1.47
3M PRIBOR	%, average	1.3	1.2	1.0	0.5	0.4	0.3	0.3	0.4	0.9	1.6

\* figures in brackets are constant weights in current consumer basket

\*\* CNB calculation

- data not available/forecasted/released

data in bold = CNB forecast

2015				2016				2017				2018				2019			
QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV
1057.5	1073.4	1086.0	1091.6	1095.0	1104.0	1106.0	1110.9	1128.0	1155.2	1163.3	1172.4	1182.8	1194.7	1205.2	1214.2	1225.8	1236.2	1245.2	1252.6
5.2	5.8	5.7	4.9	3.5	2.8	1.8	1.8	3.0	4.6	5.2	5.5	4.9	3.4	3.6	3.6	3.6	3.5	3.3	3.2
3.7	3.7	3.8	4.1	4.0	3.6	3.7	3.0	3.0	4.4	4.3	4.3	4.4	3.6	4.0	4.4	4.2	3.9	3.5	3.3
1.4	1.4	2.6	2.3	1.9	2.2	1.8	2.1	1.9	1.4	0.9	1.9	2.7	2.6	3.5	2.1	2.1	2.4	2.1	2.5
14.8	18.5	13.4	6.2	2.8	-5.2	-4.0	-3.1	-2.5	3.8	8.3	12.1	11.6	8.4	6.4	6.7	6.9	5.4	4.5	3.9
8.4	12.0	12.4	8.6	2.1	-3.1	-4.8	-3.9	0.1	7.3	7.7	8.4	8.9	6.6	9.0	10.1	9.6	7.7	6.5	5.7
5.4	6.0	6.8	6.6	6.7	5.6	2.8	2.3	5.0	7.8	7.4	7.6	5.7	4.9	8.3	8.6	8.6	8.4	8.3	7.8
6.6	7.8	7.5	6.0	6.5	3.0	1.9	1.4	2.9	6.8	7.0	8.3	7.3	6.8	10.1	10.5	10.3	9.6	9.0	8.4
56.6	45.6	57.6	65.0	61.9	68.8	67.2	73.9	82.4	82.4	75.2	73.4	73.7	70.2	65.6	63.1	64.3	64.7	64.3	61.9
5.0	5.4	3.6	3.2	3.2	6.1	0.8	3.5	8.5	4.3	5.5	7.9	-	-	-	-	-	-	-	-
9.4	12.0	6.9	1.3	-6.8	-8.8	-6.2	-1.6	0.9	7.2	1.6	3.0	-	-	-	-	-	-	-	-
7.9	8.3	5.9	8.5	7.1	8.5	4.7	4.3	6.9	3.5	3.4	4.5	-	-	-	-	-	-	-	-
0.3	0.5	0.4	0.3	0.4	0.3	0.4	0.7	1.2	1.5	2.0	2.5	2.4	-	-	-	-	-	-	-
0.1	0.7	0.4	0.1	0.5	0.3	0.5	1.4	2.4	2.2	2.6	2.6	1.9	1.9	1.7	1.5	1.7	1.7	1.8	1.9
0.2	0.3	-0.2	-0.4	0.7	0.2	-0.1	-0.1	-0.5	-0.1	0.2	0.3	1.4	1.6	1.6	1.7	1.6	1.6	1.5	1.5
-0.9	0.7	0.3	0.0	-0.4	-0.8	0.2	1.8	3.4	2.9	3.9	4.4	2.5	2.1	1.4	0.8	1.3	1.7	1.9	1.9
1.1	1.1	1.1	1.3	1.3	1.1	1.1	1.4	2.1	2.5	2.7	2.5	1.7	1.7	1.6	1.8	2.0	1.9	2.0	2.2
-14.6	-10.1	-12.6	-16.6	-12.4	-12.4	-9.5	0.2	15.1	7.5	1.7	2.6	-1.6	0.5	2.5	-1.6	-3.0	-1.5	-1.7	-2.0
-0.1	0.4	0.2	0.0	0.3	0.0	0.3	1.3	2.5	2.3	2.7	2.7	1.8	1.8	1.6	1.4	1.6	1.7	1.8	1.9
1.5	1.3	1.0	0.8	1.5	1.1	1.3	1.1	0.6	1.1	1.7	2.4	2.7	2.7	1.8	1.4	1.5	1.4	1.9	2.1
-3.3	-2.3	-3.6	-3.5	-4.0	-4.6	-3.3	-1.1	2.7	2.3	1.4	0.9	0.1	0.4	1.0	0.6	0.7	0.8	1.1	1.4
-9.1	-9.3	-5.7	1.3	-3.2	-8.2	-7.0	-4.9	0.2	10.1	11.4	8.2	4.0	-1.7	-1.4	-2.1	-0.9	1.1	1.0	1.6
1.0	1.2	1.4	1.3	1.2	1.1	1.0	1.2	1.4	1.6	1.7	2.0	2.2	-	-	-	-	-	-	-
-48.9	-42.1	-50.6	-41.6	-36.3	-26.1	-7.6	16.0	57.6	9.1	11.0	20.8	22.9	33.9	28.2	6.7	-4.0	-6.5	-6.1	-5.9
2.3	3.3	3.5	3.7	3.8	3.3	4.0	3.7	5.4	7.6	6.8	8.0	8.5	8.1	8.0	7.2	6.1	5.8	5.4	5.2
2.2	2.6	3.1	3.6	3.3	3.1	3.5	2.3	2.9	5.3	4.2	5.3	6.6	6.2	6.3	5.7	4.5	4.1	3.6	3.3
2.1	2.4	2.0	2.1	2.8	2.0	1.9	1.9	1.1	1.3	2.2	2.1	1.8	1.8	0.9	0.5	0.6	0.6	0.5	0.5
-1.0	-1.0	0.0	0.1	2.7	1.5	4.1	4.0	2.9	5.0	3.4	3.5	4.5	5.5	5.1	4.1	2.9	2.7	2.4	2.3
-0.7	0.4	3.0	4.4	5.3	-1.3	1.5	-1.2	-1.7	5.9	1.7	1.3	-	-	-	-	-	-	-	-
3.8	4.1	3.8	3.7	1.8	2.9	0.4	0.2	2.5	2.0	2.8	3.9	3.6	2.0	3.1	3.1	3.2	3.1	3.0	2.8
6.1	5.0	4.9	4.5	4.4	4.0	4.0	3.6	3.5	3.0	2.8	2.4	2.4	2.2	2.2	2.1	2.1	2.0	2.0	2.0
7.5	6.4	6.2	6.0	6.3	5.4	5.3	5.0	5.1	4.2	3.9	3.6	3.7	3.2	3.1	3.2	3.5	3.0	3.1	3.1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74.4	45.9	33.1	34.6	83.1	80.5	44.7	37.4	88.8	71.7	42.7	37.8	80.0	76.0	45.0	39.0	85.0	77.0	46.0	42.0
7.0	4.0	2.8	2.9	7.5	6.6	3.7	3.0	7.7	5.7	3.3	2.8	6.4	5.6	3.3	2.8	6.5	5.5	3.2	2.8
19.2	19.4	20.2	19.3	25.3	26.4	28.7	27.2	28.5	33.3	31.5	28.7	29.0	34.0	32.0	30.0	30.0	35.0	34.0	31.0
93.4	-48.4	-48.4	14.7	119.5	-10.0	-19.2	-16.1	97.5	-8.1	-34.5	-0.7	89.5	-2.5	-31.5	-0.5	101.0	-2.0	-34.0	0.0
8.8	-4.2	-4.1	1.2	10.8	-0.8	-1.6	-1.3	8.4	-0.6	-2.7	-0.1	7.2	-0.2	-2.3	0.0	7.7	-0.1	-2.4	0.0
3.3	-1.4	20.2	27.6	-1.8	-95.6	-63.0	-26.2	-62.7	-26.2	-12.1	-34.3	-	-	-	-	-	-	-	-
24.5	24.8	24.3	24.7	24.5	23.9	24.2	25.1	25.4	24.1	22.2	21.8	20.7	20.5	20.1	19.8	19.6	19.6	19.6	19.6
27.6	27.4	27.1	27.1	27.0	27.0	27.0	27.0	27.0	26.5	26.1	25.7	25.4	25.2	24.8	24.6	24.4	24.4	24.3	24.3
0.4	-0.7	-2.3	-2.1	-2.4	-1.5	-0.5	-0.7	-0.7	-2.5	-4.3	-5.9	-6.5	-5.1	-4.6	-3.9	-3.5	-3.2	-1.9	-0.9
1.2	0.0	-1.0	-1.7	-1.9	-0.3	0.8	1.0	0.8	-1.0	-2.4	-3.6	-4.6	-3.2	-3.1	-2.9	-3.0	-2.4	-1.2	-0.3
-0.5	-0.5	-2.7	-3.3	-4.1	-4.3	-2.6	-1.3	2.2	0.9	-1.1	-2.4	-4.4	-3.0	-1.5	-1.1	-1.1	-0.8	0.1	0.8
-1.5	0.0	-2.5	-3.8	-5.7	-6.3	-3.7	-0.4	5.1	2.9	-0.9	-3.3	-6.1	-4.0	-1.7	-1.7	-1.2	-1.2	-0.5	0.3
5.7	6.3	8.0	9.2	9.7	9.5	9.0	8.1	10.2	12.6	12.7	11.1	8.8	6.2	5.9	7.1	7.4	8.1	8.3	8.1
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.25	0.50	0.75	0.66	0.72	0.85	1.07	1.30	1.57	1.95
0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.7	0.9	0.8	0.9	1.0	1.2	1.4	1.7	2.1

**Issued by:**

CZECH NATIONAL BANK  
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Czech Republic

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**Produced by:** CZECH NATIONAL BANK

**Design:** Jerome s.r.o.

ISSN 1803-2419 (Print)  
ISSN 1804-2465 (Online)





