Inflation Report —— I/2020

CNB CZECH NATIONAL BANK

Czech National Bank —— Inflation Report —— I/2020

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This Inflation Report was approved by the CNB Bank Board on 13 February 2020 and – with some exceptions – contains the information available as of 24 January 2020. 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.

Contents

Foreword

Dear Readers,

The Inflation Report is our key monetary policy publication. We have been publishing it since 1998 and have gradually developed it over the years. The first report of 2020 is issued in a modern layout reflecting the CNB's new visual style introduced this year. Section I of the Report presents the message of our new quarterly forecast and the reasons behind the monetary policy decision adopted by the CNB Bank Board. In section II you will find a detailed description of the new forecast and its risks. Section III contains our assessment of past economic and monetary developments.

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

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

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

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

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

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

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

On behalf of the Czech National Bank

Jiří Rusnok
Governor

I. SUMMARY

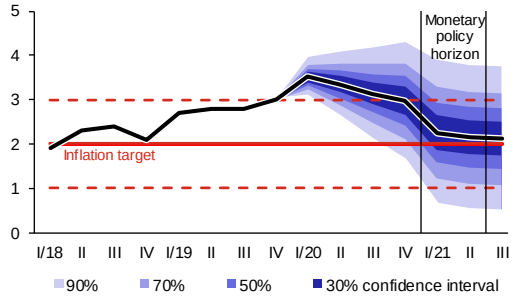
Inflation will remain above the upper boundary of the tolerance band this year and will converge towards the CNB's 2% target over the monetary policy horizon (see Chart I.1). Consumer prices increased by 3% in 2019 Q4, driven by buoyant core inflation and faster growth in administered prices and food prices. Inflation will increase appreciably above the upper boundary of the tolerance band around the target in the months ahead, mainly due to the price impacts of changes to indirect taxes amid persisting domestic fundamental inflation pressures. The inflation pressures from the domestic economy will temporarily increase at the start of this year as a result of government measures boosting household consumption. However, they will subsequently weaken, mainly due to slowing but still robust wage growth. A temporary decline in core import prices and falling growth in administered prices and subsequently food prices will also act in the anti-inflationary direction. Inflation will thus decrease close to the 2% target over the monetary policy horizon. This will be supported by a tightening of the monetary conditions at the start of this year. However, the decrease in inflation will be slowed by the assumed price impacts of changes to indirect taxes. These impacts will remain positive in 2021, so headline inflation will be slightly above the target. Monetary policy-relevant inflation will be lower than headline inflation and will be at the target over the monetary policy horizon (see Chart I.2). As regards the structure of inflation, growth in market prices will continue to be driven above all by core inflation. Food price inflation will remain high this year and then decline as a result of a gradual decrease in domestic demand pressures and lower growth in imported food prices. Fuel prices will mostly go down in connection with a falling oil price outlook. The currently marked growth in administered prices will weaken.

The growth of the Czech economy slowed but will gradually accelerate on the back of a recovery in external demand (see Chart I.3). GDP growth will continue to be driven mainly by rising consumption expenditure. The solid growth in household consumption will reflect continued, albeit gradually slowing, growth in household income. Fiscal policy will contribute to domestic demand growth mainly via a rise in public sector pay, pensions and other social benefits. However, government investment expenditure will also increase, supported by drawdown of EU funds. By contrast, private investment is undergoing a downturn reflecting the slowdown in euro area economic growth. This factor will drop out during this year and total investment growth will turn positive again. The recovery in external demand will be reflected in positive contributions of net exports to GDP growth. Overall, these factors will foster a gradual slight acceleration of economic growth, which will return close to its long-term rate next year. The tightness in the labour market persists as a result of continued growth in economic activity, although it, too, is now past its peak. Amid persisting labour shortages on the one hand and weakening demand for labour on the other, total employment growth will remain subdued. The unemployment rate will remain close to its current very low levels. Wage growth will decrease gradually towards its steady-state level, but its slowdown will be

Chart I.1 Headline inflation forecast

Headline inflation will be above the upper boundary of the tolerance band for most of this year and will fall close to the CNB's 2% target over the monetary policy horizon

(year on year in %)

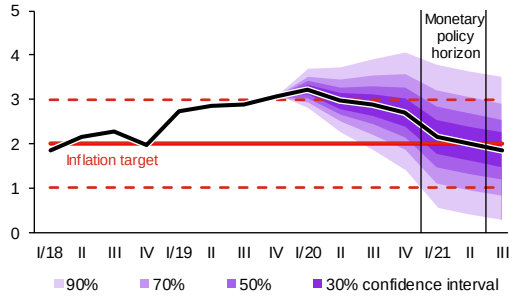


Note: The confidence intervals of the headline inflation forecast reflect the predictive power of past forecasts and are symmetric. They are widening only for the first five quarters and then stay constant. This is consistent with both the past predictive power and the stabilising role of monetary policy.

Chart I.2 Monetary policy-relevant inflation forecast

Monetary policy-relevant inflation will be at the CNB's 2% target over the monetary policy horizon

(year on year in %)

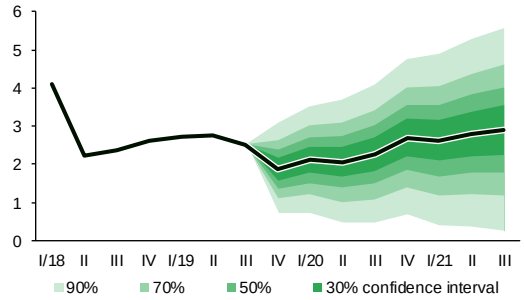


Note: The confidence intervals of the monetary policy-relevant inflation forecast reflect the predictive power of past forecasts and are symmetric. They are widening only for the first five quarters and then stay constant. This is consistent with both the past predictive power and the stabilising role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

Chart I.3 GDP growth forecast

The growth of the Czech economy will remain moderate in the coming quarters; it will subsequently accelerate towards 3%, mainly on the back of a recovery in external demand

(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.

dampened by a further increase in the minimum wage and growth in salaries in the non-market part of the economy.

After appreciating at the start of 2020, the exchange rate will remain stable for the rest of the year and appreciate slightly next year (see Chart I.4). The exchange rate forecast for 2020 Q1 is set at CZK 25.3 to the euro. The exchange rate will stay at this level until the start of next year. The effect of a temporary further widening of the interest rate differential vis-à-vis other countries will be offset by only weak economic and price growth abroad, amid only gradually fading negative global sentiment. Subsequently, the exchange rate will appreciate only slightly, reaching CZK 25 to the euro at the end of next year. Continued real convergence of the Czech economy will foster appreciation over the entire forecast horizon.

Consistent with the forecast is a rise in domestic market interest rates initially, followed by a decline in 2020 H2 (see Chart I.5). The initial increase in interest rates mainly reflects persisting increased domestic inflation pressures, which will be temporarily intensified by a further large increase in the minimum wage and other government measures fostering growth in household consumption. The second-round effects of changes to indirect taxes, which will affect inflation in 2020 and early 2021, are also pushing up rates. The subsequent decline in domestic interest rates will reflect a decrease in domestic inflation pressures in an environment of still very easy monetary policy in the euro area.

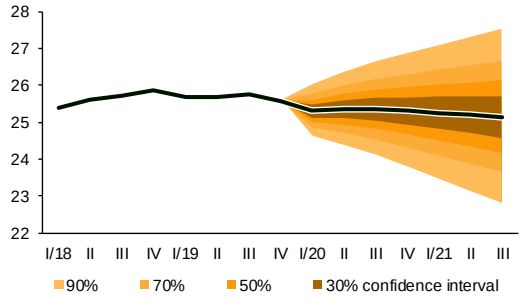
At its February monetary policy meeting, the CNB Bank Board increased the two-week repo rate by 25 basis points to 2.25%. At the same time, it increased the Lombard rate to 3.25% and the discount rate to 1.25%. Four members voted in favour of this decision, and three members voted for leaving rates unchanged.

The Bank Board assessed the balance of risks to the inflation forecast at the monetary policy horizon as being broadly balanced. The future exchange rate path is an anti-inflationary risk to the forecast. The external assumptions of the forecast continue to include the risk of a potential slower recovery of external demand growth. Potential higher inflation due to stronger domestic inflation pressures is an upside risk to the forecast.

Chart I.4 Exchange rate forecast

After appreciating at the start of 2020, the exchange rate of the koruna against the euro will remain stable for the rest of the year and appreciate slightly next year

(CZK/EUR)

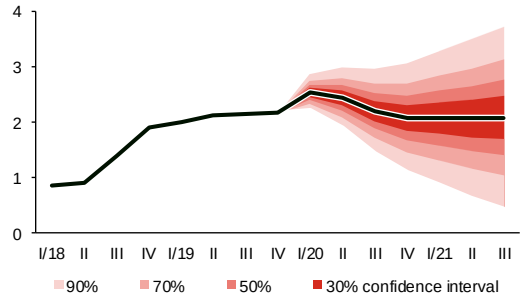


Note: The confidence intervals of the CZK/EUR exchange rate reflect the predictive power of past forecasts (with the exception of the exchange rate commitment period). They are symmetric and linearly widening.

Chart I.5 Interest rate forecast

Consistent with the forecast is a rise in domestic market interest rates initially, followed by a decline in 2020 H2

(3M PRIBOR in %)



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

II. THE FORECAST, ITS CHANGES AND RISKS

II.1 DEVELOPMENTS ABROAD AND EXTERNAL ASSUMPTIONS OF THE FORECAST

The growth of the world economy will remain roughly at the 2019 level this year and the next. In the euro area, the currently muted economic growth will be replaced by a gradual acceleration during this year. The weak growth in economic activity is reflected in still subdued growth in producer and consumer prices, but their dynamics will also increase gradually in both cases. The market outlook for short-term euro rates has shifted to slightly less negative levels, whereas the outlook for dollar rates is decreasing. The euro is expected to appreciate only marginally against the dollar.

II.1.1 Economic developments abroad

The growth of the world economy this year and the next will remain broadly stable at last year's level.[1] China will remain the main driver of global growth. However, its contribution will continue to decline, as will that of the USA. After 18 months of a trade war, the two countries signed a phase-one trade agreement in January 2020, but tariff barriers remain in place for the time being. India's share in global growth will rise and the euro area's contribution will remain low. Overall, the weighted growth of the economies monitored is expected to reach around 3.4% this year and the next (see Chart II.1.1).[2]

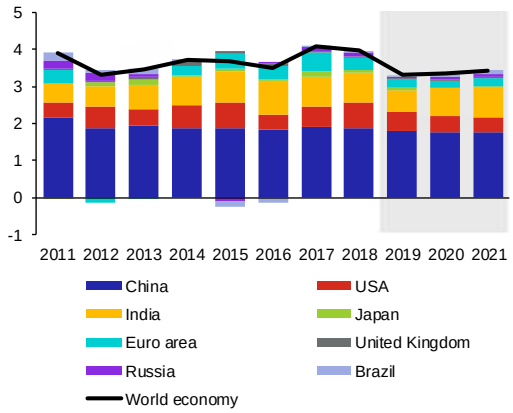
Economic growth in the euro area stayed at 1.2% in 2019 Q3 (see Chart II.1.2). As in previous quarters, it was driven by investment and by household and government consumption, while the contribution of net exports remained significantly negative. This reflected a continued year-on-year decline in the volume of global trade during the summer in reaction to rising protectionism and in an environment of ongoing structural changes in the automotive industry. These factors affected manufacturing above all in Germany and Italy. As a result, the two economies recorded only slight quarterly growth in GDP. By contrast, economic growth in Spain and France remained solid.

The available business indicators are signalling that economic growth in the euro area remained subdued at the close of last year. Industrial production continued to fall year on year, but the decline moderated to 1.5% in November. The Purchasing Managers' Index (PMI) in manufacturing edged up during Q4 (see Chart II.1.3) but remains deep in the contraction band. It can therefore be assumed that industrial production will not return to growth in early 2020. By contrast, the labour market situation remains favourable. Annual wage growth slowed somewhat in Q3 (to 2.6%[3]), as did employment growth (to 0.9%), but the unemployment rate (7.5% in November) continued to fall gradually,[4] reaching an 11-year low. The increased wage

Chart II.1.1 World economy growth outlook

Following last year's slowdown, the growth of the world economy will stay at roughly the same level this year and the next

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

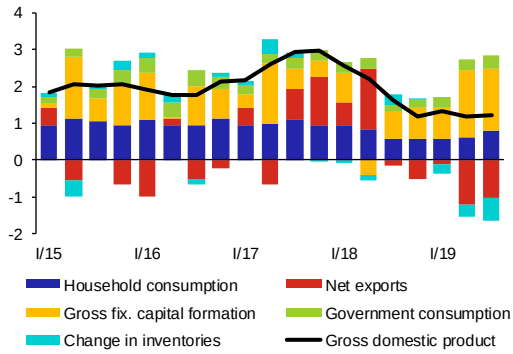


Note: World economy growth is proxied by the growth of the eight largest economies, which account for around 75% of global GDP. The weights of the individual economies are calculated on the basis of nominal GDP at purchasing power parity. The sources of the outlooks are CF and EIU.

Chart II.1.2 Structure of annual GDP growth in the euro area

Euro area GDP growth remained subdued in 2019 Q3 and continued to be driven by fixed investment and consumption, while the contribution of net exports stayed negative

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



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

2 The outlook, including the expected outcome, is indicated by the grey areas in the chart. This convention is used throughout this Report.

3 Among the large euro area economies, nominal wages saw the biggest increase in Germany (by 3.1%). In most euro area countries, wages rose faster in the non-market sector of the economy.

4 Importantly, the unemployment rate is falling in countries where it is highest (in November it decreased in Spain and France, for example).

dynamics are fostering growth in retail sales, which remains solid (2.2% in November).

GDP growth in the effective euro area[5] will slow further in early 2020 but will then start to accelerate gradually (see Chart II.1.4). Overall, the euro area economy will grow by 1% this year and 1.3% next year. Growth in the effective euro area is still being hampered mainly by the German economy, whose industry is being strongly affected by international trade developments. Economic growth in Slovakia is also slowing markedly. Economic activity in these two countries will gradually recover during this year. Despite that, growth in effective external demand will remain well below its steady-state level. The risks to this outlook are tilted towards a slower recovery in growth. A further deterioration in international trade conditions, such as an increase in tariffs on EU imports into the USA, would result in a longer-lasting decline in German industrial production. This, in turn, could adversely affect Germany's – currently solidly prospering – services sector and the economic output of other euro area countries and the EU as a whole.

II.1.2 Price developments abroad

The price of oil is expected to fall gradually from around USD 65 a barrel, and the price of natural gas in Europe will decrease as well. The main factors behind the price growth during December were still favourable news on the US-China trade deal negotiations and an OPEC+ agreement to further reduce oil production. Oil prices temporarily increased owing to the escalation of the conflict between the USA and Iran in early January, but they subsequently returned to their mid-December level after the situation calmed. The Brent market price curve in early January remains falling and is signalling average prices of USD 61 a barrel at the close of this year and USD 58 a barrel at the end of next year (see Chart II.1.5). By contrast, the EIA forecast expects the oil glut on the market to fade out in mid-2020 and the price of oil to rise to USD 69 a barrel at the end of 2021. The January CF expects an oil price of USD 63 a barrel at the one-year horizon. Oil prices declined further in late January on concerns about the spread of the coronavirus epidemic in China. The price of natural gas in Europe is expected to fall owing to a mild winter and an excess of gas on the market.

The outlook for the two non-energy commodity price sub-indices is slightly rising (see Chart II.1.5). The food commodity price index surged at the close of last year, owing mainly to rising prices of wheat, rice, sugar, coffee and beef. The industrial metals price index was broadly flat, with the copper price rising but the nickel price falling. The rising outlook for the industrial metals price index is due solely to the expected path of aluminium prices. An improvement in Chinese industry and the conclusion of a partial

5 For the purposes of the forecast, external real and price developments are proxied by effective euro area indicators (see the Glossary). The outlooks for GDP, PPI and the HICP in the individual euro area countries are based on the CNB's model calculations and available outlooks, including the January Consensus Forecasts (CF). The outlooks for government bond yields, the euro-dollar exchange rate and the NEER of the euro are constructed on the basis of the January CF. The scenarios for the future paths of the 3M EURIBOR and 3M USD LIBOR and the Brent crude oil price are derived from market contracts as of 13 January 2020.

Chart II.1.3 PMI in manufacturing

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

(Purchasing Managers' Index; source: Bloomberg)

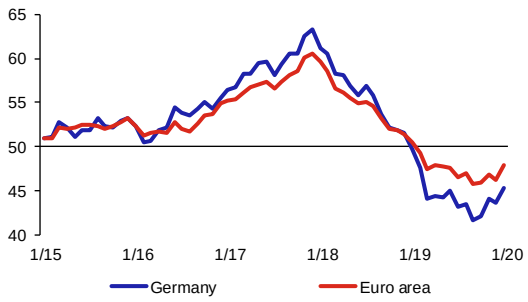
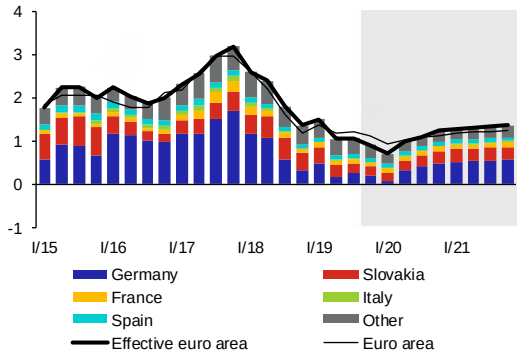


Chart II.1.4 Euro area GDP growth outlook

Growth in economic activity will slow further at the start of this year and then start to accelerate gradually

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

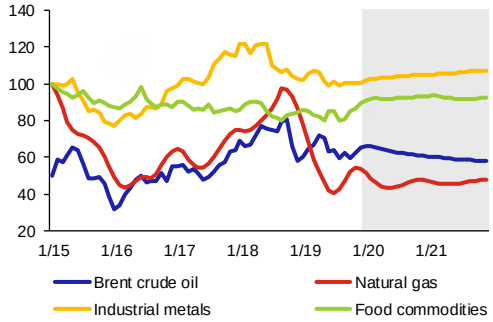


Note: Other comprises the remaining 12 euro area member countries. Its forecasted growth corresponds to the average growth of the five countries shown in the chart.

Chart II.1.5 Prices of crude oil and other commodities

The Brent crude oil price is expected to gradually return below USD 60 a barrel; similarly, the natural gas price in Europe is expected to decline again

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



US-China trade deal could support growth in metals prices, although most tariffs remain in place for the time being.

Producer prices in the euro area bottomed out at the close of last year (see Chart II.1.6). The contribution of the energy component to the overall price growth was negative on account of the observed year-on-year decrease in oil prices. At the same time, the share of the core component declined owing to the slowdown in euro area economic growth. According to the data for November, euro area industrial producer prices fell by 1.4% year on year, mainly due to a negative contribution of energy prices. However, falling prices of intermediate goods also contributed to the continued overall decline in industrial producer prices to a lesser extent. Among the large countries, the largest price decrease was recorded in Italy (3.6%). Prices also fell modestly in Germany and France, whereas Slovakia recorded an increase of 1.2%.

Annual industrial producer price inflation in the effective euro area will start to go up gradually this year (see Chart II.1.6). The January market outlook expects a slight year-on-year increase in the price of oil in 2020 Q1 but the core component of producer prices will act in the opposite direction. The contribution of the core component will be positive from Q2 and increase further as euro area economic growth gradually recovers. Producer prices are expected to increase by 0.9% in 2020 as a whole. A figure of 1.5% is expected in 2021 as economic growth accelerates. The effective indicator is higher than that for the euro area proper this year. This is due to higher inflation in Slovakia than in large euro area countries.

Consumer price inflation also remains muted in the euro area. Although consumer price inflation increased to 1.3% in December due to a subsiding of the negative contribution of energy prices, core inflation stayed at the November level (see Chart II.1.7). Annual inflation stood at 1% in 2019 Q4 as a whole, the same figure as in the previous quarter.

Consumer price inflation in the effective euro area will be below 2% over the entire forecast horizon (see Chart II.1.8). This is due to long-running muted fundamental inflation pressures and low inflation expectations. In 2020, inflation is expected to stand on average at the same level as last year, i.e. 1.5%. It will be only marginally higher in 2021. Inflation according to the effective indicator is expected to be above that in the euro area proper as a result of higher inflation in the Czech Republic's second-biggest trading partner country (Slovakia), where inflation is expected at 2.3% this year.

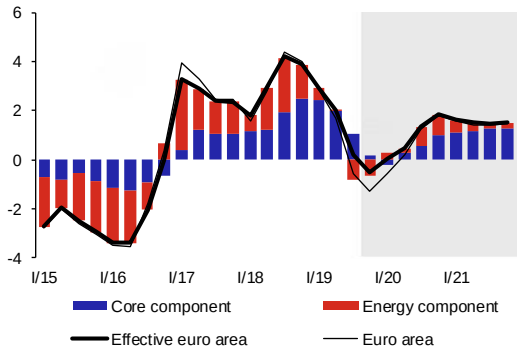
II.1.3 Financial developments abroad

According to the market outlook, the 3M EURIBOR will increase slightly in 2021 but will remain markedly negative (see Chart II.1.9). The shift of the market outlook to rather less negative levels (-0.3% at the end of 2021) was due mainly to news from the euro area economy indicating that a cyclical trough has been reached. The January CF survey expects the 3M EURIBOR to stand at the current level (-0.4%) at the one-year horizon. Financial markets calmed after the threat of a disorderly Brexit was averted and the USA and China signed a phase-one trade

Chart II.1.6 Industrial producer prices in the euro area

Industrial producer price inflation bottomed out at the close of last year and will gradually turn positive again

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

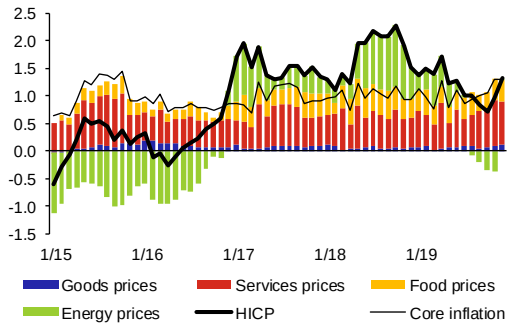


Note: The energy component is determined by developments in industries strongly linked to the oil price. The rest of the PPI index in effective terms is the core component.

Chart II.1.7 Inflation in the euro area

Consumer price inflation increased in December due to a subsiding of the negative contribution of energy prices

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

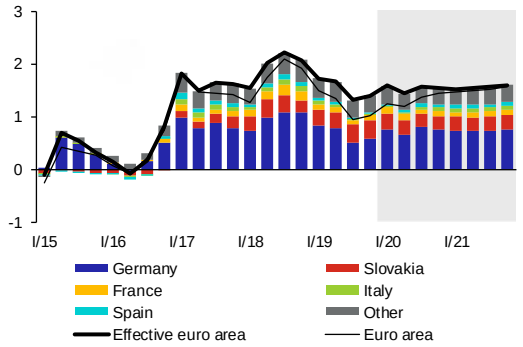


Note: Core inflation is calculated on the basis of the HICP excluding prices of energy, food, alcohol and tobacco.

Chart II.1.8 Consumer price inflation outlook in the euro area

Inflation will be well below the ECB's target over the entire forecast horizon

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



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

deal. The ECB's meetings in December and January brought no changes to the monetary policy stance or official communication.[6] The calm-down on financial markets at the end of 2019 was also reflected in rates with longer maturities. The ten-year German government bond yield is expected to rise gradually from its current negative levels to zero by the end of 2021 (see Chart II.1.10).

According to the market outlook, the 3M USD LIBOR will decrease next year due to further monetary policy easing by the Fed (see Chart II.1.9). At the end of October, the Fed decided to lower the target range for key rates by 25 bp to 1.5%–1.75%. The Fed also clearly signalled a pause in cutting rates, saying it would this year assess the aggregate effect of all three adjustments made last year. The current market outlook thus expects the 3M USD LIBOR to decline gradually only during 2021. This will foster a decrease in the spread vis-à-vis the euro rate with the same maturity.

According to the January CF outlook, the euro will appreciate slightly against the dollar (see Chart II.1.11). The euro is also expected to appreciate in effective terms, especially against the Chinese and British currencies. The euro appreciated against the dollar at the end of 2019, mainly due to the calm-down of the situation on financial markets (the aversion of the threat of a disorderly Brexit and the deal between the USA and China). The appreciation was also fostered by signs of stabilisation of the euro area economy. The trend reversed at the beginning of January 2020 as new data confirmed still robust consumer demand in the USA amid an improving balance of trade. However, the effect of the expected reduction of rates in the USA next year will prevail over the outlook horizon.

Chart II.1.9 3M EURIBOR and 3M USD LIBOR

The spread between 3M rates in the USA and the euro area will decrease, due mainly to an expected gradual decline in rates in the USA

(percentages; differences in percentage points)

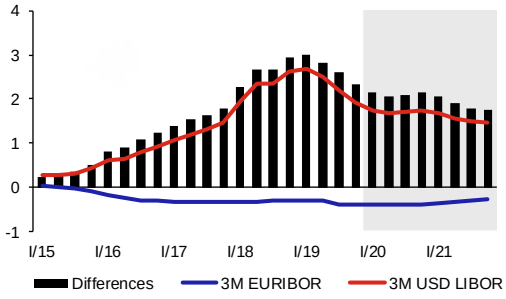


Chart II.1.10 10Y government bond yields

A moderate increase in ten-year government bond yields is expected in both the USA and Germany; their spread will increase only slightly

(percentages; differences in percentage points)

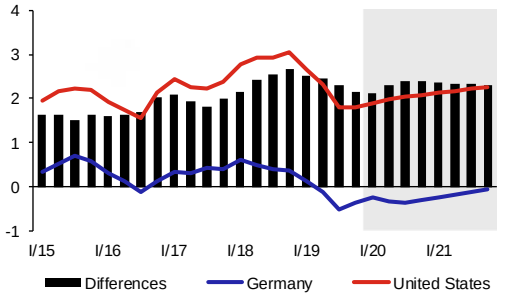
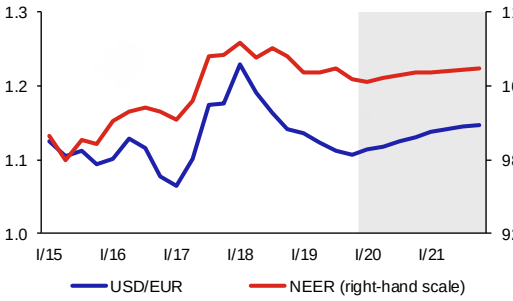


Chart II.1.11 Euro exchange rate

The outlook expects only slight appreciation of the euro against the dollar and the currencies of other trading partners

(USD/EUR; NEER of euro against currencies of euro area countries' 18 main partners; 2015 Q1 = 100; right-hand scale)



6 The ECB's December meeting drew attention to the announced strategic review of monetary policy. The aim is to review some key parameters of the monetary policy regime, for example the definition of the inflation target (price stability), and to explore the ECB's possible involvement in tackling climate change. The comprehensive review will go on throughout 2020 and will include external consultations.

II.2 THE FORECAST

Inflation will increase appreciably above the upper boundary of the tolerance band around the 2% target in the months ahead, mainly due to the price impacts of changes to indirect taxes amid persisting domestic fundamental inflation pressures. These pressures will temporarily increase at the start of this year as a result of government measures boosting household consumption. However, they will subsequently moderate, mainly due to slowing wage growth. A temporary decline in core import prices and falling growth in administered prices and subsequently food prices will also act in the anti-inflationary direction. Inflation will thus gradually slow for the rest of this year and will decrease close to the 2% target over the monetary policy horizon. Monetary policy-relevant inflation will be lower than headline inflation and will return to the target during the first half of next year. This will be supported by a tightening of the monetary conditions at the start of this year. Consistent with the forecast is a rise in domestic market interest rates initially, followed by a decline in the second half of this year. The koruna will remain at the stronger levels observed at the start of the year. A further slight appreciation cannot be expected until 2021, after the effect of negative global sentiment fades out. The current slowdown of the Czech economy will gradually be replaced by an acceleration linked with external demand developments.

II.2.1 Inflation and monetary policy

Headline inflation will stay above the upper boundary of the tolerance band for most of this year and return close to the target in 2021 (see Chart II.2.1). Headline inflation will increase further early this year. This will be due mainly to tax changes, but a rise in fuel prices will also briefly push up inflation. At the same time, inflation will reflect persisting fundamental inflation pressures, which will continue to foster elevated core inflation and rapid growth in food prices. The impacts of changes to indirect taxes will be positive this year and the next, and administered prices will also continue to rise briskly in the first half of this year (see Chart II.2.2). Inflation will thus be appreciably above the upper boundary of the tolerance band around the target in the coming months. Over the rest of this year, however, it will gradually moderate as domestic inflation pressures ease, core import prices go down and the high growth in administered prices abates. At the end of this year, food price inflation will also slow, so inflation will decrease close to the 2% target at the start of next year. This will be supported by a tightening of the monetary conditions at the start of this year. However, the decrease in inflation will be slowed by the assumed price impacts of changes to indirect taxes.[7] As a result, headline inflation will be slightly above the target next year.

Monetary policy-relevant inflation[8] will be below headline inflation and will return to the 2% target during the first half of next year (see Chart II.2.1). The first-round effects of changes to indirect taxes will be markedly positive over the entire forecast horizon. The forecast includes the increase in excise duty on cigarettes and alcohol introduced at the start of this year, which has a first-round effect on headline inflation of 0.69 percentage point (and no impact on monetary policy-relevant inflation). The third and

Table II.2.1 Forecasts of selected variables

GDP growth will slow slightly further this year and accelerate again to slightly below 3% in 2021

(annual percentage changes unless otherwise indicated)

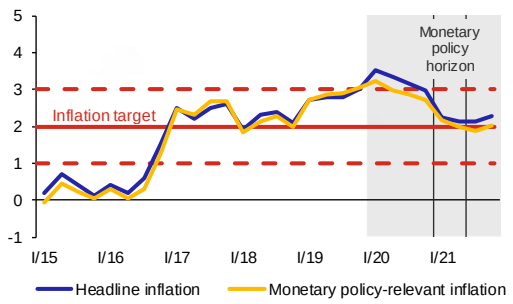
	2018 actual	2019 actual	2020 forecast	2021 forecast
Headline inflation	2.1	2.8	3.2	2.2
GDP	2.8	2.5	2.3	2.8
Average nominal wage	7.6	7.2	5.7	5.2
Exchange rate (CZK/EUR)	25.6	25.7	25.3	25.2
3M PRIBOR (in %)	1.3	2.1	2.3	2.1

Note: The figures for GDP and the average nominal wage in 2019 are expected outturns.

Chart II.2.1 Headline inflation and monetary policy-relevant inflation

Headline inflation will be above the upper boundary of the tolerance band for most of this year and will fall close to the 2% target over the monetary policy horizon; monetary policy-relevant inflation will be below headline inflation

(annual percentage changes)



7 The effect of changes to indirect taxes in 2020 on the inflation forecast was described in detail in a box in IR III/2019.

8 Monetary policy-relevant inflation is inflation adjusted for the first-round effects of changes to indirect taxes. The difference between headline and monetary policy-relevant inflation is equal to the size of the first-round tax effect.

fourth phases of ESR will be launched in May 2020. This will be associated with a decline in the VAT rate on certain consumer basket items (with a first-round impact on headline inflation of -0.34 percentage point). The forecast assumes that the VAT rate cut will pass through to the prices of the relevant items to only a limited extent. The (immediate) second-round effects of these changes are therefore positive and will affect both headline and monetary policy-relevant inflation in 2020 and early 2021. A further expected increase in excise duty on cigarettes, with a first-round effect on headline inflation of 0.26 percentage point (and no impact on monetary policy-relevant inflation), will take place in January 2021.

Core inflation will fluctuate around 2.5% this year and moderate during 2021. The still high core inflation (see Chart II.2.3) will be due to persisting elevated domestic inflation pressures reflecting the exceptionally high, albeit gradually diminishing, labour market tightness. This is affecting inflation above all in services, but it is also passing through to the tradables sector, including food prices (see Box 1 in section III.1). Moreover, positive second-round impacts of the lower VAT on some services will affect core inflation from May 2020 onwards. The effect of a tightening of the monetary conditions in early 2020 will act in the opposite direction. Core inflation will decrease to 2% during 2021 H1 as the effects of these secondary impacts fade away and domestic inflation pressures gradually lessen. It will then remain close to this level until the end of next year.

Food price inflation will remain elevated in the near future and moderate in late 2020 and early 2021. Food price inflation will continue to reflect persisting domestic demand pressures (see Box 1 in section III.1). Poor harvests of vegetables, fruit and potatoes in the last two years (due to hot and dry weather), continuing problems with swine fever in China and sharp growth in import prices are acting in the same direction. Food price inflation will thus stay elevated in the coming quarters. For most of 2020, it will fluctuate around 3.5%, slowing only at the close of the year (see Chart II.2.3). Next year, growth in food prices will drop to 2% due to a decrease in domestic demand pressures and lower growth in imported food prices.

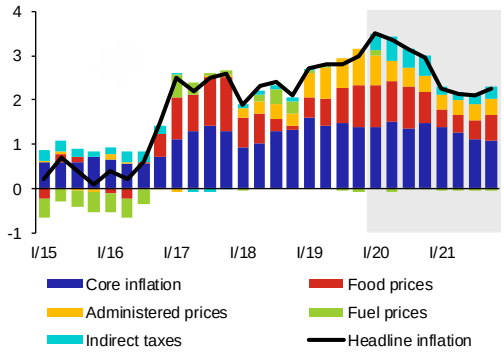
Fuel prices will mostly go down. The exception will be the start of 2020, when a temporary rise in koruna prices of oil coupled with base effects will give rise to a year-on-year increase in fuel prices at filling stations. However, this will dissipate in Q2 on account of an expected year-on-year decline in oil prices amid a strengthening koruna-dollar exchange rate. Fuel prices will subsequently continue to fall slightly for the rest of the forecast horizon (see Chart II.2.3).

The high growth in administered prices observed in early 2020 will moderate in the rest of the year. This will be due mainly to a gradual decline in the currently high growth in electricity prices. To a lesser extent, slowing growth in administered prices will also be fostered by an expected slight drop in gas prices for households on the back of the recent decrease in gas prices on world markets. Lower growth in heat prices for households due to a decrease in the VAT rate will affect annual administered price inflation in the same direction. Overall, administered price

Chart II.2.2 Structure of inflation and the inflation forecast

Inflation will rise further in early 2020, as the other components of inflation will be joined by the effect of a significant increase in indirect taxes

(annual percentage changes; contributions in percentage points)



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

Chart II.2.3 Components of inflation

The sharp growth in food prices will slow at the end of this year, but core inflation will not decrease significantly until 2021, while fuel prices will mostly decline slightly year on year

(annual percentage changes)

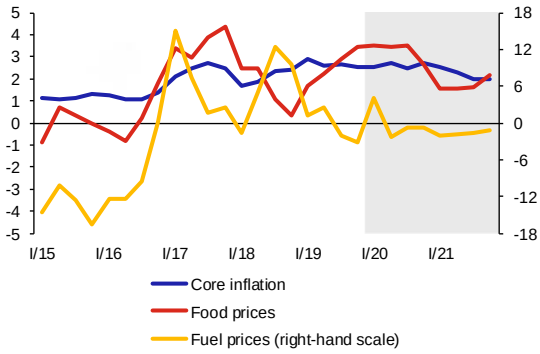


Table II.2.2 Forecast of administrative effects

Administered price inflation will be driven mainly by increasing electricity prices

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

	2018 actual		2019 actual		2020 forecast		2021 forecast	
ADMINISTERED PRICES[a)]	1.8	0.27	4.4	0.69	3.0	0.47	2.2	0.35
of which (main changes):								
electricity	4.4	0.19	10.6	0.45	6.8	0.29	2.8	0.12
natural gas	-0.7	-0.02	3.3	0.08	-0.7	-0.02	1.1	0.03
heat	-0.1	0.00	4.6	0.08	0.9	0.02	2.5	0.05
water	1.7	0.01	2.6	0.02	1.8	0.01	1.7	0.01
health care	5.0	0.06	2.3	0.03	1.6	0.02	2.7	0.04
transport	-1.9	-0.03	-5.0	-0.08	2.0	0.03	2.1	0.03

a) including effects of indirect tax changes

inflation will thus decrease to 2% at the end of this year. In 2021, administered prices will rise by 2.2% (see Table II.2.2).

After appreciating at the start of 2020, the exchange rate will remain stable for the rest of the year and appreciate slightly next year (see Chart II.2.4). The exchange rate forecast for 2020 Q1 is set at CZK 25.3 to the euro.[9] The exchange rate will stay at this level until the start of next year. The effect of a temporary further widening of the interest rate differential vis-à-vis other countries will be offset by only weak economic and price growth abroad, amid only gradually fading negative global sentiment. Subsequently, the exchange rate will appreciate only slightly, reaching CZK 25 to the euro at the end of next year. Continued real convergence of the Czech economy will foster appreciation over the entire forecast horizon.

Consistent with the forecast is a rise in domestic market interest rates initially, followed by a decline in 2020 H2 (see Chart II.2.5). The initial increase in interest rates mainly reflects persisting increased domestic inflation pressures, which will be temporarily intensified by a further large increase in the minimum wage and other government measures fostering growth in household consumption.[10] The second-round effects of changes to indirect taxes, which will affect inflation in 2020 and early 2021, are also pushing up rates. The subsequent decline in domestic interest rates will reflect a decrease in domestic inflation pressures in an environment of still very easy monetary policy in the euro area.

II.2.2 Costs and the labour market

Total nominal costs will grow at a roughly equilibrium rate of 2% this year and the next (see Chart II.2.6). Growth in total costs in the consumer sector decreased at the end of 2019, due to slower growth in domestic costs and a decline in core import prices. The latter reflected both a decline in core foreign producer prices and appreciation of the koruna. The contribution of energy import prices remained only slightly negative. Owing to the appreciation of the koruna at the start of this year, core import prices will have a modest anti-inflationary effect in the first half of 2020. Their contribution will later turn positive again due to a stable koruna and renewed growth in foreign prices. Energy import prices will slightly dampen the growth in costs, due to falling crude oil prices. Following a temporary surge in early 2020, domestic cost pressures will gradually lessen as labour market tightness diminishes. Growth in prices of domestic intermediate goods will fall to its steady-state level next year. The contribution of price convergence will be constantly positive over the entire forecast horizon.

Growth in domestic costs will gradually drop after a temporary pick-up in early 2020 (see Chart II.2.7). Growth in domestic nominal marginal costs in the intermediate goods sector slowed in the second half of last year. This mainly reflected slower

Chart II.2.4 Exchange rate forecast

After appreciating at the start of 2020, the exchange rate of the koruna against the euro will remain stable for the rest of the year and appreciate slightly next year

(CZK/EUR and CZK/USD)

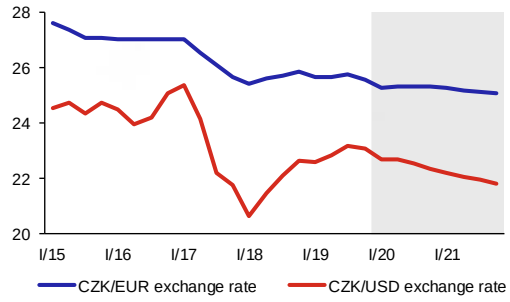


Chart II.2.5 Interest rate forecast

Consistent with the forecast is a rise in domestic market interest rates initially, followed by a decline in 2020 H2

(percentages)

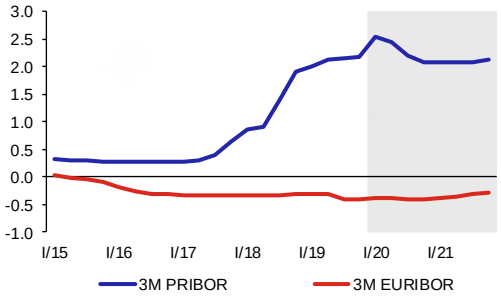
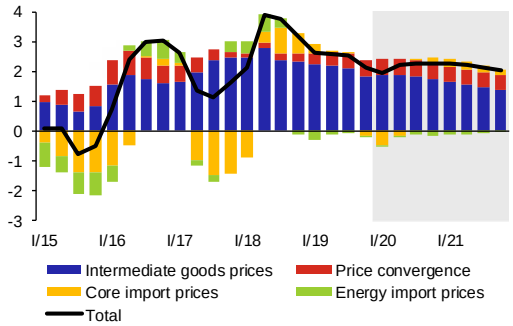


Chart II.2.6 Costs in the consumer sector

Growth in total costs will stay close to 2% over the entire forecast horizon, with renewed growth in core import prices offsetting a gradual reduction in domestic inflation pressures

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



9 The observed marked appreciation of the exchange rate in late 2019 and early 2020 is interpreted as temporary and fundamentally unjustified. The sensitivity scenario in section II.4 describes a situation where global factors unwind faster and the koruna exchange rate is at slightly stronger levels.

10 A larger-than-usual increase in old age pensions and an increase in parental allowance in January 2020.

wage growth. Conversely, growth in domestic costs will pick up temporarily in early 2020 on the back of a further pronounced rise in the minimum wage, an increase in parental allowance and continued higher-than-usual growth in old age pensions. This will foster growth in household consumption and demand-pull inflation pressures, which will be reflected in an increase in the contribution of the price of capital. Growth in domestic costs will then gradually moderate due to slower wage growth as labour market tightness diminishes. Domestic cost pressures will be dampened over the entire forecast horizon by increasing labour efficiency. Its currently reduced contribution will gradually increase to its steady-state level on the back of renewed growth in private investment activity. By contrast, a distinctly positive contribution of the price of capital, reflecting continued growth in domestic demand and a gradual recovery in external demand, will have an upward effect on costs over the entire forecast horizon. As a result, growth in domestic costs will slow to 2% by the end of next year.

Employment will temporarily decline modestly due to the impacts of subdued growth of external demand on the Czech economy (see Chart II.2.8). However, it will start rising again this year on the back of faster growth in domestic economic activity and a related rise in demand for labour. Nonetheless, owing to persisting labour shortages in some sectors of the domestic economy, which are linked with a very low unemployment rate, growth in employment will be subdued for the rest of the forecast horizon. It will be covered exclusively by slight growth in the labour force, due, among other factors, to a gradual increase in the statutory retirement age. The number of employees converted into full-time equivalents will also decline year on year until mid-2020. This will be a result of a continued decrease in employment in industry (as industrial firms are being negatively affected by the current economic downturn abroad) amid temporarily reduced growth in employment in the services sector.

The unemployment rate will remain close to its current very low levels (see Chart II.2.8). It will rise only marginally this year, due to subdued growth in employment and continued slight growth in the labour force. The share of unemployed persons will follow a similar path as the general unemployment rate. The gradually decreasing labour market tightness will be reflected in a weak increase in the number of registered job applicants amid a continued slight decline in the population aged 15–64.

Wage growth will start to slow due to easing labour market tightness. As assumed by the forecast, wage growth in the market segment of the economy slowed to 6.3% in 2019 Q4 (see Chart II.2.9), mainly because of a further decrease in wage growth in industry. In addition to the continuing, albeit weakening, labour market tightness, wage growth will be bolstered this year by another large increase in the minimum wage.[11] On the other hand, the slowing wage growth will reflect firms' efforts to maintain their profitability and price competitiveness. Growth in market wages will thus slow to 5.5%

Chart II.2.7 Costs in the intermediate goods sector

Growth in domestic costs will temporarily pick up and later gradually moderate as a result of falling wage growth and an increasing contribution of labour efficiency

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

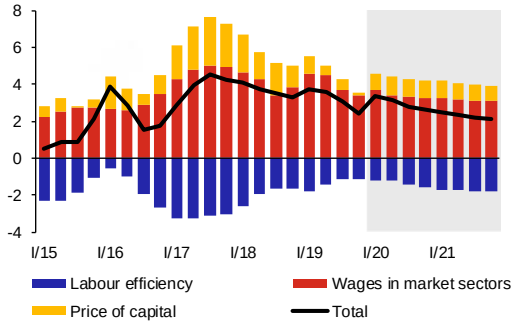


Chart II.2.8 Labour market forecast

Total employment will temporarily decrease and then go up only slightly; the unemployment rate will rise marginally

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

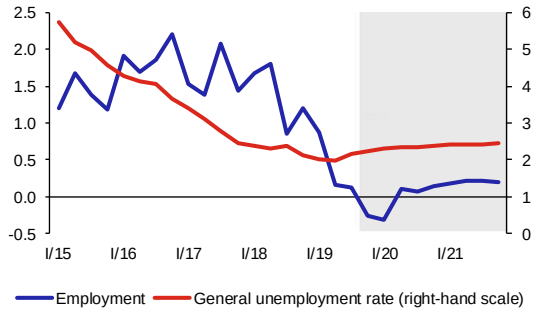
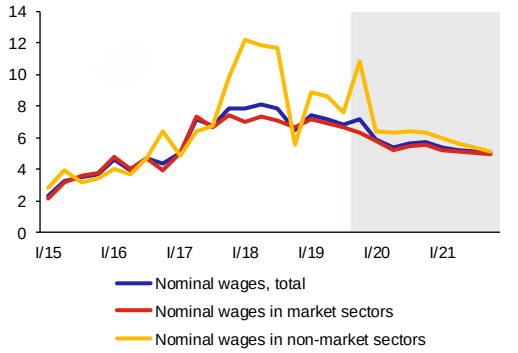


Chart II.2.9 Average nominal wages

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

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



11 The minimum wage was increased by CZK 1,250 to CZK 14,600 in January 2020.

in 2020 as a whole. Wage growth will drop further to its steady-state level of 5% in 2021. Volatile (due to base effects) and generally pronounced, though gradually decreasing, wage growth will continue in non-market sectors. It will mainly reflect an increase in the wages of teachers and other public employees over the entire forecast horizon.

II.2.3 Economic activity

Following a slowdown in 2019 H2, GDP growth will gradually accelerate on the back of a recovery in external demand (see Chart II.2.10). Growth in household and government consumption will continue to foster growth in the domestic economy. Conversely, growth in gross fixed capital formation will stay at the low rates observed at the end of last year, which mainly reflected deteriorating economic growth in the euro area. Renewed growth in private investment due to a gradual recovery in external demand will later be reflected in an upswing in gross fixed capital formation. The external demand recovery will also give rise to a positive contribution of net exports to GDP growth. Overall, these effects will lead to an upswing in the growth of the Czech economy at the end of this year. GDP growth will return close to its long-term rate next year.

Growth in household consumption will remain solid due to persisting high growth in wages and other income. Nominal gross disposable income will maintain strong, albeit gradually slowing, growth. It will continue to be driven by robust growth in wages and salaries together with a large contribution of income of entrepreneurs and social benefits (see Chart II.2.11). In addition, private consumption expenditure will be bolstered this year by a further large increase in the minimum wage and old age pensions and by an increase in parental allowance.[12] Households affected by such measures usually display an above-average propensity to consume. After a temporary slight slowdown in late 2019 and early 2020, consumption growth will return above 2.5% in 2020 H2, where it will stay until the end of the forecast horizon (see Chart II.2.12) amid a gradual rise in the saving rate.

Government consumption will continue to rise on the back of growth in non-wage expenditure and wage growth in the government sector. Growth in government consumption remained above 3% on average in 2019 and will drop only slightly below this level in 2020 (see Chart II.2.12). Its growth rate will remain almost unchanged in 2021. Government consumption expenditure in nominal terms will be affected by continued rapid growth in compensation of employees this year. Current (non-investment) expenditure and social transfers in kind will continue to rise.

Fixed investment will start rising again during 2020. Continued high government investment activity will be joined gradually by the private sector as growth in external demand picks up. In addition to reduced uncertainty regarding future global economic developments, private investment will continue to be

12 The forecast assumes an even distribution of final consumption expenditure stemming from the increase in parental allowance during 2020.

Chart II.2.10 Annual GDP growth structure

Household and government consumption will contribute to GDP growth constantly over the entire forecast horizon, while the contributions of other components will fluctuate this year

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

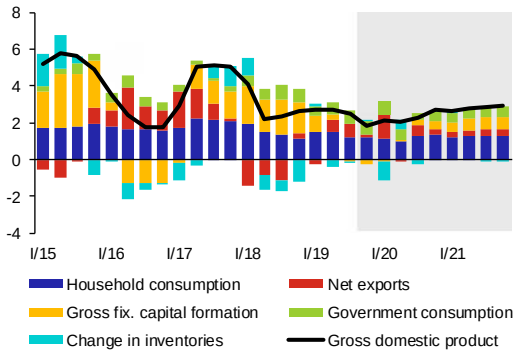
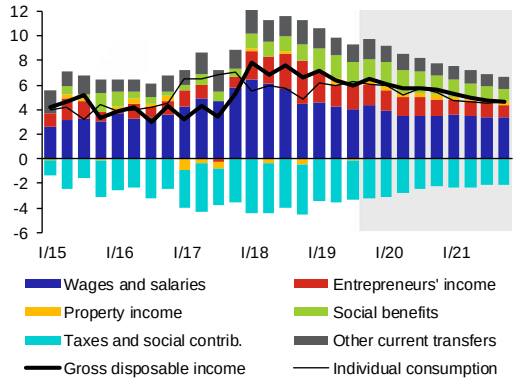


Chart II.2.11 Nominal disposable income

The still solid growth in disposable income will be a result mainly of continued, albeit gradually slowing, growth in wages and salaries, but other income will also increase

(annual percentage changes; contributions in percentage points)

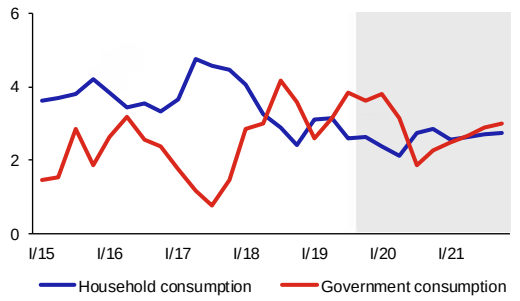


Note: Entrepreneurs' income comprises gross operating surplus and mixed income.

Chart II.2.12 Real household and government consumption

The solid growth in household consumption and government will continue

(annual percentage changes; seasonally adjusted)



motivated by still high production capacity utilisation and persisting labour market tightness. Renewed growth in private investment will not be prevented by the tightening of domestic monetary conditions observed at the start of 2020. Annual growth in total gross capital formation will be volatile this year due to previous changes in inventories (see Chart II.2.13). Gross capital formation growth will be stable in 2021 amid broadly balanced contributions of government investment (partly co-financed from EU funds) and private investment.

Export growth halted at the end of 2019 but will turn positive again this year (see Chart II.2.14). In addition to slower economic growth abroad, export growth was dampened by a worsening of domestic producers' price competitiveness. This was mainly a result of slower growth in the core component of external prices amid continued high growth in domestic wage and other costs. The adverse effect of these factors will partially unwind this year. Growth in exports of goods and services will thus increase to 3.5% amid a broadly stable exchange rate of the koruna. Export growth will accelerate further in 2021.

Import growth will rise this year on the back of renewed growth in domestic investment activity and faster export growth. The muted growth in exports and investment by Czech firms in 2019 was reflected in slowing import growth due to their high import intensity. By contrast, import growth will be supported this year by a recovery in both investment and exports and will also continue to be affected by steady growth in domestic consumer demand. Imports of goods and services will thus grow by around 3% this year and pick up further next year (see Chart II.2.14).

The contribution of net exports to GDP growth will remain broadly positive. This will be a result of somewhat faster growth in exports than imports. In 2021, the growth rates of exports and imports will converge and the contribution of net exports to GDP growth will decrease slightly.

II.2.4 The balance of payments

According to preliminary figures, the current account surplus amounted to 0.4% of GDP in 2019 (see Chart II.2.15). Its negligible increase compared to 2018 was associated with a rise in the goods and services surplus (see Table II.2.3), which mainly reflected lower growth in domestic demand and a year-on-year decline in gas and oil prices.[13] However, the effect of these factors on the goods and services balance was partly offset by slower growth in external demand. The secondary income deficit remained at the 2018 level, amid broad stability of both component balances (government and private transfers). The increase in the primary income deficit was due to increasing compensation of foreign employees and rising domestic investment earnings of non-residents.

Chart II.2.13 Investment decomposition

The downturn in gross capital formation will fade away this year, with a renewed positive contribution of private investment

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

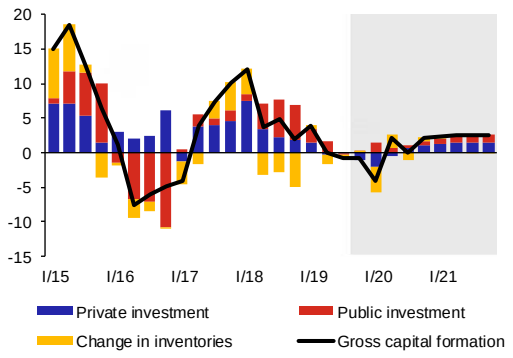


Chart II.2.14 Real exports and imports

The currently subdued growth in exports and imports will gradually increase, reflecting a recovery of growth in external demand, while the contribution of net exports will remain positive

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

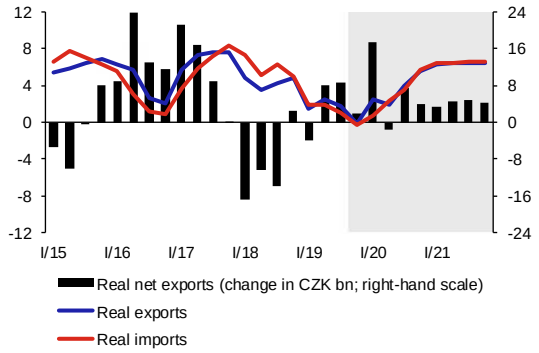
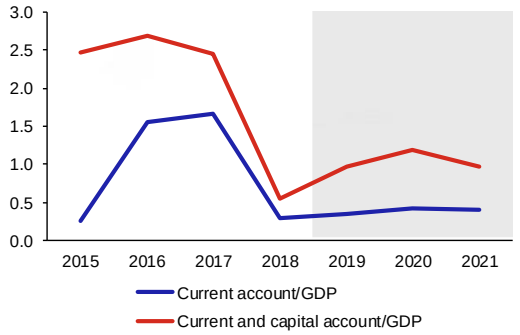


Chart II.2.15 Ratios of the balance payments accounts to GDP

The ratio of the current account surplus to GDP will be virtually unchanged from 2019

(percentages)



Note: The figures for 2019 are expected outcomes.

13 The export side of the trade balance was also positively affected by growth in car exports, achieved despite a global decline in demand for cars. The growth was associated primarily with exports of more expensive Škoda Auto models (SUVs). The year-on-year rise in the services surplus was positively affected by growth in income from telecommunications and computer services.

In 2020, the current account surplus will continue to rise slightly in volume terms but will remain virtually unchanged as a percentage of GDP. The slightly rising goods and services surplus will mainly reflect a continued year-on-year decline in fuel prices, faster growth in net income from manufacturing and repair services, and a slight increase in the other services surplus. The primary income deficit will increase slightly due to a widening investment income deficit and a further increase in compensation of foreign employees. Secondary income is expected to record a stable deficit amid the contrary effects of slightly increased drawdown of EU funds and growth in private transfers abroad.

The current account surplus will also remain stable at 0.4% of GDP in 2021. The goods and services surplus will increase slightly further due to a recovery in external demand growth and a continued slight decline in oil prices on the one hand and an acceleration in domestic demand growth on the other. The growth in the primary income deficit will continue to primarily reflect non-residents' rising direct investment earnings and increasing compensation of foreign employees. The secondary income deficit will remain at the 2020 level.

According to the forecast, the capital account surplus will rise further this year. This will be due to one-off income from the planned auction of 5G frequencies. On the other hand, based on the situation in 2018 and 2019, expenditure is expected to slightly outweigh income in trading in emission permits (i.e. a negative balance). In 2021, the capital account surplus will drop to the 2019 level.

According to preliminary data, the financial account recorded a slight net capital outflow in 2019. The net inflow of direct investment capital into the Czech Republic (see Chart II.2.16) slowed compared with 2018. This was due to a decrease in the balance of reinvested earnings and, in particular, to a change in debt capital flows (mainly significantly increased investment by residents abroad). Turning to portfolio investment (see Chart II.2.17), residents' holdings of foreign securities (mainly bonds) declined slightly further on the asset side due to the highly positive koruna-euro interest rate differential. On the liabilities side, non-residents' holdings of domestic government and corporate bonds grew for the same reason. Under other investment (excluding the banking sector), a relatively large year-on-year increase in the net outflow of capital was recorded. This was a result of the repayment of a foreign short-term government loan, which was offset by the growth in non-residents' government bond holdings. A significant rise in reserve assets was associated with both a rise in returns on the CNB's international reserves and a year-on-year increase in the overall surplus on operations vis-à-vis the EU.

The net inflow of capital into the Czech Republic will be renewed this year due to residents' one-off revenues from the sale of assets abroad. The relatively high income from the sale of ČEZ's assets in Romania and Bulgaria will help the net inflow of direct investment exceed reinvested earnings for the first time in three years. As regards portfolio investment, a positive difference between domestic and foreign interest rate income will ensure a relatively high net capital inflow. For this reason, a slight

Table II.2.3 Balance of payments forecast

The current account surplus will increase slightly due to further growth in the goods and services surplus

(CZK billions)

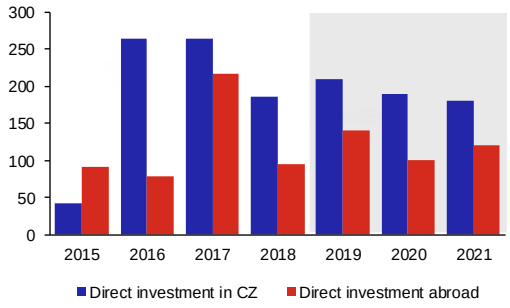
	2018 actual	2019 exp. outcome	2020 forecast	2021 forecast
A. CURRENT ACCOUNT	15.5	20.0	25.0	25.0
Goods	217.2	245.0	265.0	270.0
Services	120.7	125.0	130.0	135.0
Primary income	-282.5	-310.0	-330.0	-340.0
Secondary income	-39.9	-40.0	-40.0	-40.0
B. CAPITAL ACCOUNT	14.0	35.0	45.0	35.0
C. FINANCIAL ACCOUNT[a)]	12.2	20.0	-30.0	10.0
Direct investment	-91.3	-70.0	-90.0	-60.0
Portfolio investment	22.5	-70.0	-100.0	-80.0
Financial derivatives	-15.3	-	-	-
Other investment	46.3	65.0	70.0	60.0
Reserve assets	50.0	95.0	90.0	90.0

a) forecast excluding operations of banking sector and financial derivatives

Chart II.2.16 Direct investment structure

In the next two years, both the net inflow of direct investment into the Czech Republic and the net outflow of direct investment abroad will decrease compared with 2019

(CZK billions)

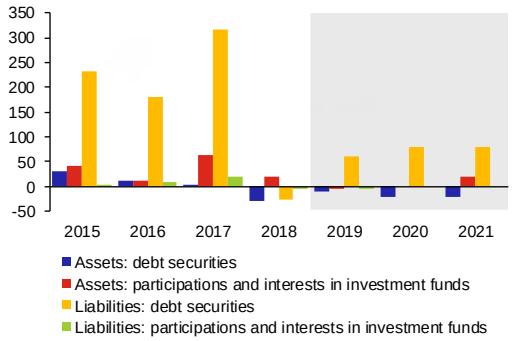


Note: The figures for 2019 are expected outcomes.

Chart II.2.17 Portfolio investment structure

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

(CZK billions)



Note: The figures for 2019 are expected outcomes.

decline in residents' holdings of foreign assets and continued interest of non-residents in domestic government and corporate bonds are still expected. Other investment excluding banking sector operations will see a relatively large net capital outflow, which, unlike in 2019, will be concentrated in the business sector. The growth in reserve assets will be similar to that in 2019, reflecting approximate year-on-year stability of the surplus on transactions vis-à-vis the EU and returns on international reserves.

The inflow of capital into the Czech Republic will halt in 2021 as one-off sales of residents' foreign assets fade out. The other financial account items will not deviate significantly from the previous trend, and the financial account as a whole (excluding banking sector operations) is forecasted to record a very slight net outflow of capital.

According to the forecast, the domestic economy will this year generate a significant foreign currency surplus, which should foster a strengthening of the koruna. The bulk of the forecasted surplus, however, is due to the inclusion of one-off revenues from sales of assets to non-residents,[14] while a smaller part is associated with an expected year-on-year fall in oil and gas prices. Another significant factor affecting the exchange rate may be movements of short-term capital.[15]

II.2.5 Fiscal developments

After several years of surplus, the government sector will enter a slight deficit in 2021. The CNB estimates that the general government budget ended 2019 in a surplus of 0.6% of GDP. This year, the surplus will drop to 0.3% of GDP, and in 2021 the government sector will post a slight deficit of 0.1% of GDP (see Table II.2.4). The gradual worsening of the government sector's performance will be caused mainly by the government's generous spending policy, which is being implemented through an increase in social transfers and solid growth in compensation of public sector employees and other current expenditure. Continuing higher-than-usual growth in old-age pensions[16] and an increase in parental allowance will also be reflected in rapid growth in social transfers this year.[17] The government's expansionary spending policy will be partly funded by newly approved tax measures. As of this year, general government revenues have been boosted by an increase in excise duty on cigarettes and alcohol, restrictions on the exemption for

Table II.2.4 Fiscal forecast

In 2021, the government sector will enter a slight deficit and the government debt-to-GDP ratio will continue to fall

(% of nominal GDP)

	2018 actual	2019 exp. outcome	2020 forecast	2021 forecast
Government revenue	41.8	42.0	42.2	42.1
Government expenditure	40.7	41.4	41.9	42.1
of which: interest payments	0.8	0.7	0.7	0.6
GOVERNMENT BUDGET BALANCE	1.1	0.6	0.3	-0.1
of which:				
primary balance[a)]	1.8	1.3	0.9	0.6
one-off measures[b)]	0.2	0.2	0.2	0.2
ADJUSTED BUDGET BALANCE[c)]	0.9	0.4	0.0	-0.2
Cyclical component (disaggregated method)[d)]	0.6	0.5	0.1	0.0
Structural balance (disaggregated method)[d)]	0.3	-0.1	-0.1	-0.3
Fiscal stance in pp (disaggregated method)[e)]	-0.8	-0.4	0.0	-0.2
Cyclical component (aggregated method)[d)]	0.1	0.0	-0.1	0.0
Structural balance (aggregated method)[d)]	0.8	0.4	0.1	-0.2
Fiscal stance in pp (aggregated method)[e)]	-0.4	-0.4	-0.3	-0.4
GOVERNMENT DEBT	32.6	30.9	29.4	28.2

a) government budget balance minus interest payments

b) This item consists of expected revenue from primary sales of emission permits, expenditure on the (New) Green Savings Programme, guarantees and revenue from the sale of frequency bands to mobile operators.

c) adjusted for one-off measures; CNB estimate

d) CNB estimate; the disaggregated method is based on the evolution of the individual tax bases in the business cycle; the aggregated method defines the position of the cycle on the basis of the output gap only.

e) year-on-year change in structural balance

14 The sales of ČEZ's foreign assets and the revenue from auctions of 5G frequencies are included in the forecast for this year, but may be delayed.

15 Domestic interest rates are the second-highest among developed nations, and the calming of the financial market situation is making investment in koruna assets very attractive for non-residents. Acting against this, however, is the limited offer of government bonds and the (un)willingness of banks (given the existing limits on exposures to customers) to accept additional short-term koruna deposits from non-residents.

16 In 2019, the flat-rate component of pensions was increased from 9% to 10% of the average wage and senior citizens aged over 85 received an extra CZK 1,000 a month. This increased pension spending by 0.3% of GDP. In January 2020, pensions were raised again: the average old-age pension went up by CZK 900 (increasing pension spending by some 0.1% of GDP).

17 With effect from 1 January 2020, the total parental allowance was increased from CZK 220,000 to CZK 300,000, which means an increase in expenditure on social benefits of approximately 0.1% of GDP.

winnings in games of chance from income tax, an increase in tax rates on lotteries and gambling,[18] a change in the method of the creation and tax deductibility of technical reserves of insurance companies and, as from 1 May 2020, by the launch of the third and fourth phases of ESR.[19] A further hike in excise duty on cigarettes is expected in January 2021.

Fiscal policy will be near neutral in its effect this year and the next. A slightly positive and only slightly negative fiscal impulse (see Table II.2.5) this year and next year respectively reflects the fact that the impacts of the discretionary fiscal measures included in the forecast virtually offset each other. In addition to the discretionary fiscal measures approved, increased growth in the non-wage component of government consumption is contributing to growth in the share of total government expenditure in GDP in the forecast.

The general government balance will also worsen in structural terms, but the ratio of government debt to GDP will decrease further. Despite the expected general government structural deficits, the medium-term objective – namely a structural deficit of 0.75% of GDP from 2020 – will continue to be met at the forecast horizon. Government debt will gradually drop to 28.2% of GDP in 2021, due to nominal GDP growth. In contrast, the nominal government debt will increase slightly, mainly because of gradually worsening government sector performance.

Table II.2.5 Fiscal impulse

Fiscal policy will be near neutral in its effect this year and the next

(contributions to GDP growth in percentage points)

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

18 These proposed tax changes form part of a “rate package”. The most important change in terms of budgetary impact is the increase in excise duty on cigarettes (0.13% of GDP).

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

II.3 COMPARISON WITH THE PREVIOUS FORECAST

The changes by comparison with the previous forecast stem mainly from a revision of the fundamental domestic inflation pressures. These, coupled with changes to indirect taxes and a higher outlook for administered prices, push inflation higher. The environment of longer-running and more marked price growth will be reflected in mildly faster wage growth. Following a stronger appreciation at the beginning of this year, the koruna will strengthen at an imperceptibly slower pace. Consistent with the new forecast is a similar domestic interest rate path as in the previous forecast. A decrease in uncertainties abroad is reflected in a shift in foreign interest rates to less negative levels and in a higher oil price outlook.

As regards the external assumptions of the forecast, the 3M EURIBOR outlook is less negative. The outlook is higher mainly in the longer term (see Chart II.3.1). The change reflects a shift in expectations of the financial market, which no longer expects the ECB to ease monetary policy further, as news from the euro area economy indicates that a cyclical trough has been reached. The outlook for GDP growth in the effective euro area in the coming quarters has increased slightly compared with the previous forecast, reflecting rather less pessimistic developments in Germany, France and Spain. The expected oil price path has changed quite significantly upwards. This is reflected in higher growth of the energy component of industrial producer prices in the coming quarters. By contrast, their core component has been revised downwards due to the values observed at the end of last year. Overall, the outlook for foreign producer prices is slightly higher than in the previous forecast this year, but lower next year. The exchange rate of the euro against the dollar will appreciate somewhat faster initially, but more slowly as from the second half of this year.

The forecast for domestic economic growth in 2020 has been revised down imperceptibly (see Chart II.3.2). GDP growth in the second half of last year was slightly lower than in the previous forecast, owing to smaller contributions from net exports and household consumption. The lower-than-expected contributions of these two demand components will remain in the outlook for this year. The lower contributions of net exports will be related mainly to the stronger koruna. By contrast, faster government consumption growth will foster higher GDP growth compared with the previous forecast, mainly as a result of stronger growth in non-wage expenditure. In 2021, the economic growth outlook remains almost unchanged from the previous forecast.

Wage growth is lower in the first half of this year, after which it will be slightly higher (see Chart II.3.3). In 2019 H2, wage growth was slower than expected in the previous forecast. This was due mainly to wage growth in industry and partially in the services sector. Despite a further large increase in the minimum wage at the start of this year,[20] the forecast for market wage growth in the first half of this year is slightly lower, owing to the observed growth at the end of last year. Wage growth will be affected in the opposite direction by higher expected inflation, whose outlook remains well above the target for longer than in the previous forecast. As from the end of 2020, wage growth will

20 Relative to the previous forecast, the impact of the increase in the minimum wage on wage growth has increased from 0.15 to 0.2 percentage point.

Chart II.3.1 Change in the 3M EURIBOR forecast

The euro area has probably reached a cyclical trough and the financial market no longer expects the ECB to ease monetary policy further; the interest rate outlook is thus higher but remains deeply negative

(percentages; differences in percentage points)

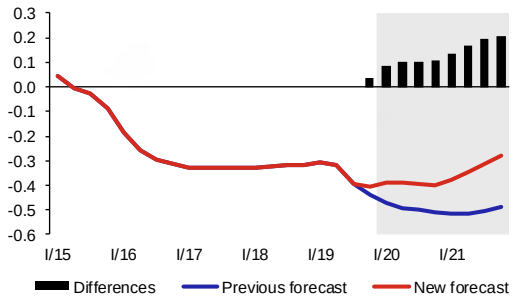


Chart II.3.2 Change in the GDP forecast

The forecast for domestic economic growth is imperceptibly lower this year; in 2021 the changes are negligible

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

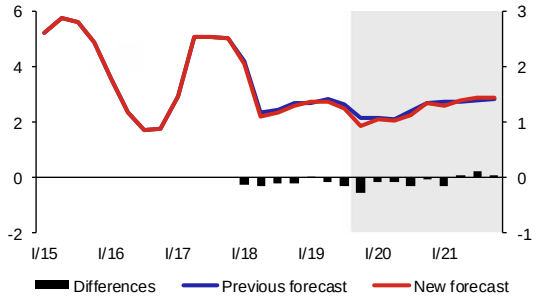
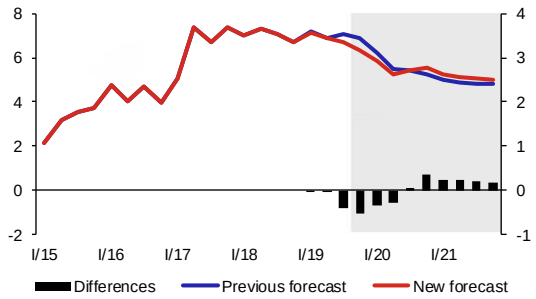


Chart II.3.3 Change in the forecast for nominal wages in market sectors

The lower wage forecast at the beginning of the forecast reflects the observed data; the forecast is slightly higher in the longer term

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



thus be slightly higher compared with the previous forecast. These factors will lead to slightly stronger domestic cost pressures compared with the previous forecast.

The inflation outlook is higher due to stronger domestic price pressures, faster growth in administered prices and new tax changes. At the end of last year, headline inflation was higher than assumed by the previous forecast. This was due to much faster-than-expected growth in food prices, higher core inflation and a smaller decline in fuel prices. In addition to short-term cost factors (and the usual price volatility), a stronger effect of domestic fundamentals – including demand pressures and profit margins – than in the previous forecast can be identified in the first two inflation components above. These initially stronger domestic fundamental inflation pressures will be further bolstered at the start of this year by a newly incorporated increase in parental allowance, which will further stimulate growth in domestic demand, and by a higher rise in the minimum wage. This will be reflected mainly in continued faster food price inflation and slightly higher core inflation than in the previous outlooks. In the longer term, the higher growth in domestic costs will be driven by slightly faster wage growth. The contribution of import prices to total cost growth will remain roughly the same as in the previous forecast, as the initially stronger koruna will be roughly offset by higher oil prices. The outlook for administered price inflation is slightly higher this year due to a more marked increase in electricity prices and a less pronounced drop in gas prices. The forecast for 2021 incorporates a new assumption of a further increase in excise duty on cigarettes with an estimated impact on headline inflation of 0.25 percentage point (and no impact on monetary policy-relevant inflation). Overall, the headline inflation forecast is thus higher this year and the next (see Chart II.3.4).

The koruna is stronger at the start of this year, but will conversely appreciate more gradually in subsequent quarters (see Chart II.3.5). The stronger exchange rate of the koruna against the euro in 2020 Q1 relative to the previous forecast reflects its path at the end of last year and in the first half of January.[21] The koruna will subsequently appreciate rather more gradually than in the previous outlook and remain virtually stable for the rest of this year. This will mainly reflect a less positive interest rate differential vis-à-vis other countries, primarily as a result of a slightly higher path of expected interest rates in the euro area. Worse price competitiveness of domestic exporters, due to lower growth in foreign core prices, also fosters a weaker koruna in the forecast.

In the new forecast, the path of domestic interest rates is rather lower initially, but slightly higher next year (see Chart II.3.6). Slightly lower rates than in the previous forecast are initially fostered mainly by the initial state. It includes the effect of lower interest rates and more subdued cost growth in the form of slower wage growth and a slightly stronger koruna at the end of last year. The shift of the short-term koruna exchange rate

21 The forecast also incorporates the path of the koruna exchange rate observed over the past year. Nonetheless, the effect of global sentiment on the exchange rate has undergone a downward expert adjustment at the start of the horizon compared with the previous forecast.

Chart II.3.4 Change in the headline inflation forecast

The headline inflation forecast is higher due to stronger domestic price pressures, new tax changes and faster growth in administered prices

(year on year in %; differences in percentage points – right-hand scale)

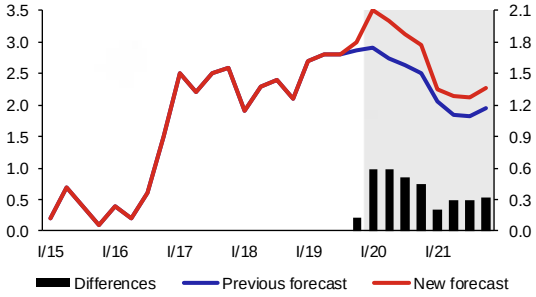


Chart II.3.5 Change in the exchange rate forecast

The stronger exchange rate of the koruna against the euro at the start of this year is due to its observed path; the koruna will subsequently appreciate more gradually than in the previous forecast

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

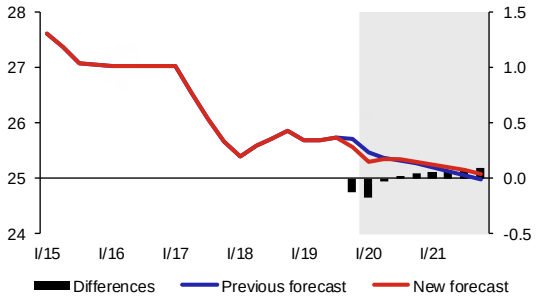
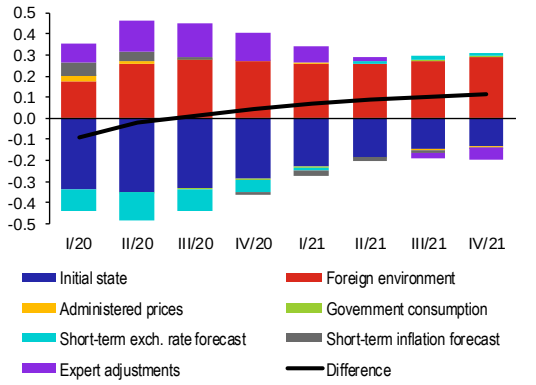


Chart II.3.6 Decomposition of changes in the interest rate forecast

The interest rate outlook is essentially unchanged, with the effects of the individual factors largely offsetting each other

(3M PRIBOR; percentage points)



forecast to a stronger level has the same effect. By contrast, developments abroad contribute to a higher interest rate path than in the previous forecast over the entire forecast horizon. They primarily reflect less negative 3M EURIBOR interest rates, but also a higher oil price outlook. Expert adjustments also act towards higher rates, especially this year. They include a newly incorporated increase in parental allowance and a slightly larger impact of minimum wage growth from the start of this year than assumed by the previous forecast. An upward revision of the short-term inflation forecast, especially in the case of food prices, also fosters slightly higher rates in the quarters ahead.

II.4 RISKS AND UNCERTAINTIES OF THE FORECAST

The Bank Board assessed the balance of risks to the inflation forecast at the monetary policy horizon as being broadly balanced. The future exchange rate path is an anti-inflationary risk to the forecast. The external assumptions of the forecast continue to include the risk of a potential slower recovery of external demand growth. Potential higher inflation due to stronger domestic inflation pressures is an upside risk to the forecast.

II.4.1 Risks perceived by the CNB

The external risks and uncertainties developments have diminished recently. However, the recovery in external demand growth may be more gradual than assumed by the forecast despite the averted threat of a hard Brexit and the signing of a phase-one trade deal between the USA and China.[22]

The exchange rate path is thus a major risk to the forecast. The exchange rate stayed around CZK 25.7 to the euro for almost all of last year. This was due to global factors (negative sentiment) on financial markets coupled with declining external economic and price growth.[23] In light of the above developments, the unexpectedly sharp appreciation of the koruna at the end of last year and in the first half of January is interpreted as a short-term deviation in the baseline scenario of the forecast. The forecast assumption that global factors will fade only gradually in the quarters ahead is thus unchanged. Nonetheless, this assumption may not materialise.

An exchange rate sensitivity scenario assumes a rapid fade-out of global factors. It thus offers a fundamentally different interpretation of the recent exchange rate path than the baseline scenario, with much greater appreciation pressure on the koruna in the quarters ahead. At the same time, this scenario sets the exchange rate at CZK 25.1 to the euro for 2020 Q1, consistent with the values observed in the first half of January. All other assumptions, including external ones, are the same as in the baseline scenario of the forecast.

The stronger appreciation pressure leads to a significantly lower interest rate path, and hence only slightly lower inflation, in the scenario. Despite the fundamentally higher appreciation pressure in the sensitivity scenario, the koruna stabilises only just above CZK 25 to the euro in the quarters ahead, as it is prevented from firming further[24] by significantly lower (and then markedly falling) interest rates than in the baseline scenario. Specifically, this means that market interest rates remain broadly stable in 2020 Q1 in the sensitivity scenario, whereas growth in interest rates is consistent with the baseline scenario.

The significant pressure on the koruna stems from the interest rate differential and continuing real economic

22 The risk of a longer and deeper demand slowdown in the Czech Republic's main trading partner countries was captured in a scenario in IR III/2019.

23 Starting with IR II/2019, this trend is interpreted as an increase in the persistent component of the risk premium in the exchange rate equation and is thus incorporated into the exchange rate forecast itself.

24 In this scenario, as in the forecast proper, further appreciation of the koruna is also dampened by only weak economic and price growth abroad.

convergence. These factors suddenly stop being hindered by negative global sentiment. In such a situation, the potential strong appreciation of the koruna could jeopardise the fulfilment of the inflation target at the monetary policy horizon without an interest rate response. In the sensitivity scenario, the central bank is aware of this and preventively eliminates a potential excessive tightening of the overall monetary conditions by cutting rates.

As a result, the koruna is only slightly stronger in the sensitivity scenario than in the baseline scenario. It thus dampens import price growth slightly more strongly and leads to somewhat lower inflation pressures overall relative to the baseline scenario. Inflation is therefore only about 0.2 percentage point lower at the one-year horizon in the sensitivity scenario than in the forecast. The impacts on real economic growth are negligible overall. On the one hand, the somewhat stronger koruna leads to slightly higher growth in household consumption, but on the other it worsens exporters' price competitiveness a little compared with the baseline scenario. The simulation results, expressed as deviations from the forecast, are given in Table II.4.1.

The Bank Board assessed the balance of risks to the inflation forecast at the monetary policy horizon as being broadly balanced. The future exchange rate path is an anti-inflationary risk to the forecast. The external assumptions of the forecast continue to include the risk of a potential slower recovery of external demand growth. Potential higher inflation due to stronger domestic inflation pressures is an upside risk to the forecast.

II.4.2 Risks signalled by other entities' forecasts

Inflation expectations in the economy continue to be anchored by the CNB's 2% target. Inflation forecasted by financial market analysts is currently slightly above the CNB's 2% target at the one-year horizon. At the three-year horizon, it is at the target. According to the analysts, inflation will continue to fluctuate close to the upper boundary of the tolerance band around the target in the next few months. However, the domestic inflation pressures will gradually ease and headline inflation will slow, due also to lower import price growth. The inflation expectations of business managers are slightly above the central bank's target at the one-year horizon. At the three-year horizon, they are well above the target (see Table II.4.2).

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

The analysts estimate that the rate of growth of the Czech economy will slow to 2% this year (see Table II.4.2). According to the survey results, GDP growth will continue to be driven most of all by household consumption. The rate of cyclical slowdown

Table II.4.1 Exchange rate sensitivity scenario

Rapid fade-out of negative global sentiment leads to significantly lower interest rates and slightly lower inflation; as a result, the koruna is only slightly stronger

(deviations from baseline scenario paths)

	CPI inflation (in pp)	3M PRIBOR (in pp)	GDP growth (in pp)	Nominal exchange rate (CZK/EUR)
I/20	0.0	-0.5	0.0	-0.2
II/20	-0.1	-0.7	0.0	-0.3
III/20	-0.2	-0.7	0.0	-0.3
IV/20	-0.2	-0.5	0.0	-0.2
I/21	-0.2	-0.3	-0.1	-0.2
II/21	-0.2	-0.2	0.0	-0.1
III/21	-0.1	-0.1	0.0	-0.1
IV/21	0.0	0.0	0.0	-0.1

Table II.4.2 Expected indicators of FMIE, CF and corporations

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

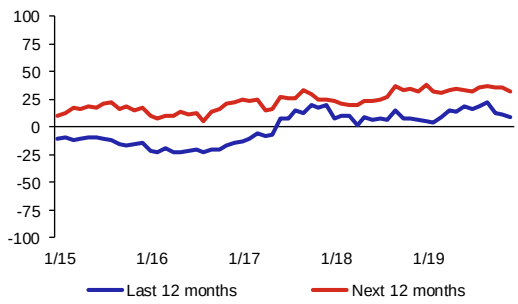
(at 1Y; annual percentage changes unless otherwise indicated)

	9/19	10/19	11/19	12/19	1/20
FMIE:					
CPI	2.2	2.3	2.3	2.3	2.2
CPI, 3Y horizon	2.0	2.0	2.0	2.0	2.0
Real GDP in 2019	2.5	2.6	2.6	2.5	
Real GDP in 2020	2.3	2.3	2.2	2.1	2.2
Nominal wages in 2019	6.9	6.9	7.0	7.0	
Nominal wages in 2020	5.4	5.5	5.5	5.7	5.9
CZK/EUR exchange rate (level)	25.5	25.5	25.4	25.4	25.1
2W repo rate (in per cent)	1.9	2.0	2.0	2.0	2.1
1Y PRIBOR (in per cent)	2.1	2.2	2.2	2.3	2.3
Corporations:					
CPI	2.2			2.2	
CPI, 3Y horizon	2.6			2.6	
CF:					
Real GDP in 2019	2.5	2.6	2.6	2.5	
Real GDP in 2020	2.3	2.2	2.2	2.1	2.2
Nominal wages in 2019	6.9	6.8	6.9	7.2	
Nominal wages in 2020	5.4	5.5	5.6	5.9	5.8
CZK/EUR exchange rate (level)	25.5	25.3	25.4	25.2	25.4
3M PRIBOR (in per cent)	2.1	2.1	2.1	2.2	2.2

Chart II.4.1 Perceived and expected inflation

Perceived and expected inflation fell slightly from the perspective of households

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



of the Czech economy will largely depend on external demand (especially in Germany). According to the analysts, labour shortages persist mainly in sectors oriented towards satisfying domestic demand, i.e. primarily in services and construction. However, the economic slowdown will be accompanied by a weakening of demand for labour, a gradual cooling of the overheated labour market and subsequently a drop in nominal wage growth. The analysts believe that the current rate of growth in labour costs is unsustainable for firms in the long run.

The analysts on average forecast broad stability of both the koruna and interest rates at the one-year horizon. The analysts perceive relatively high sensitivity of the koruna to sentiment on foreign markets. According to the analysts, sentiment improved following the UK parliamentary elections and after progress was made in the trade talks between the USA and China. In the analysts' view, however, appreciation of the koruna, which would be consistent with the strongly positive interest rate differential and positive medium-term macroeconomic fundamentals, is offset by other factors. They include the currently slowing growth of the domestic economy, the worsening trade balance and outflows of dividends abroad. The decline in the perceived uncertainties was reflected in a drop in the range between the maximum and minimum values of the koruna at the one-year horizon. Despite this, the range remains relatively wide.[25] Almost all the analysts in the January FMIE survey were expecting the CNB Bank Board to leave key interest rates unchanged at the February meeting. Only one analyst was expecting them to be raised by 0.25 percentage point. Their average estimate of the 2W repo rate at the one-year horizon was 2.1%. Several opposing factors are reflected in the analysts' outlooks for key interest rates. On the one hand, inflation remains close to the upper boundary of the tolerance band, but on the other hand, the domestic economy and external demand are slowing and the inflation outlook in the euro area remains low.

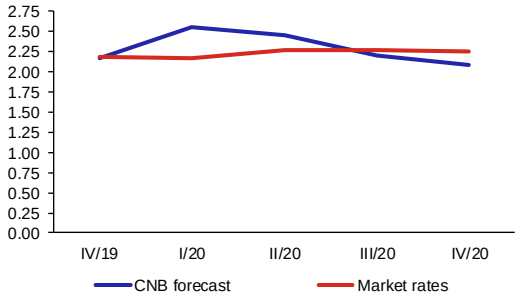
The analysts predict similar GDP growth and inflation as the CNB forecast, with almost the same monetary conditions structure. Like the CNB forecast, the analysts predict broad stability of the koruna on average. Their one-year outlook for interest rates is almost the same as the central bank's forecast (see Table II.4.2). The analysts' wage expectations do not differ much from the CNB's prediction either.

The current market outlook for 3M rates implies broad stability over the one-year horizon. Consistent with the forecast is a rise in domestic market interest rates initially, followed by a decline in 2020 H2. The market outlook until mid-2020 is thus slightly below the interest rates contained in the CNB forecast (see Chart II.4.2).

Chart II.4.2 FRA rates versus the CNB forecast

The market outlook for interest rates is broadly stable; until mid-2020 it is thus slightly below the rates contained in the CNB forecast, consistent with which is a rise in rates in the same period

(percentages)



Note: Market rates represent for 2019 Q4 and 2020 Q1 the 3M PRIBOR and for 2020 Q2–2020 Q4 the average values of the FRA 3*6, 6*9 and 9*12 rates for the last 10 trading days as of 24 January 2020.

25 At the one-year horizon, the range was CZK 24.3–26.1 to the euro in the January FMIE survey and CZK 24.5–26.3 to the euro in the CF survey.

III. CURRENT ECONOMIC DEVELOPMENTS

III.1 PRICE DEVELOPMENTS

Consumer prices increased by 3% on average in 2019 Q4. Observed inflation in 2019 was above the forecast published in summer 2018, a retrospective assessment of which is relevant for evaluating the current fulfilment of the inflation target. The deviation from the forecast increased during the year. With the benefit of hindsight, the CNB's monetary policy in the past period can be assessed as having been insufficiently tight as regards the fulfilment of the inflation target. Inflation rose slightly above the upper boundary of the tolerance band around the CNB's target at the end of last year. The accelerating overall growth in consumer prices in recent months continued to be due mainly to core inflation, although faster growth in administered prices and food prices also played a big role. Within core inflation, non-tradables inflation slowed somewhat, while growth in tradables prices picked up. Growth in property prices moderated further during 2019, but remained high. The decline in import prices deepened at the end of the year. This was due mainly to a decline in oil prices. Agricultural producer prices also recorded a decrease, with crop product prices falling due to a solid grain harvest. Conversely, industrial producer price inflation went up at the end of last year after a lengthy decline. Construction work prices continued to grow very quickly. Prices of services for the business sector also continued to show robust growth due to strong demand.

III.1.1 Fulfilment of the inflation target

According to the forecast published in Inflation Report III/2018, inflation was expected to stay above the target over the entire horizon and return to it at the end of 2019 (see Chart III.1.1).[26] A brief increase in consumer price inflation before the start of 2019 was expected to reflect persisting major domestic inflation pressures associated with a tight labour market situation and peaking wage growth. Growth in import prices was expected to act in the same direction, due to depreciation of the koruna amid buoyant external price inflation. Subsequently, the inflation pressures from the domestic economy were expected to weaken gradually owing to gradually slackening economic growth and wage growth. Continued tightening of monetary conditions and renewed appreciation of the koruna were expected to return inflation to the 2% target.

Observed inflation was slightly below the forecast initially and well above it in 2019. The gap between actual inflation and the forecast widened during 2019, reaching 1 percentage point in Q4 (see Table III.1.1). This was due mainly to a surprisingly sharp rise in administered prices and a weaker koruna, reflected above all in higher-than-expected core inflation. Food prices also increased faster than expected.

Turning to external factors, the evolution of producer prices and economic activity in the effective euro area deviated from the assumptions of the forecast (see Table III.1.2). Compared with the forecast assumptions, external producer price inflation was

Chart III.1.1 Forecast versus actual headline inflation

The positive deviation of actual inflation from the forecast increased during 2019

(year on year in %)

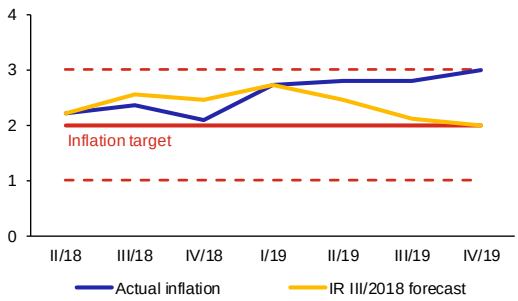


Table III.1.1 Fulfilment of the inflation forecast

Administered price inflation, food price inflation and core inflation all exceeded expectations

(annual percentage changes; contributions in percentage points)

	IR III/2018 forecast	2019 Q4 outturn	Contribution to total difference[c)]
CONSUMER PRICES	2.0	3.0	1.0
of which:			
administered prices	1.5	5.3	0.6
first-round impacts of changes to indirect taxes[a)]	0.0	0.0	0.0
core inflation[b)]	2.1	2.6	0.3
food prices[b)]	2.3	3.5	0.3
fuel prices[b)]	0.0	-3.1	-0.1

a) impact on headline inflation except administered prices
b) excluding the first-round effects of changes to indirect taxes
c) Figures may not add up owing to rounding.

26 This section of the Inflation Report briefly analyses the contribution of the CNB's monetary policy to this situation. In order to assess the effect of monetary policy on the fulfilment of the inflation target it is appropriate to analyse retrospectively the forecasts and the Bank Board's decisions based thereon in the past. To assess the fulfilment of the target in 2019 Q4, we have to examine – in view of the monetary policy transmission lag – the period from April to December 2018 (the "reference period"). For the sake of clarity, the analysis of the fulfilment of the forecasts in this section is limited to a comparison of Inflation Report III/2018 with subsequent inflation.

slightly higher at first, but appreciably lower from mid-2019 on. The developments at the end of the horizon reflected weaker cost pressures due to a lower Brent crude oil price and lower demand pressures stemming from much slower GDP growth. However, they were initially outweighed by a distinctly weaker euro against the dollar. The forecast that foreign interest rates would remain negative materialised, but the rates were actually even lower than forecasted as a result of further monetary policy accommodation by the ECB in the shape of an extension of the asset purchase programme.[27] Overall, according to a simulation performed using the CNB's model, observed external developments fostered more gradual appreciation of the koruna and slightly lower domestic interest rates compared with the forecast, amid a roughly neutral impact on inflation.

Observed domestic real GDP growth was weaker than forecasted. This was due to lower-than-expected growth in household consumption and investment. Conversely, growth in government consumption surpassed expectations, reflecting a surprisingly sharp rise in wage expenses and partly also non-wage expenses in the government sector. Mounting uncertainty in world trade and slowing growth in external demand were reflected in significantly lower-than-expected export and import growth. The comparison with the forecast is substantially affected by data revisions, especially in the case of household consumption growth and wage growth. The latter remained broadly stable and was thus lower than forecasted until the start of 2019. Later, by contrast, it was slightly higher due to long-running labour market tightness amid continued growth in labour efficiency.

The structure of the domestic monetary conditions deviated from the forecast. The exchange rate remained at a weaker level due to negative global sentiment and later also a decreasing outlook for external economic and price growth. Domestic monetary policy reflected this with a rather faster increase in interest rates than forecasted (see Table III.1.3). The monetary conditions were thus easier than expected in the exchange rate component at the end of the period under review, whereas the interest rate component moved towards a neutral stance more quickly than forecasted.

The monetary policy pursued by the CNB between April and December 2018 can be assessed as having been insufficiently tight as regards the fulfilment of the inflation target. In addition to the forecast, an assessment of the risks associated with the forecast is important for the Bank Board's decisions on monetary policy settings. In the period under review, the Bank Board assessed the risks to the forecast in most cases as balanced and twice as inflationary. Interest rates were raised four times in this period. Observed inflation was close to the upper boundary of the tolerance band around the target in 2019 Q4. From this perspective, therefore, it can be said that monetary policy should have been tighter in the said period,

Table III.1.2 Fulfilment of the external assumptions

External economic activity grew appreciably more slowly than forecasted

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

		III/18	IV/18	I/19	II/19	III/19	IV/19
GDP in euro area[a), b), c)]	p	2.2	2.0	2.1	2.1	2.0	2.0
	o	1.8	1.4	1.5	1.0	1.1	-
PPI in euro area[b), c)]	p	4.0	3.3	2.5	1.7	1.4	1.4
	o	4.2	3.9	3.0	2.0	0.2	-
3M EURIBOR (percentages)	p	-0.3	-0.3	-0.3	-0.3	-0.2	-0.2
	o	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4
USD/EUR exchange rate (levels)	p	1.17	1.17	1.19	1.20	1.20	1.20
	o	1.16	1.14	1.14	1.12	1.11	1.11
Brent crude oil price (USD/barrel)	p	77.8	77.1	76.1	74.9	73.8	72.7
	o	75.8	68.6	63.8	68.5	62.0	62.4

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

Table III.1.3 Fulfilment of the forecast for key variables

The monetary conditions were easier in the exchange rate component and tighter in the interest rate component

(p – prediction, o – outturn)

		III/18	IV/18	I/19	II/19	III/19	IV/19
Consumer price index (annual perc. changes)	p	2.5	2.4	2.7	2.5	2.1	2.0
	o	2.4	2.1	2.7	2.8	2.8	3.0
3M PRIBOR (percentages)	p	1.6	1.8	1.8	1.7	1.7	1.8
	o	1.4	1.9	2.0	2.1	2.2	2.2
CZK/EUR exchange rate (levels)	p	25.8	25.3	24.8	24.6	24.5	24.3
	o	25.7	25.9	25.7	25.7	25.7	25.6
Real GDP[a)] (annual perc. changes)	p	2.9	3.3	3.7	3.4	3.3	3.1
	o	2.4	2.6	2.7	2.8	2.5	-
Nominal wages[b)] (annual perc. changes)	p	8.7	8.6	7.7	6.6	6.5	6.3
	o	7.1	6.7	7.1	6.9	6.7	-

a) seasonally adjusted
b) in market sectors

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

even though the increase in rates was actually more pronounced than the summer 2018 forecast had foreseen.

III.1.2 Consumer prices and property prices

Inflation rose to 3% on average in Q4 and moved above the upper boundary of the tolerance band during the quarter (see Chart III.1.2). Core inflation was still the biggest contributor to the continued high price growth, but the contributions of administered prices and food prices also increased. Monetary policy-relevant inflation was slightly above headline inflation in Q4.[28]

Core inflation remained elevated owing to the pass-through of strong fundamental price pressures. This was due to the contrary effects of falling non-tradables inflation and rising tradables inflation in Q4 (see Chart III.1.3). The gradual moderation of non-tradables inflation reflected a deepening decline in internet connection prices. Gradually falling growth in imputed rents, responding to weakening growth in property prices, acted in the same direction. Besides this, growth in prices of other housing-related services[29] remained strong. Growth in prices of recreational and cultural services accelerated. Following a downturn in the previous two quarters, growth in tradables prices started to increase gradually at the end of 2019. This was fostered by both a halt in the decline in prices of clothing and footwear and a smaller drop in prices of leisure-related goods. At the same time, prices of household equipment grew more strongly.

The high administered price inflation increased further at the end of 2019 (see Chart III.1.4). This was due mainly to a further increase in the already dominant contribution of electricity prices. To a lesser extent, it was also fostered by stronger growth in prices in restaurants and renewed growth in administered prices in transport. On the other hand, growth in prices of heat and gas for households slowed in December.

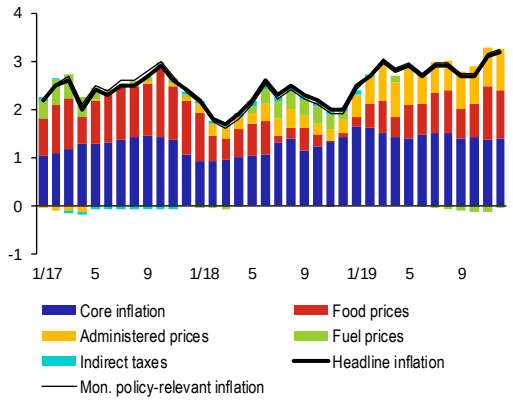
The decline in fuel prices initially deepened in Q4 but suddenly almost halted in December (see Chart III.1.4). This was due to the dissipation of the sharp year-on-year drop in koruna oil prices, which, however, switched to strong growth at the end of 2019 due to rising global oil prices.

Food price inflation initially rose significantly in Q4 but slowed slightly in December (see Chart III.1.4). The increase in food price inflation in Q4 was due most of all to renewed growth in fruit prices and, to a lesser extent, to gradually intensifying growth in meat prices. A decrease in the growth contribution of vegetable prices had the opposite effect. Food price inflation moderated slightly in December compared with November, due mainly to a further moderation in vegetable price growth and slower growth in prices of bread products. In addition to cost effects, the upswing in food price inflation in recent months is probably

Chart III.1.2 Structure of inflation

Inflation rose slightly above 3% at the end of last year, with all components except fuel prices contributing to the price growth

(annual percentage changes; contributions in percentage points)



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

Chart III.1.3 Core inflation

Core inflation remained elevated, amid contrary movements in non-tradables and tradables inflation

(annual percentage changes)

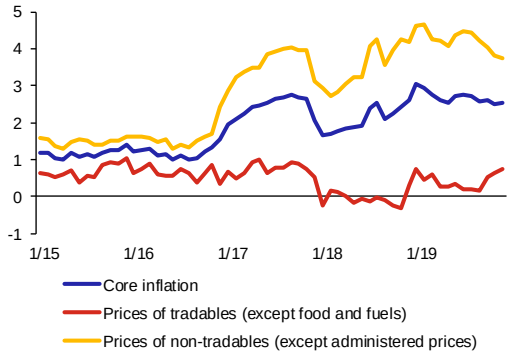
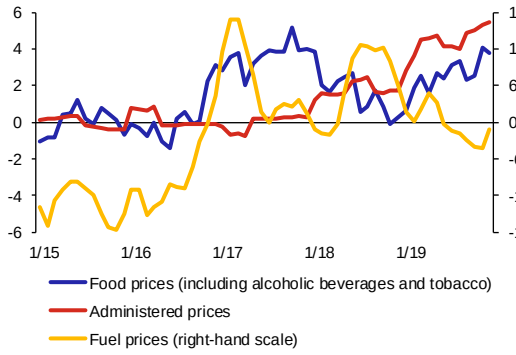


Chart III.1.4 Food prices, administered prices and fuel prices

Administered price inflation increased further during Q4, while food price inflation also picked up at the end of the year

(annual percentage changes)



28 The first-round effect of changes to indirect taxes was slightly negative in Q4, due to a reduction in VAT in public transport introduced in February 2019.

29 These include, for example, house maintenance and improvement services.

linked with persisting labour market tightness and related demand pressures (see Box 1).

BOX 1 What drives food prices?

Consumer prices reflect both costs and demand, while food price inflation is shaped mainly by supply factors. This is evidenced by a high correlation between growth in consumer prices, food producer prices and agricultural producer prices (see Chart 1). Going beyond this co-movement, however, cyclical demand pressures play a role alongside costs. This may explain the recent slight loosening of the correlation between consumer prices of food and agricultural producer prices. This box tries to answer the question of how strong an effect cyclical pressures have on food prices for consumers.

The margin between consumer and producer food prices started to increase after 2016 due to growing demand. This trend can be observed for numerous food commodities based on CZSO data. These data can be used to determine the prices of selected food commodities at each stage of the product vertical. It is then possible to calculate the margins between consumer prices and producer prices in the food industry or agricultural producer prices in koruna terms. Both margins started to increase significantly for most monitored items around 2016. They reached their highest values in the period under review last year. This suggests that the level of demand has recently had a truly significant effect on consumer food price inflation. These aspects are well illustrated by the example of pork (see Chart 2). Although per-kilogram producer prices dropped markedly in 2018, the price of pork in shops increased slightly. The margin between consumer and producer prices thus rose significantly, probably reflecting strong demand. The situation changed in 2019. Prices of pork around the world rose sharply due to African swine fever in China, and the Czech market was no exception. Although this cost pressure resulted in a decline in the margin between consumer prices and producer prices, the decline was smaller than the increase in costs, and this margin thus remained elevated. This indicates that traders managed to pass on part of the growing costs to consumers.

This analysis of the margins between consumer prices and food producer prices uses a trend-cycle VAR model.[30] The model was applied to the aggregate HICP data since 2005, i.e. after the Czech Republic joined the EU, and explains the aggregate growth in agriculture producer prices, food producer prices, consumer food prices and food import prices.[31] The advantage of the trend-cycle model is that trends and cyclical components

Chart 1 (BOX) Food prices

Agricultural producer prices, food industry prices and consumer prices of food are significantly correlated

(annual percentage changes)

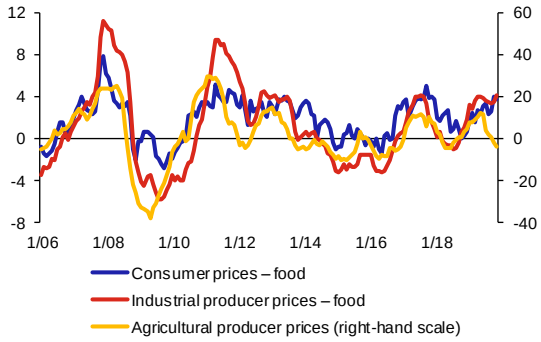


Chart 2 (BOX) Prices of pork in the product vertical

The margins between consumer prices and industrial/agricultural producer prices remain elevated

(CZK/kg)

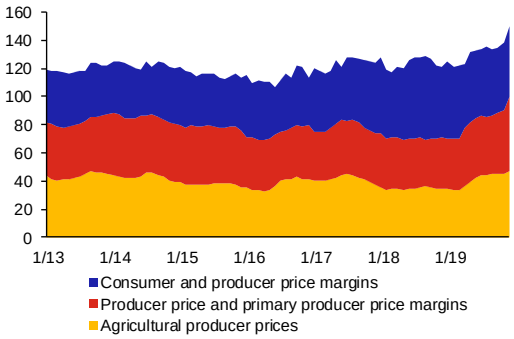
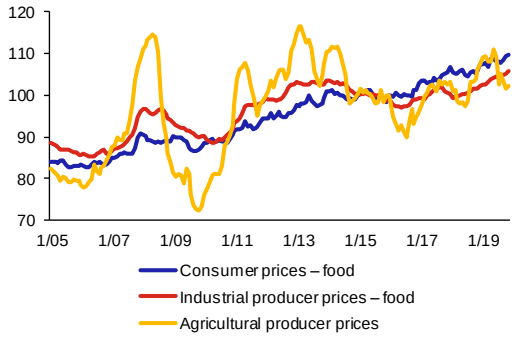


Chart 3 (BOX) Price categories in the food industry

Consumer food prices have long been rising faster than producer prices

(index; 2015 average = 100)



30 The general methodology of trend-cycle VAR models is described by Andrle and Brůha (2017): "Forecasting and Policy Analysis with Trend-Cycle Bayesian VARs", IMF and CNB, (https://michalandrle.weebly.com/uploads/1/3/9/2/13921270/tc_vars.pdf).

31 The above CZSO statistics illustrating the price margins at each level of product vertical expressed in CZK do not capture the entire consumer food basket and are only available since 2013. For the purposes of estimating the trend-cycle VAR model, we therefore work with aggregate indexes, for which longer time series are available. The change in these price indexes approximates only the change in margins and so – in contrast to the individual data – cannot be used to quantify the price margins in koruna terms.

are modelled separately. This is important, since consumer food prices have long been rising faster than producer prices (see Chart 3).[32] The model is extended to include LUCI, which serves as a measure of cyclical demand pressures. LUCI was chosen because it is a composite indicator of labour market tightness. A very tight labour market creates conditions for strong domestic demand. This indicator is available monthly and is constructed to be directly cyclical.[33]

The results of the analysis point to the presence of demand effects in the evolution of food prices. The above-mentioned trend-cycle VAR model allows one to construct a hypothetical consumer price index under neutral demand pressures. This hypothetical index thus adjusts food prices for domestic demand pressures (recessionary and expansionary). The deviation of the actual food price index from its hypothetical level (see Chart 4) then indicates the contribution of domestic demand to the level of consumer food prices. Slightly positive contributions of demand pressures in food prices can be identified in the run-up to the global economic crisis. Its onset meant a noticeable drop in demand, manifested in a narrowing of the gap between the food price index and its version adjusted for demand pressures in late 2008 and early 2009. The subsequent lengthy domestic recession dampened growth in food prices. With the onset of the growth phase of the economic cycle after 2015, the upward pressure on food prices began to increase gradually.

The contributions of demand to growth in consumer food prices currently remain positive. The positive contribution of demand pressures to food price inflation peaked in the final quarter of 2017. Until recently it was gradually shrinking, but it has increased again in recent months (see Chart 5). Food price inflation is thus currently being significantly influenced again by inflationary demand pressures in the domestic economy and is higher than would correspond to the growth in costs arising from changes in agricultural and food producer prices and food import prices. The above estimate of the demand pressures in food prices is broadly consistent with the CNB's conventional estimates of the output gap, despite being based on a different methodology and data. The results of this box therefore indirectly confirm that the output gap estimate is realistic.

Chart 4 (BOX) Food price index

Food prices have also significantly reflected demand pressures in recent years

(index; 2015 average = 100)

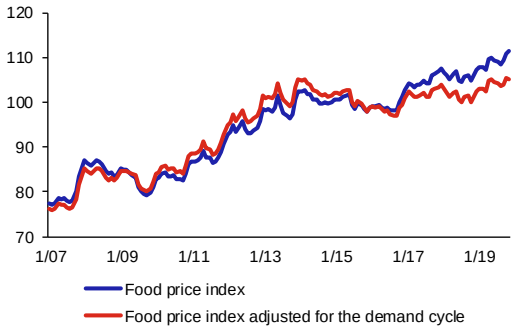
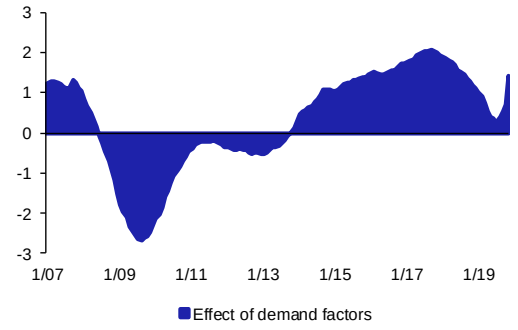


Chart 5 (BOX) Demand pressures affecting food price inflation

Despite having eased a little, demand pressures are continuing to push up food price inflation

(contribution in percentage points to annual food price inflation)

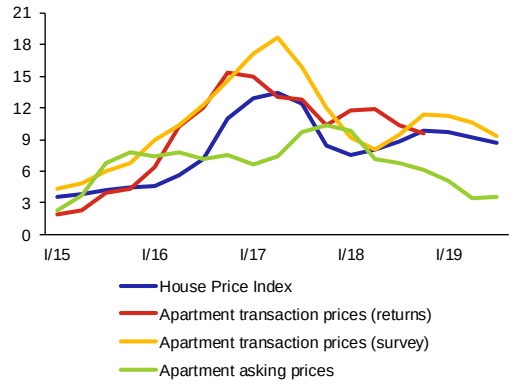


Growth in property prices remained brisk in 2019 despite a slight slowdown (see Chart III.1.5). Although growth in prices of apartments and houses gradually moderated in 2019, it stayed close to 9% in Q3. In addition to undersupply of apartments in cities, relatively low interest rates on loans for house purchase (mortgages), especially those with longer fixation periods, remain a major factor behind the still rapid growth in property

Chart III.1.5 Transaction and asking prices of housing

Growth in transaction and asking prices of apartments slowed further last year but remained brisk

(annual percentage changes)



32 This fact is common to the other converging economies of the Central European region and thus probably also reflects changing demand for various types of foods and general price convergence as the inhabitants of converging economies become more prosperous. However, this long-term income effect is not a subject of the analysis in this box. This box focuses on the cyclical effects of consumer demand.

33 The extended LUCI was presented in a box in IR IV/2019.

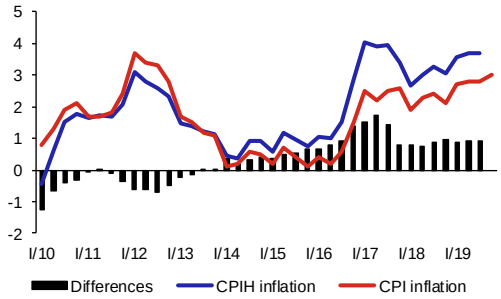
prices. In an environment of continued growth of the Czech economy, persisting labour market tightness and a related good financial situation of households, this has resulted in overvaluation of property prices in recent years. Only gradually decreasing price growth is also apparent in the market in older apartments in 2019.

Growth in the CPIH index was 0.9 percentage point higher than consumer inflation in 2019 Q3 (see Chart III.1.6). This was due to continued brisk – albeit gradually slowing – growth in property prices. Growth in the experimental CPIH, consisting of prices of both new and older property including land, stood at 3.7% in 2019 Q3 and so, like consumer inflation, remained at the level of the previous quarter.

Chart III.1.6 The experimental CPIH price index

Just like consumer prices, the CPIH index maintained the previous quarter's high growth momentum in Q3

(annual percentage changes)



III.1.3 Import prices and producer prices

The decline in import prices deepened further at the end of last year (see Chart III.1.7). Mineral fuels prices declined most markedly. In October, they were joined by a decline in growth in most prices of products and semi-finished products. Only prices of machinery and transport equipment rose at a moderate pace. The contributions of non-energy commodity prices and food prices remained insignificant. The decline in import prices reflected falling prices of industrial producers in the euro area, a year-on-year decline in oil prices and a slightly strengthening exchange rate of the koruna.

Industrial producer price inflation increased to 2% in December, following a previous lengthy decline (see Chart III.1.8). This rise was caused mainly by a renewed increase in the contribution of commodities and energy. Growth in electricity prices was joined at the end of the year by renewed growth in prices of coke and refinery products. In addition, the food industry maintained its stable positive contribution. The effect of prices in other manufacturing was slightly positive on average in Q4. It was driven up mainly by the furniture sector, while prices of transport equipment had the opposite effect. Price growth in the metal processing industry turned slightly negative.

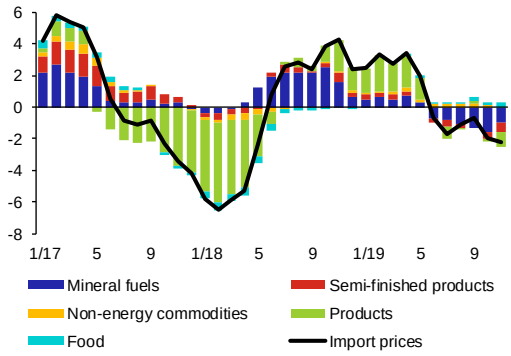
Agricultural producer prices began to decline year on year in Q4 (see Chart III.1.9). This was exclusively due to prices of crop products. These dropped sharply at the close of the year, despite having grown at a rate of over 15% in the first half of the year. Prices of cereals, which were affected by this year's favourable harvest in the Czech Republic and around the world, fell sharply. The rapid growth in prices of vegetables and potatoes also slowed, and sugar beet prices also fell significantly as a result of surpluses on the European sugar market. In contrast, prices in livestock production continued grow apace. In particular, prices of slaughter pigs kept rising, mainly due to a swine fever epidemic going on in a number of South-East Asian countries. Prices of milk and poultry also rose, while prices of other items mostly fell.

Construction work prices continue to grow briskly, while growth in market services remains buoyant (see Chart III.1.10). The persisting high growth in construction work prices reflects still strong demand for construction output and rising prices of materials and products used in the construction industry.

Chart III.1.7 Import prices

The deepening decline in import prices was due to the contributions of prices of mineral fuels, products and semi-finished products

(annual percentage changes; contributions in percentage points)

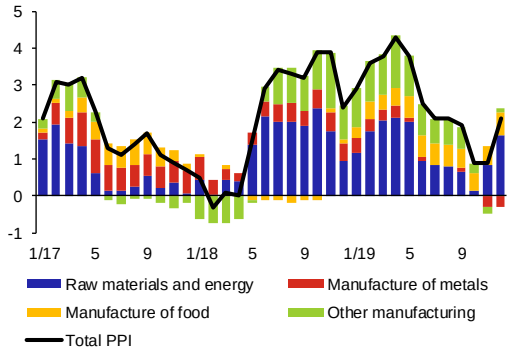


Note: Food also includes beverages and tobacco.

Chart III.1.8 Industrial producer prices

Following a previous lengthy decline, industrial producer price inflation increased to 2%, mainly due to growth in the contribution of prices of raw materials and energy

(annual percentage changes; contributions in percentage points)



Turning to market services for business, sizeable growth in prices was recorded for employment, programming, information services and also for advertising services and market research. On the other hand, prices of storage and support services in transport declined.

Chart III.1.9 Agricultural producer prices

Crop product prices dropped sharply, while livestock product prices continued to grow apace

(annual percentage changes)

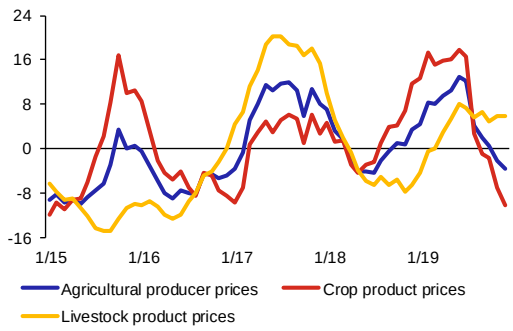
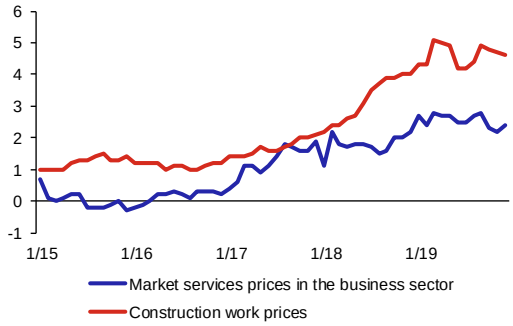


Chart III.1.10 Market services prices in the business sector and construction work prices

Construction work prices continue to grow briskly, while growth in market services prices also remains robust

(annual percentage changes)



III.2 ECONOMIC DEVELOPMENTS

A slowdown in growth to 2.5% caused the Czech economy to return close to its potential output level in Q3. The nonetheless still solid pace of growth in domestic economic activity is due primarily to final consumption. Net exports also made a positive contribution, despite weakening export and import growth due not only to the economic slowdown abroad, but also to a slight downturn in domestic demand growth. By contrast, GDP growth was negatively affected by a decrease in the contribution of gross capital formation. From the supply-side perspective, the tertiary sector remains the main driver of gross value added growth. As a result of continuing weak external growth, industrial production mostly fell. By contrast, the construction industry saw a recovery in growth in November. Consumer sentiment dropped sharply in January. Business sentiment remains relatively favourable, despite having worsened slightly.

III.2.1 The cyclical position of the economy

The Czech economy is currently close to its estimated potential output level. According to the small structural model, the gradual closing of the positive output gap from its peak in 2017 (see Chart III.2.1) was related to a slowdown in GDP growth below 3%. At the same time, employment growth has weakened and the extremely strong inflationary effect of the labour market has started to ease gradually. The currently positive output gap will steadily close further over the forecast horizon due to a tightening of domestic monetary conditions and a temporary slowdown of growth in external demand. An alternative estimate using the production function, which does not take inflation and the effect of monetary policy directly into account, conversely indicates that the economy has reached its potential and will remain near it at the forecast horizon.

Potential output growth will mostly fluctuate just below 3% at the forecast horizon (see Chart III.2.2). Potential output growth accelerated gradually in previous years after the repercussions of the economic crisis subsided and pronounced growth in domestic economic activity resumed amid muted inflation pressures. As regards the factors entering the production function, the labour market has improved structurally in recent years, with a rising participation rate causing faster growth in equilibrium employment. The buoyant growth in investment by non-financial corporations also continued until recently, although total fixed investment has been volatile due to uneven drawdown of EU funds. According to both methods, potential output growth has been slowing since the turn of 2019. This is mainly due to weakening growth in investment activity, which, with a lag, is causing labour productivity growth to slow. Over the forecast horizon, investment growth will pick up again as a result of an upswing in external demand. This will lead to a stabilisation of, and subsequently a slight increase in, labour productivity growth and broadly stable growth in potential output.

III.2.2 The expenditure side of the economy

GDP increased by 2.5% in 2019 Q3 (see Chart III.2.3). GDP growth thus slowed modestly compared with the first half of the year. Weakening growth in household consumption and a halt in fixed investment growth acted in this direction. A decrease in the negative contribution of change in inventories, an upturn in

Chart III.2.1 Output gap

According to the small structural model, the slightly positive output gap will continue to close gradually; according to the production function, the Czech economy will remain near to its potential at the forecast horizon

(% of potential output)

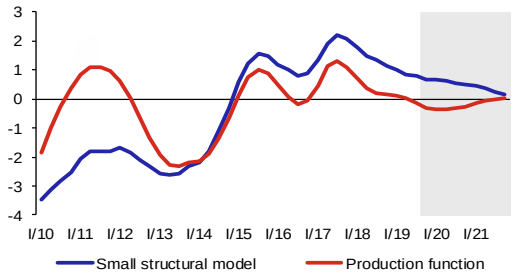


Chart III.2.2 Potential output

After slowing temporarily, potential output growth will return to 3%; according to the production function it will settle slightly lower

(annual percentage changes)

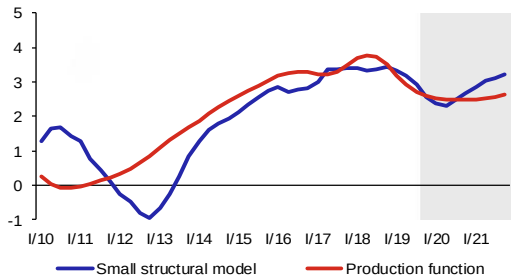
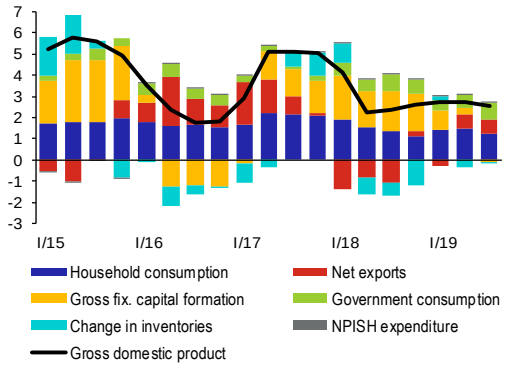


Chart III.2.3 Gross domestic product

Household consumption remains the driver of the continuing growth of the Czech economy; government consumption and net exports also made positive contributions, while growth in fixed investment halted

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



government consumption growth and a slight increase in the contribution of net exports had the opposite effect, albeit to a smaller extent overall.

Despite recording weaker growth, household consumption remains the main driver of the continuing economic growth. Household consumption[34] continues to be supported by strong growth in household incomes and generally favourable consumer sentiment. For some time now, households have been channelling the growth in their spending primarily into increased short-term consumption and purchases of services. Gross disposable income growth dropped slightly further in Q3, falling below household consumption growth (see Chart III.2.4). This implies a slight year-on-year drop in the saving rate. Consumer confidence saw a temporary improvement at the end of last year, but worsened considerably in January on increased concerns about future economic developments and a decline in the intention to save (see Chart III.2.5). The perceived financial situation of households also remains favourable. Retail sales continued to record robust growth in October and November.

Government consumption also rose robustly in 2019 Q3. The high growth in nominal government consumption reflected brisk growth in non-wage consumption expenditure and rapid wage growth in the government sector. The latter, however, was also reflected in high growth in the government consumption deflator. This partially reduced its real growth, which nonetheless reached almost 4%.

Government and corporate fixed investment dropped slightly year on year, whereas household investment kept rising (see Chart III.2.6). Continuing lacklustre growth in demand and worse sentiment abroad continued to dampen investment activity in all sectors of the domestic economy. The further decrease in year-on-year total fixed investment growth was due most of all to a decline in the positive contribution of government, which, however, was due to base effects. The level of government investment thus remained solid. Investment activity in this sector is being supported to a great extent by continued drawdown of European funds. The contribution of investment by financial institutions also decreased visibly. Households directed their growing capital expenditure above all into housing. Continuing growth in their investment activity is being enabled by still brisk growth in their incomes. Low mortgage rates are also a stimulus. On the supply side, growth in the number of apartments starts and completions rose markedly.

The contribution of additions to inventories to GDP growth was roughly neutral in 2019 Q3. This probably reflected the persisting concerns of firms about the continuing lacklustre growth in external demand.

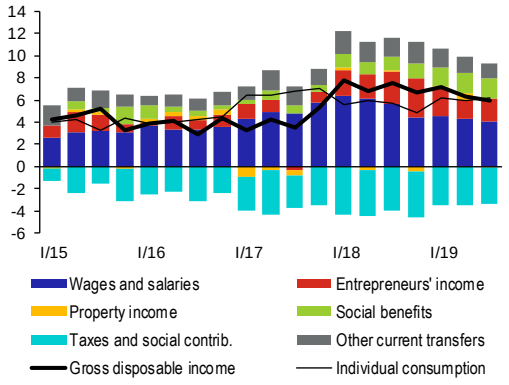
The contribution of net exports to GDP growth increased slightly in Q3, despite falling export and import growth. Weak external demand was reflected in slower growth in goods and services exports. Export growth was supported by car industry exports

34 Household consumption was flat in real quarter-on-quarter terms in Q3 despite continued robust growth in retail sales.

Chart III.2.4 Disposable income

The continuing, albeit gradually slowing growth in gross disposable income was due mainly to contributions from wages and salaries and entrepreneurs' income

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

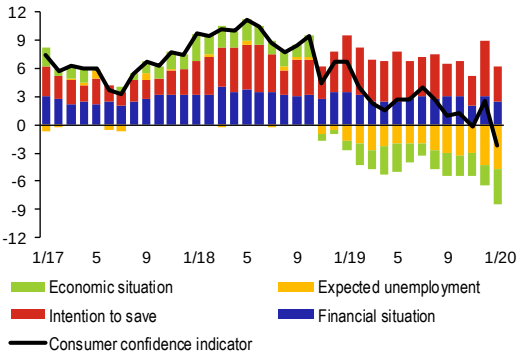


Note: Entrepreneurs' income comprises gross operating surplus and mixed income.

Chart III.2.5 Consumer confidence balance

Consumer confidence worsened in January

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

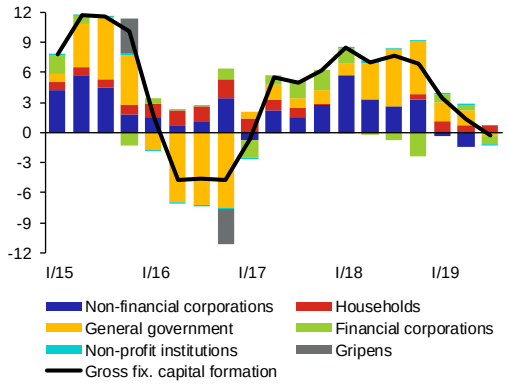


Note: Expectations 12 months ahead.

Chart III.2.6 Investment by sector

Growth in investment activity came to a standstill, with only investment in the household sector maintaining positive growth

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



only; the contributions of other industries were negligible. Import growth also decreased, owing to the stable and high import intensity of Czech exports. Import growth was also dampened by slackening growth in domestic demand. Goods imports slowed, while services imports accelerated slightly. According to the more detailed sector structure, this was due to the contribution of other business services, just as in 2018. Given the similar slowdowns in export growth and import growth (see Chart III.2.7), the contribution of net exports to GDP growth increased only slightly compared with the previous quarter, to 0.7 percentage point.

III.2.3 The output side of the economy

Growth in gross value added slowed slightly to 2.4% in Q3, due mainly to developments in industry (see Chart III.2.8). Continuing growth in domestic demand was again reflected in a dominant contribution of the services and trade sector. By contrast, the slight drop in GVA growth was due to the export oriented industry, which is being affected by the persisting slowdown in external demand. In addition, many firms are still facing high production capacity utilisation in tight labour market conditions as they increase production. Construction again made a positive contribution to GVA growth. Growth in market services fell slightly across almost all sectors in Q3. The only exception was information and communication activities, where sales continued to increase at a brisk pace.

Industrial production mostly fell at the end of last year (see Chart III.2.9). Firms in this sector are still being negatively affected by the lacklustre growth in external demand, which is making Czech products difficult to sell. This was reflected in deepening negative growth in production in the highest weight manufacturing segment in November. Data on new orders also failed to provide grounds for optimism.

Insufficient demand was the biggest barrier to growth in production for industrial firms (see Chart III.2.10). This was related above all to the still muted economic growth abroad. Growth in production was additionally constrained by domestic factors, specifically continuing, though diminishing, labour market tightness manifesting itself in labour shortages. After having deteriorated sharply in the previous period, the perceived financial situation continued to worsen. Production capacity utilisation remains just below 85%.

Growth in production in the construction sector recovered in November (see Chart III.2.9). This was due to base effects, which caused growth in production in building construction to rise appreciably. The continuing growth in civil engineering was further supported by government investment co-financed from EU funds.

Despite a slight deterioration, business sentiment remains relatively favourable. The increase in pessimistic sentiment was concentrated mainly in industry, where concerns about the future economic situation continue to be emphasised. To a lesser extent, the mood in services is also worsening. Business sentiment in construction remains high.

Chart III.2.7 Exports and imports

Similar slowdowns in import growth and export growth led to an only slight year-on-year increase in net exports

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

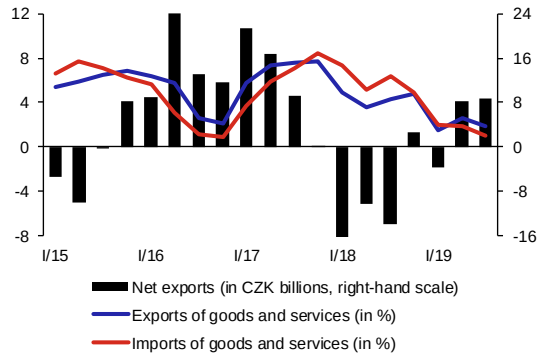
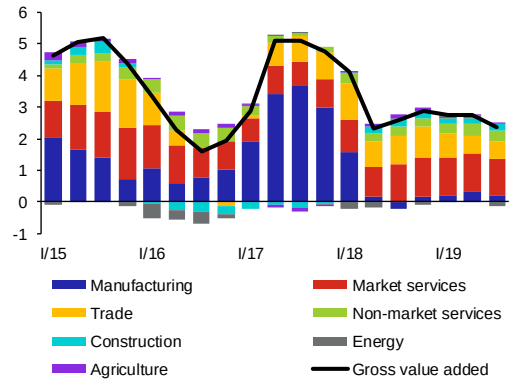


Chart III.2.8 Contributions of sectors of activity to GVA growth

The slight decrease in gross added value growth was due mainly to industry

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

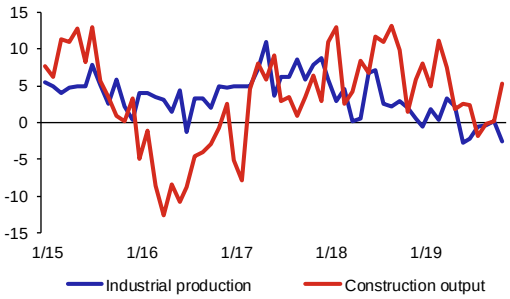


Note: Trade also includes hotels and restaurants and transport. Energy also includes mining and quarrying.

Chart III.2.9 Industrial production and construction output

While industrial production decreased, construction saw a marked recovery in growth in November

(annual percentage changes)



Growth in gross operating surplus picked up at the start of last year, even reaching double figures in Q3 (see Chart III.2.11). In terms of sector structure, the automotive industry was the biggest contributor to the marked improvement in performance. However, this was probably due partially to the base effect linked with the introduction of more stringent emission standards in 2018. In most other industries, though, the performance of non-financial corporations improved. Personnel costs continued to slow steadily amid a further increase in growth in book value added. The latter was a result of a more modest slowdown in output growth than in intermediate consumption growth, which slowed more sharply.

Chart III.2.10 Barriers to growth in industry

Faster growth in industrial production is being prevented mainly by low demand, but many firms are still experiencing labour shortages

(percentages)

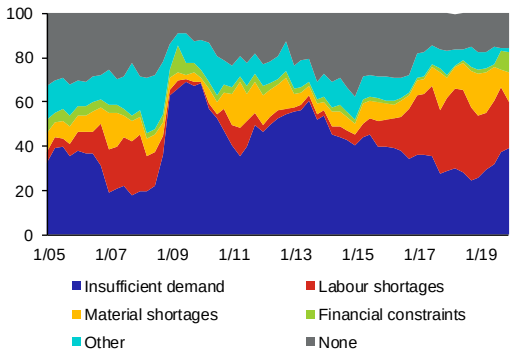
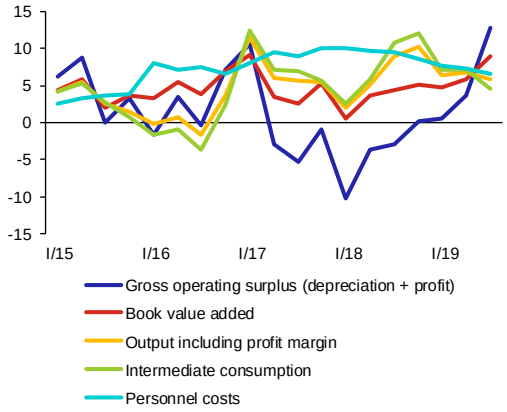


Chart III.2.11 Key financial indicators

Growth in gross operating surplus picked up further, amid a continued drop in personnel cost growth and an increase in book value added growth

(annual percentage changes)



III.3 THE LABOUR MARKET

The labour market remains tight, despite having eased slightly. Growth in employment remained muted in Q3, while the unemployment rate stayed close to its historical low. The labour force is not growing sufficiently to meet demand for labour, as indicated by a high number of vacancies. This situation, coupled with growth in the minimum wage, is exerting continued strong upward pressure on wages. Despite slowing slightly in Q3, wage growth remained near 7%. This was due to slower wage growth in both market and non-market sectors. Growth in whole-economy labour productivity remained subdued and still lagged behind average real wage growth, so nominal unit wage costs continued to grow at a brisk pace.

III.3.1 Employment and unemployment

The continuing growth in economic activity is keeping the tightness in the labour market near a historical high. This is illustrated by the composite LUCI indicator across its main components (see Chart III.3.1). Amid persisting labour shortages, albeit with simultaneously subdued growth in external demand, employment grew by 0.1% in 2019 Q3. In terms of sector structure, according to the results of the Labour Force Survey (LFS), the growth in employment was driven exclusively by non-market services.[35] Conversely, employment decreased in agriculture and also newly in market services (see Chart III.3.2).[36] A large number of individuals who are not actively seeking a job[37] but are willing to work, continues to be observed. This potential reserve labour force (on top of the number of unemployed) stood at 98,000 persons in Q3, down by more than 12,000 year on year.

Although the number of employees in the economy increased slightly further, hours worked per person employed decreased slightly (see Chart III.3.3). From the sectoral point of view, the total growth in the converted number of employees was due solely to the services sector in Q3. Compared with Q2, growth in the number of employees in the services sector slowed, but on the other hand average hours worked increased. As a result, the growth in the converted number of employees in services slowed only slightly. It continued to be driven mainly by wholesale and retail trade and education. By contrast, the fall in the converted number of employees was concentrated mainly in industrial sectors, due to subdued external demand growth. This strongly affected the highest-weight manufacturing sector, where the converted number of employees decreased by 16,000 (1.4%) year on year. Linked with this was a drop in employment growth in market services, which also include administrative and support service activities, where agency employees working mostly in industry predominate.

The unemployment rate broadly stabilised during 2019 (see Chart III.3.4). The general unemployment rate is still the lowest in the EU. The continuing solid economic growth fostered a further

Chart III.3.1 LUCI – Labour Utilisation Composite Index

The current LUCI values are still very high from the historical perspective, with all components indicating exceptional labour market tightness

(index; vertical axis shows standard deviations)

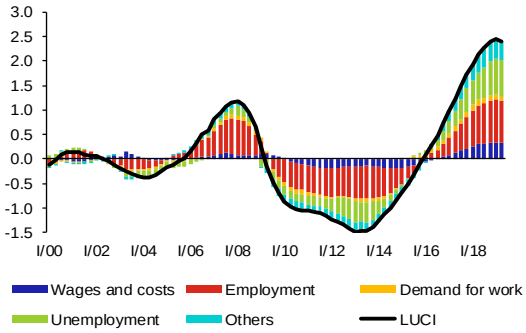


Chart III.3.2 Employment breakdown by sector of activity

Employment growth remained muted overall in Q3

(contributions in percentage points to year-on-year change; selected sectors of activity; source: LFS)

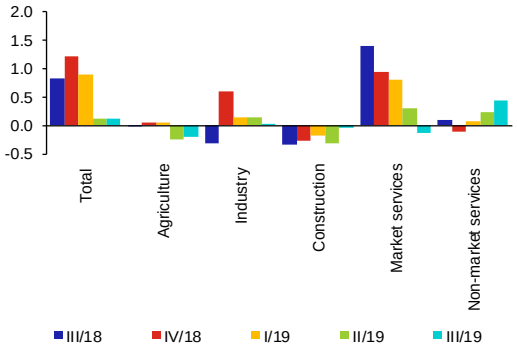
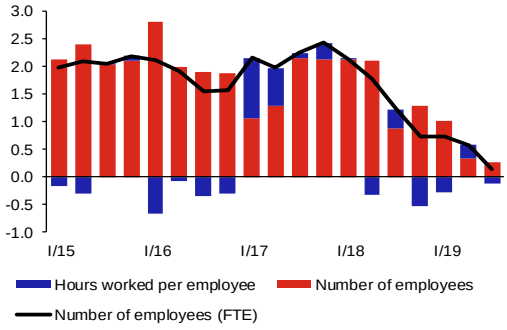


Chart III.3.3 Number of employees (full-time equivalent)

The falling growth in the converted number of employees was due to shorter hours worked

(annual percentage changes; contributions in percentage points)



35 In non-market services, health care and education made the largest contributions.

36 However, this sector structure of employment (according to the LFS) does not correspond to the national accounts statistics or to the registered number of employees from the CZSO wage statistics.

37 These persons are identified not as unemployed but as economically inactive under the ILO methodology.

year-on-year decrease in the number of long-term unemployed, which accounted for almost one-half of the persisting slight decline in the total number of unemployed persons in 2019 Q3. The available monthly data for October and November indicate only a slight rise in the general unemployment rate at the end of last year. The rate of economic activity of the working-age population[38] remains near a historical high (almost 77% in November). According to the Labour Office, the seasonally adjusted share of unemployed persons stayed at 2.7% for the fifth consecutive month in December.

The persisting strong demand for labour is illustrated by a high number of vacancies. The number of vacancies increased further in Q4. The highest number of vacancies offered via labour offices was registered in manufacturing. There was also strong demand for new employees in construction and administrative and support service activities. Around two-thirds of vacancies were for employees with basic education and another 12% were for employees with vocational training with a school-leaving certificate. Viewed in terms of the Beveridge curve (see Chart III.3.5), the number of registered job applicants per vacancy is still close to an all-time low. Wage growth remains high despite a slight slowdown. This is reflected in higher core inflation, which is currently at roughly the same level as it was at the peak of the previous cycle in 2008.

III.3.2 Wages and productivity

Average wage growth in 2019 Q3 was close to 7%, which represented a slight slowdown (see Chart III.3.6). In addition to persisting tightness on the labour market, an increase in the minimum wage from CZK 12,200 to CZK 13,350 in January 2019 helped to maintain high growth in the average nominal wage. Despite this, overall wage growth dropped in both market and non-market sectors in Q3 (to 6.7% and 7.6% respectively). Wage growth in market sectors slowed in most branches, the exceptions being financial and insurance activities, wholesale and retail trade and agriculture, where growth conversely accelerated further. Wages rose fastest in financial and insurance activities (8.8%) and also recorded very rapid growth in health care (8.1%). Wages in non-market sectors mainly reflected a decline in wage growth in public administration and defence (from 6.7% to 4.9%) and, to a lesser extent, in education (from 11.4% to 11.1%) and culture (from 7.7% to 7.4%). The median wage rose by 6.7% in 2019 Q3 and thus lagged slightly behind the average wage (6.9%).

Labour productivity continued to rise at a modest pace, due to subdued productivity growth in industry. The year-on-year growth in whole-economy labour productivity in 2019 Q3 (of 1.9%; see Chart III.3.6) was driven mainly by market services and, to a lesser extent, by construction. By contrast, productivity in non-market services dropped slightly. Productivity growth thus continued to lag behind average real wage growth (4%).

Chart III.3.4 Unemployment indicators

The general unemployment rate and the share of unemployed persons remained close to historical lows

(percentages; seasonally adjusted; source: MLSA, CZSO)

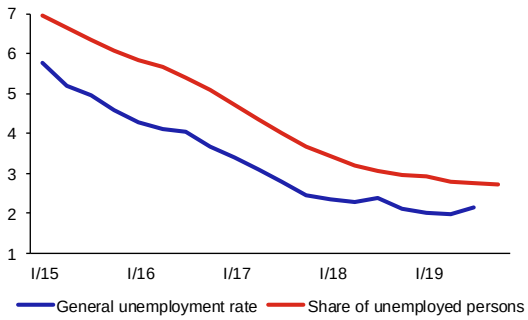


Chart III.3.5 Beveridge curve

The number of vacancies is still much higher than the number of registered unemployed persons, amid higher core inflation

(numbers in thousands; seasonally adjusted; annual percentage changes for core inflation; source: MLSA, CZSO)

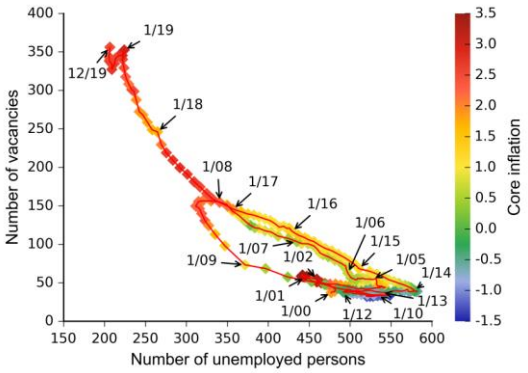
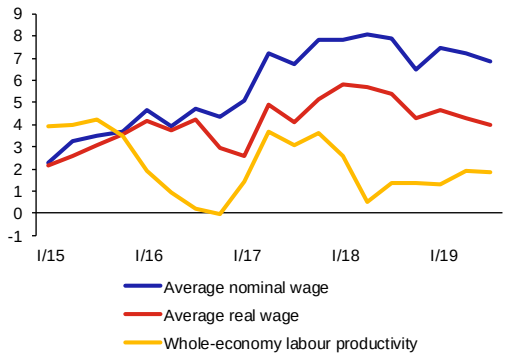


Chart III.3.6 Average wage and whole-economy labour productivity

Labour productivity growth is lagging well behind wage growth

(annual percentage changes; whole-economy productivity – seasonally adjusted)



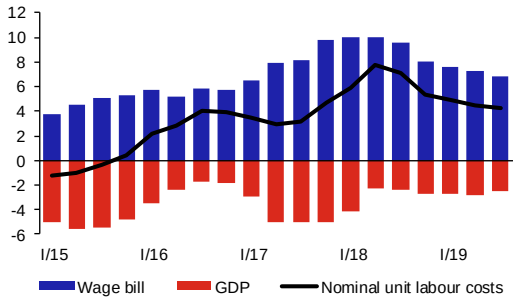
38 This concerns the 15–64 age group.

Nominal unit labour costs continued to grow strongly due to robust growth in the volume of wages combined with relatively subdued productivity growth (see Chart III.3.7). Growth in unit labour costs slowed only slightly to 4.3% in Q3. This reflected almost unchanged growth in nominal unit labour costs across the main sectors of the economy. The strongest growth in unit costs was thus still recorded in non-market services (7.8%) and industry (4.5%). In construction and market services, by contrast, the growth was more moderate due to higher labour productivity growth in these sectors.

Chart III.3.7 Unit labour costs

The rapid growth in nominal unit labour costs reflected persisting high wage growth accompanied by subdued growth in labour productivity

(annual percentage changes; contributions in percentage points)



III.4 FINANCIAL AND MONETARY DEVELOPMENTS

The CNB left its monetary policy interest rates unchanged in 2019 Q4; at its monetary policy meeting in February, the CNB increased them by 25 basis points. Money market rates remained stable in 2019 Q4. Rates with longer maturities calmed after previous turbulence and increased slightly due to external factors. Interest rates on loans for house purchase have fallen over the past year. By contrast, rates on loans to non-financial corporations rose slightly at the end of last year. Growth in loans to households slowed further year on year in November, while growth in loans to non-financial corporations stayed close to 4%. As regards housing loans, the year-on-year fall in the volume of new loans slowed somewhat. M3 growth remained stable. The exchange rate of the koruna against the euro and the dollar firmed substantially in late 2019 and early 2020.

III.4.1 Monetary policy and interest rates

The CNB left its monetary policy rates unchanged at the November and December meetings; in February it raised them by 25 basis points. The two-week repo rate is thus set at 2.25%, the Lombard rate at 3.25% and the discount rate at 1.25% with effect from 7 February 2020. The 3M PRIBOR stayed just under 2.2% in Q4 (see Chart III.4.1). The money market premium, as measured by the spread between the 3M PRIBOR and the 2W repo rate, thus remained just below 0.2 percentage point. FRA rates have recorded only small changes at all maturities since the end of September. The end-January outlook for FRA rates implied broad stability of the 3M PRIBOR over the one-year horizon.

Domestic interest rates with longer maturities increased in Q4 (see Chart III.4.1). This reflected the situation on foreign financial markets, which – after a rate drop in August and a later correction – calmed in the following period. The ECB's communications led to a slight rise in the 3M EURIBOR path to less negative levels. The market thus stopped speculating about further monetary policy easing in the euro area, like in the USA. At the end of last year, the risk of a no-deal Brexit fell significantly, the market had already incorporated the cooling of the global economy into the interest rate outlook, and the trade talks between the USA and China were sending out mostly positive signals. In early January, risk aversion on markets increased temporarily and the price of oil rose in response to escalating geopolitical tensions in the Middle East. However, the market situation returned to normal after a few days. Medium- and long-term interest rates in the euro area and the USA rose by as much as 0.2 percentage point overall. Domestic IRS rates and government bond yields went up slightly more. The slope of the IRS yield curve remained negative. The domestic government bond curve has a negative slope up to five-year maturity and is then slightly rising (see Chart III.4.2).

The Ministry of Finance continued its issuing activity on the primary government bond market at the end of 2019, focusing on longer maturities. The Ministry took advantage of the above-mentioned shape of the yield curve and issued bonds mostly with maturities of seven and 14 years. Government bonds

Chart III.4.1 Interest rates

Money market rates remained stable, while rates with longer maturities increased

(percentages)

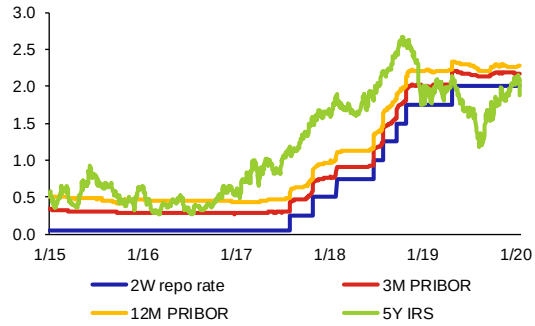
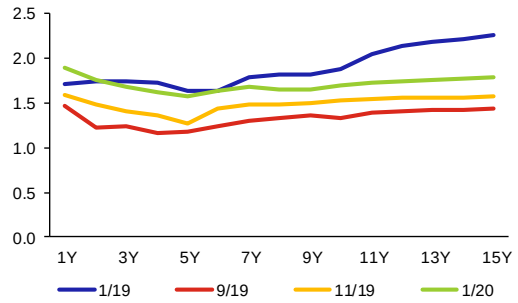


Chart III.4.2 Government bond yield curve

The yield curve moved up slightly, but remained relatively flat at the beginning of 2020

(percentages)



totalling CZK 224 billion were issued in 2019 as a whole.[39] By contrast, the volume of short-term T-bills remained very low or zero for almost the whole of last year. Negative-yield T-bills totalling almost CZK 5 billion and maturing in early January were issued at the end of December. Here, the Ministry of Finance took advantage of a temporary increase in investors' demand for financial market instruments connected with banks' contributions to the Resolution Fund. In addition, the sale of state saving bonds ("Republic Bonds") to the public continued. According to Ministry of Finance statistics, non-residents' total government bond holdings have been fluctuating around CZK 600 billion in recent months, accounting for 41% of the total. Many foreign investors are thus continuing to take advantage of the higher yield on koruna investments than on euro assets, for example.

Interest rates on loans to households for house purchase decreased last year. The rate on genuinely new mortgages fell by 0.4 percentage point year on year to 2.4% in November (see Table III.4.1). In an environment of strong competition, the interest rate on loans for house purchase decreased, due mainly to the trend in long-term financial market interest rates. The ten-year government bond yield, on which the mortgage rate largely depends, fell markedly during 2019 and corrected slightly to 1.5% at the year-end. This correction was later reflected in the latest Fincentrum Hypoindex data, according to which the mortgage rate at selected banks went up slightly in December.

Rates on corporate loans grew only slightly last year following a sharp rise in 2018. The rate on new koruna loans to corporations was 3.3% in November (see Table III.4.1). The difference in the total funding costs of corporations, as expressed by the cost of borrowing, compared with the euro area thus rose to 2 percentage points at the end of the year (see Chart III.4.3). Ex ante real interest rates on loans to corporations are around 1%, while those on loans for house purchase are around zero.

Client deposit rates were little changed and remain deeply negative in real terms. The interest rate on the stock of deposits remained just above 0.4% in November for both non-financial corporations and households. The rate on overnight deposits, which account for 90% of total new household deposits and 80% of deposits of non-financial corporations, stayed just above 0.2%. The rate on new deposits of corporations has increased a little more than that on new household deposits over the past year and is currently slightly higher than the household deposit rate (0.5% for non-financial corporations, as against 0.3% for households). Banks' interest margin, as expressed by the spread between rates on new loans and deposits, thus decreased slightly.

Table III.4.1 Client interest rates on loans and deposits

Interest rates on mortgages fell slightly last year; by contrast, rates on corporate loans rose slightly

(interest rate in percentages; change in percentage points)

	Interest rate	Change since		
	11/19	5/19	11/18	11/16
HOUSEHOLDS				
Mortgages	2.4	-0.4	-0.3	0.5
Mortgages with rate fixation 1–5 years	2.5	-0.3	-0.2	0.5
Mortgages with rate fixation 5–10 years	2.3	-0.4	-0.4	0.5
New mortgages	2.4	-0.5	-0.4	0.6
Refinanced mortgages	2.3	-0.4	-0.4	0.5
Consumer credit	8.3	0.0	-0.2	-1.8
Deposits				
Overnight deposits	0.2	0.1	0.1	0.1
New deposits with agreed maturity	1.6	0.0	0.3	0.5
NON-FINANCIAL CORPORATIONS				
Total new loans	3.3	0.2	0.2	1.4
Small loans (up to CZK 30 million)	3.8	0.0	0.2	1.4
Large loans (over CZK 30 million)	3.2	0.3	0.3	1.4
Total outstanding loans	3.8	0.0	0.3	1.3

Chart III.4.3 Client interest rates in the Czech Republic and the euro area

Client interest rates on loans in the Czech Republic are markedly higher than those in the euro area

(total credit costs as expressed by cost of borrowing; percentages)

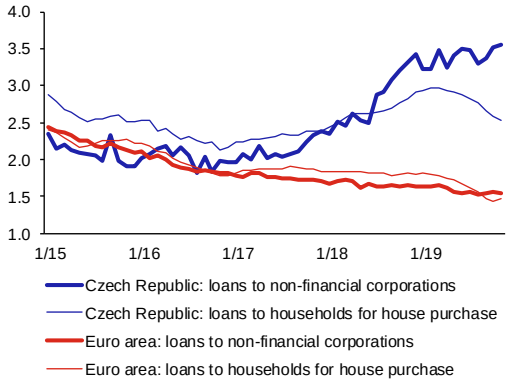
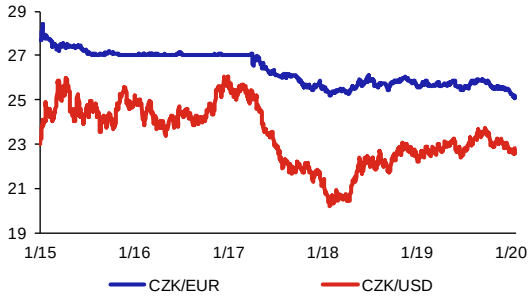


Chart III.4.4 CZK/EUR and CZK/USD exchange rates

The koruna strengthened against the euro in 2019 Q4 and at the start of 2020; its appreciation against the dollar was slightly stronger



39 The Funding and Debt Management Strategy for 2019 had originally assumed issues on the domestic market of at least CZK 150 billion. In the June update, the figure was increased to CZK 220 billion. The Ministry of Finance plans to issue bonds totalling at least CZK 120 billion on the domestic market in 2020.

III.4.2 The exchange rate

In the second half of December 2019, the koruna left the band of CZK 25.5–26.0 to the euro, where it had been since May 2018 (see Chart III.4.4). However, the koruna started to appreciate in September 2019. It then gradually firmed from around CZK 25.9 to the euro to CZK 25.1 to the euro in late January. The January koruna values are thus considerably stronger than the Q4 average (CZK 25.6 to the euro).

The koruna appreciated significantly against the dollar in 2019 Q4 (see Chart III.4.4). The exchange rate of the koruna against the dollar was fluctuating around CZK 23.4 at the start of the quarter. At the end of the quarter, it stood at around CZK 22.7. The attractiveness of the dollar in the eyes of global investors decreased somewhat due to a visible slowdown in US economic growth and a further interest rate cut (the third in 2019). The weakening of the dollar (as a safe haven asset) was also significantly fostered by lessening concerns about the global economy going forward. The dollar thus gradually reversed its previous sharp appreciation on global markets. In addition, the koruna-dollar rate reflected the appreciation of the koruna against the euro. The year-on-year depreciation of the koruna against the dollar thus decreased significantly from 7.1% in September to 1.1% in December. In January, the koruna-dollar rate strengthened slightly further (due solely to appreciation of the koruna against the euro). In late January, it stood at around CZK 22.6 to the dollar.

The strengthening of the koruna was linked with the calming of the global financial market situation amid high domestic interest rates. Markets perceived a drop in the risks associated with a no-deal Brexit.[40] At the same time, the risk of escalation of trade wars between the USA and China also decreased. The attractiveness of the koruna was positively affected by the above-mentioned series of interest rate cuts in the USA (most recently in September) and the visible slowdown of the US economy. The Czech koruna, supported by unusually high domestic interest rates relative to other developed countries, also appreciated quite sharply against some regional currencies – particularly the Hungarian forint and the Romanian leu.

The highly positive differential between koruna and euro interest rates remained stable, while the differential vis-à-vis the dollar increased (see Chart III.4.5). The highly positive differential between three-month koruna and euro rates stayed at 2.6 percentage points in 2019 Q4. The spread between three-month koruna and dollar rates shifted from slightly positive levels at the start of Q4 to 0.3 percentage point at the end of the year. This represents a sizeable change of 1.1 percentage points compared with the start of 2019.

The year-on-year appreciation of the nominal effective exchange rate of the koruna was 0.7% in December (see Chart III.4.6). The koruna strengthened markedly against the Hungarian forint, the Romanian leu, the South Korean won and the Swedish krona,

40 Sterling appreciated sharply on global markets as the risk of a disorderly Brexit receded.

Chart III.4.5 Interest rate differentials

The highly positive interest rate differential of the koruna vis-à-vis the euro remained stable, while the slightly positive differential vis-à-vis the dollar increased somewhat

(percentage points)

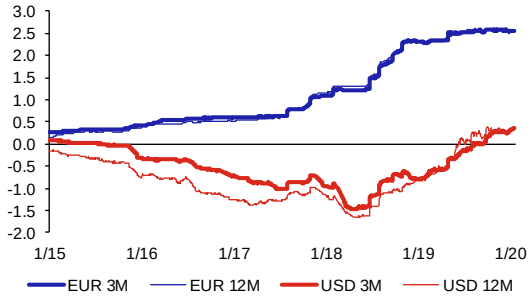
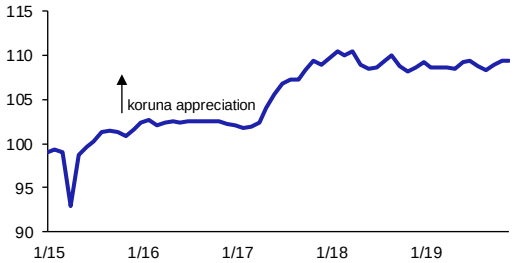


Chart III.4.6 Nominal effective koruna exchange rate

The koruna strengthened slightly in effective terms at the end of last year

(basic index; 2015 = 100)

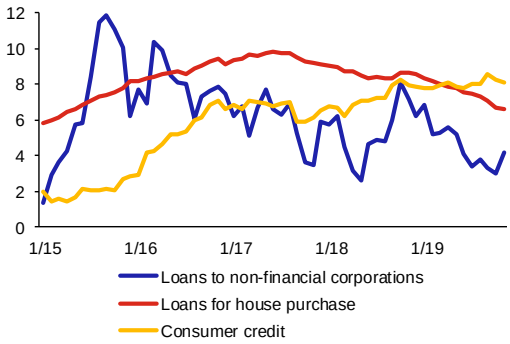


Note: In the calculation of the nominal effective exchange rate of the koruna (NEER), the euro has the largest share in the basket (64.3%). The renminbi, the zloty, the pound, the forint, the dollar and the rouble have smaller, but still significant shares (2.6%–7.8%). The shares of the remaining six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

Chart III.4.7 Loans to the private non-financial sector

Growth in loans to non-financial corporations decreased significantly last year and growth in housing loans is also gradually slowing, while consumer credit is maintaining a broadly stable rapid rate of growth

(annual percentage rates of growth)



the gains ranging from 3.2% to 4.6%. By contrast, it weakened substantially against the Russian rouble (by almost 8%), the British pound (by 4.6%)[41] and the Japanese yen (by 4.2%).

III.4.3 Credit

Growth in loans to the private non-financial sector slowed further at the end of last year (see Chart III.4.7). According to the December Bank Lending Survey, the slowdown was due on the supply side mainly to a tightening of credit standards applying to loans to households. Individual methodological modifications by banks relating to the CNB's macroprudential tools contributed to the tightening of credit standards for loans for house purchase. Consumer credit standards tightened due to worsening expectations regarding the overall economic situation. By contrast, banks left credit standards for loans to non-financial corporations unchanged overall.

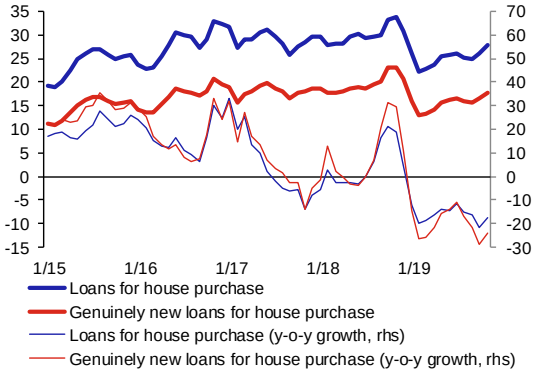
Growth in loans to households for house purchase gradually slowed. The annual rate of growth in loans for house purchase fell to 6.6% in November, as the volumes of new loans continued to decline year on year, due mainly to the macroprudential measures adopted by the CNB (the introduction of DTI and DSTI limits). Elevated demand in the summer and autumn a year earlier, connected with frontloading before the above measures took effect, affected the year-on-year comparison in the same way (see Chart III.4.8). However, the volumes of new housing loans recorded in November 2019 were the highest in the past year, indicating renewed growth in demand for mortgages. This is consistent with the results of the Bank Lending Survey, which confirm a gradual recovery in demand for loans, due mainly to a drop in mortgage rates. The ratio of total household indebtedness to gross disposable income remains close to an all-time high of 62%.

Year-on-year growth in loans to non-financial corporations slowed considerably last year. The growth in corporate loans was 4.1% in November. The observed slowdown was quite broad-based but was strongest in industry and wholesale and retail trade. Loans in services, real estate activities and construction acted in the opposite direction (see Chart III.4.9). According to the Bank Lending Survey, corporate demand for loans declined overall in Q4 due to a lower need to finance inventories and working capital and also to the use of internal financing. Banks expect no further changes in demand in 2020 Q1. The share of foreign currency loans in total loans to non-financial corporations rose to 33%. This is motivated by the large koruna-euro interest rate differential and by firms hedging against exchange rate risk. Firms are simultaneously hedging against this risk using classical financial instruments. According to a statistical survey of firms conducted by the CNB and the Confederation of Industry of the Czech Republic, the proportion of hedged exports in the coming 12 months is 41%.

Chart III.4.8 New loans to households for house purchase

The volumes of new loans for house purchase declined sharply last year

(monthly volumes in CZK billions; annual percentage changes)

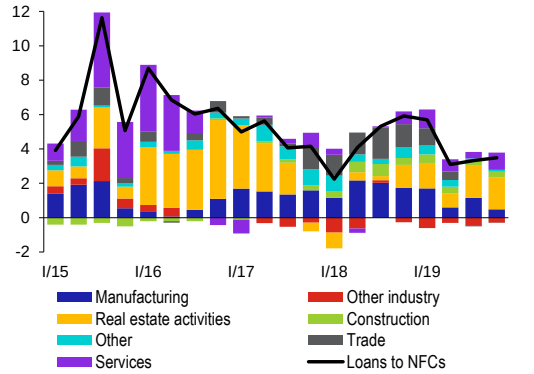


Note: The data are smoothed using three-month moving averages. Total new loans for house purchase comprise genuinely new loans (i.e. loans newly provided to the economy), refinanced loans and other renegotiated loans.

Chart III.4.9 Loans to non-financial corporations by sector of activity

The contributions of loans in manufacturing and wholesale and retail trade have declined over the past year, while the contribution of real estate loans has increased

(annual percentage changes; contributions in percentage points; end-of-quarter data; most recent data are for November 2019)



Note: Other comprises agriculture and transport.

41 Both cases involved a correction of a previous sharp depreciation.

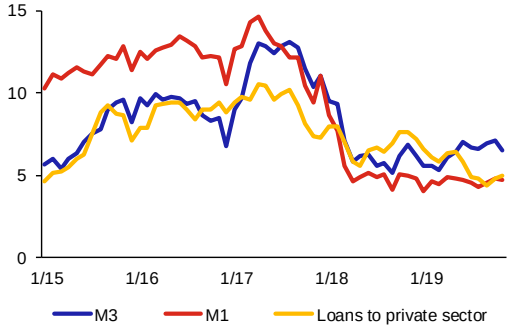
III.4.4 Money

Following a slight pick-up at the start of 2019, M3 growth was broadly unchanged for the rest of the year (see Chart III.4.10). The annual growth rate of M3 reached 6.5% in November and was thus more than 1.5 percentage points higher than growth in loans to the private sector. In addition to stable growth in overnight deposits, the current M3 growth is being driven by deposits with agreed maturity of up to two years, which continue to rise apace owing to an increase in interest rates in this segment. Turning to the sector structure, household deposits still made the biggest contribution. However, their rate of growth slowed slightly to 7.1%. Growth in deposits of non-financial corporations also slowed, to 4.8%.

Chart III.4.10 Monetary aggregates and loans

M3 growth outpaced growth in loans to the private sector

(annual percentage rates of growth)



Abbreviations

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

Glossary

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Disinflation: A decline in inflation.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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).

Key macroeconomic indicators

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
DEMAND AND SUPPLY												
Gross domestic product												
GDP	CZK bn, constant p. of 2010, seas. adjusted	4028.8	3999.6	3980.2	4088.2	4308.4	4409.9	4610.5	4740.8	**4857.6**	**4968.4**	**5107.9**
GDP	%, y-o-y, real terms, seas. adjusted	1.8	-0.7	-0.5	2.7	5.4	2.4	4.5	2.8	**2.5**	**2.3**	**2.8**
Household consumption	%, y-o-y, real terms, seas. adjusted	0.3	-1.2	0.5	1.8	3.8	3.5	4.4	3.1	**2.9**	**2.5**	**2.7**
Government consumption	%, y-o-y, real terms, seas. adjusted	-3.2	-2.0	2.5	1.1	1.9	2.7	1.3	3.4	**3.3**	**2.8**	**2.8**
Gross capital formation	%, y-o-y, real terms, seas. adjusted	1.8	-3.8	-5.1	8.6	13.1	-4.4	4.3	5.5	**0.6**	**0.0**	**2.5**
Gross fixed capital formation	%, y-o-y, real terms, seas. adjusted	0.9	-3.0	-2.5	3.9	10.3	-3.2	4.0	7.5	**0.9**	**0.6**	**2.4**
Exports of goods and services	%, y-o-y, real terms, seas. adjusted	9.2	4.4	0.2	8.7	6.2	4.1	7.1	4.4	**1.4**	**3.5**	**6.4**
Imports of goods and services	%, y-o-y, real terms, seas. adjusted	6.7	2.8	0.1	10.1	6.9	2.6	6.3	5.9	**1.1**	**3.1**	**6.5**
Net exports	CZK bn, constant p. of 2010, seas. adjusted	193.5	245.8	249.5	232.7	225.0	282.8	330.2	291.7	**306.4**	**333.6**	**350.5**
Coincidence indicators												
Industrial production	%, y-o-y, real terms	5.9	-0.8	-0.1	5.0	4.3	3.4	6.5	3.0	**-**	**-**	**-**
Construction output	%, y-o-y, real terms	-3.6	-7.6	-6.7	4.3	6.8	-5.6	3.3	9.2	**-**	**-**	**-**
Receipts in retail sales	%, y-o-y, real terms	1.7	-1.1	1.2	5.5	7.7	6.1	4.5	2.7	**-**	**-**	**-**
PRICES												
Main price indicators												
Inflation rate	%, end-of-period	1.9	3.3	1.4	0.4	0.3	0.7	2.5	2.1	2.8	**-**	**-**
Consumer Price Index	%, y-o-y, average	1.9	3.3	1.4	0.4	0.3	0.7	2.5	2.1	2.8	**3.2**	**2.2**
Regulated prices (15.54%)*	%, y-o-y, average	4.7	8.6	2.2	-3.0	0.0	0.2	0.0	1.8	4.4	**3.0**	**2.2**
Food prices (incl. alcoholic beverages and tobacco) (26.98%)*	%, y-o-y, average	4.3	2.9	3.1	1.8	0.0	0.2	3.6	1.6	2.6	**3.3**	**1.7**
Core inflation (54.60%)*	%, y-o-y, average	-0.4	-0.3	-0.5	0.5	1.2	1.2	2.4	2.1	2.7	**2.6**	**2.2**
Fuel prices (2.88%)*	%, y-o-y, average	7.2	6.0	-2.1	0.2	-13.5	-8.5	6.7	6.3	-0.4	**0.1**	**-1.6**
Monetary policy-relevant inflation	%, y-o-y, average	1.9	2.1	0.6	0.2	0.2	0.5	2.5	2.1	2.9	**2.9**	**2.0**
GDP deflator	%, y-o-y, seas. adjusted	0.0	1.5	1.4	2.5	1.2	1.3	1.4	2.6	**3.5**	**2.7**	**2.1**
Partial price indicators												
Industrial producer prices	%, y-o-y, average	5.6	2.1	0.8	-0.8	-3.2	-3.3	1.8	2.0	2.6	**1.3**	**1.2**
Agricultural prices	%, y-o-y, average	22.1	3.3	-12.1	4.7	-6.2	-6.0	7.4	-0.2	5.8	**-3.2**	**1.2**
Construction work prices	%, y-o-y, average	-0.5	-0.7	-1.1	0.5	1.2	1.1	1.7	3.2	4.6	**-**	**-**
Brent crude oil (in USD/barrel)	%, y-o-y, average	38.2	0.7	-2.6	-8.5	-46.1	-16.0	21.7	30.5	-10.3	**-1.5**	**-6.6**
LABOUR MARKET												
Average monthly wage	%, y-o-y, nominal terms	2.5	2.5	-0.1	2.9	3.2	4.4	6.7	7.6	**7.2**	**5.7**	**5.2**
Average monthly wage	%, y-o-y, real terms	0.6	-0.8	-1.6	2.6	2.8	3.8	4.3	5.4	**4.3**	**2.4**	**3.0**
Number of employees	%, y-o-y	0.0	-0.1	1.6	0.6	2.2	2.1	1.7	1.6	**0.3**	**0.0**	**0.2**
Unit labour costs	%, y-o-y	0.5	3.3	1.0	0.8	-0.5	3.3	3.6	6.5	**4.6**	**3.3**	**2.5**
Unit labour costs in industry	%, y-o-y	0.8	5.7	5.1	-0.4	1.5	4.5	-0.9	7.0	**-**	**-**	**-**
Aggregate labour productivity	%, y-o-y	2.1	-1.1	-0.8	2.1	3.9	0.8	2.9	1.5	**1.6**	**2.2**	**2.5**
ILO general unemployment rate	%, average, age 15–64	6.8	7.0	7.1	6.2	5.1	4.0	2.9	2.3	**2.1**	**2.3**	**2.4**
Share of unemployed persons (MLSA)	%, average	6.7	6.8	7.7	7.7	6.5	5.5	4.2	3.2	2.8	**2.8**	**3.0**
PUBLIC FINANCE												
Government budget balance (ESA2010)	CZK bn, current prices	-109.9	-159.6	-51.1	-90.6	-28.3	34.3	78.8	58.4	**34.2**	**15.3**	**-3.6**
Government budget balance / GDP**	%, nominal terms	-2.7	-3.9	-1.2	-2.1	-0.6	0.7	1.6	1.1	**0.6**	**0.3**	**-0.1**
Government debt (ESA2010)	CZK bn, current prices	1606.5	1805.4	1840.4	1819.1	1836.3	1754.9	1749.5	1734.7	**1744.2**	**1744.0**	**1754.1**
Government debt / GDP**	%, nominal terms	39.8	44.5	44.9	42.2	40.0	36.8	34.7	32.6	**30.9**	**29.4**	**28.2**
EXTERNAL RELATIONS												
Current account												
Trade balance	CZK bn, current prices	75.5	123.8	167.0	220.0	188.0	245.7	259.1	217.3	**245.0**	**265.0**	**270.0**
Trade balance / GDP	%, nominal terms	1.9	3.0	4.1	5.1	4.1	5.2	5.1	4.1	**4.3**	**4.5**	**4.3**
Balance of services	CZK bn, current prices	81.3	77.6	70.4	55.7	78.0	107.6	127.7	120.7	**125.0**	**130.0**	**135.0**
Current account	CZK bn, current prices	-84.8	-63.3	-21.8	7.9	11.3	74.2	83.5	15.5	**20.0**	**25.0**	**25.0**
Current account / GDP	%, nominal terms	-2.1	-1.6	-0.5	0.2	0.2	1.6	1.7	0.3	**0.4**	**0.4**	**0.4**
Foreign direct investment												
Direct investment	CZK bn, current prices	-46.8	-121.3	7.4	-80.4	49.7	-186.5	-45.9	-91.3	**-70.0**	**-90.0**	**-60.0**
Exchange rates												
CZK/USD	average	17.7	19.6	19.6	20.8	24.6	24.4	23.4	21.7	22.9	**22.6**	**22.0**
CZK/EUR	average	24.6	25.1	26.0	27.5	27.3	27.0	26.3	25.6	25.7	**25.3**	**25.2**
CZK/EUR	%, y-o-y, real (CPI euro area), avg.	-1.9	1.5	3.5	6.3	-0.9	-1.3	-3.4	-2.8	-1.2	**-3.0**	**-1.3**
CZK/EUR	%, y-o-y, real (PPI euro area), avg.	-3.0	2.2	2.4	5.1	-0.2	0.1	-1.8	-1.5	-1.3	**-1.6**	**-0.4**
Foreign trade prices												
Prices of exports of goods	%, y-o-y, average	1.7	2.9	1.2	3.5	-1.7	-3.1	-0.1	-0.3	**0.9**	**-0.6**	**0.7**
Prices of imports of goods	%, y-o-y, average	4.3	4.2	-0.2	1.9	-1.9	4.0	0.9	-0.7	**0.3**	**-0.6**	**0.3**
MONEY AND INTEREST RATES												
M3	%, y-o-y, average	1.0	5.1	5.1	5.1	7.3	9.1	11.7	6.7	**6.4**	**6.6**	**9.1**
2W repo rate	%, end-of-period, CNB forecast = average	0.75	0.05	0.05	0.05	0.05	0.05	0.50	1.75	2.00	**2.14**	**1.92**
3M PRIBOR	%, average	1.2	1.0	0.5	0.4	0.3	0.3	0.4	1.3	2.1	**2.3**	**2.1**

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

2017				2018				2019				2020				2021			
QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV
1127.3	1154.8	1160.5	1167.9	1173.6	1180.5	1188.0	1198.6	1205.7	1213.0	1217.9	1221.0	1231.1	1238.0	1245.3	1254.0	1263.4	1272.7	1281.4	1290.4
2.9	5.1	5.1	5.1	4.1	2.2	2.4	2.6	2.7	2.8	2.5	1.9	2.1	2.1	2.3	2.7	2.6	2.8	2.9	2.9
3.6	4.8	4.6	4.4	4.1	3.3	2.9	2.4	3.1	3.1	2.6	2.6	2.4	2.1	2.7	2.9	2.5	2.6	2.7	2.7
1.7	1.2	0.8	1.5	2.9	3.0	4.2	3.6	2.6	3.1	3.8	3.6	3.8	3.1	1.9	2.3	2.5	2.7	2.9	3.0
-4.1	4.0	7.4	10.1	12.1	3.7	4.9	2.0	3.9	-0.1	-0.7	-0.8	-4.1	2.1	0.0	2.1	2.4	2.5	2.5	2.5
-0.7	5.5	5.0	6.1	8.5	7.0	7.7	6.9	3.5	1.3	-0.4	-0.9	-0.5	0.2	1.1	1.7	2.0	2.4	2.6	2.6
5.8	7.3	7.6	7.7	4.9	3.6	4.3	4.8	1.5	2.5	1.8	-0.1	2.5	2.0	4.0	5.6	6.3	6.4	6.5	6.4
3.6	5.9	7.1	8.4	7.3	5.1	6.3	4.9	2.0	1.9	1.0	-0.3	0.8	2.3	3.6	5.7	6.5	6.5	6.5	6.6
86.0	86.8	81.2	76.1	69.3	76.4	67.3	78.7	65.4	84.5	75.9	80.5	82.8	83.0	83.3	84.5	86.3	87.5	88.0	88.7
8.4	4.3	5.5	7.8	2.3	3.2	3.5	3.2	0.2	0.1	1.9	-	-	-	-	-	-	-	-	-
0.9	7.2	1.6	3.0	14.1	7.8	12.3	4.9	2.4	3.5	1.3	-	-	-	-	-	-	-	-	-
7.0	3.5	3.3	4.6	2.8	3.2	2.5	2.2	2.7	2.6	5.2	-	-	-	-	-	-	-	-	-
1.2	1.7	2.2	2.5	2.3	2.3	2.3	2.1	2.3	2.5	2.6	2.8	-	-	-	-	-	-	-	-
2.5	2.2	2.5	2.6	1.9	2.3	2.4	2.1	2.7	2.8	2.8	3.0	3.5	3.3	3.1	3.0	2.3	2.1	2.1	2.3
-0.5	-0.1	0.2	0.3	1.4	1.8	2.1	1.7	3.7	4.5	4.3	5.3	4.2	3.0	2.6	2.2	2.0	2.2	2.3	2.4
3.4	2.9	3.9	4.4	2.5	2.5	1.1	0.4	1.7	2.2	2.9	3.5	3.5	3.4	3.5	2.7	1.5	1.6	1.6	2.2
2.1	2.5	2.7	2.5	1.7	1.9	2.3	2.4	2.9	2.6	2.7	2.6	2.5	2.7	2.5	2.7	2.5	2.3	2.0	2.0
15.1	7.5	1.7	2.6	-1.6	5.0	12.4	9.5	1.3	2.5	-2.1	-3.1	4.1	-2.2	-0.8	-0.6	-2.0	-1.8	-1.6	-1.2
2.5	2.3	2.7	2.7	1.8	2.1	2.3	2.0	2.7	2.9	2.9	3.1	3.2	3.0	2.9	2.7	2.2	2.0	1.9	2.0
0.7	1.0	1.6	2.4	2.6	2.5	2.5	2.6	3.4	3.6	3.6	3.2	2.3	2.9	2.7	2.9	2.9	2.2	1.7	1.6
2.7	2.3	1.4	0.9	0.1	1.5	3.3	3.4	3.5	3.5	2.0	1.3	1.5	0.7	1.3	1.8	1.4	1.2	1.2	1.2
0.2	10.1	11.4	8.2	4.0	-3.4	-2.3	1.7	6.9	11.1	6.0	-1.8	-6.1	-5.1	-1.8	1.0	1.7	0.6	0.9	1.7
1.4	1.6	1.7	2.0	2.3	2.8	3.7	4.0	4.6	4.7	4.5	4.7	-	-	-	-	-	-	-	-
57.6	9.1	11.0	20.8	23.0	47.6	45.8	11.6	-4.8	-8.6	-18.3	-6.0	3.1	-6.3	0.6	-2.1	-8.5	-7.0	-5.8	-4.9
5.1	7.2	6.7	7.8	7.8	8.1	7.9	6.5	7.4	7.2	6.9	7.2	5.9	5.4	5.6	5.7	5.4	5.2	5.1	5.0
2.6	4.9	4.1	5.1	5.8	5.7	5.4	4.3	4.6	4.3	4.0	4.2	2.4	2.1	2.5	2.7	3.1	3.1	3.0	2.7
1.1	1.3	2.2	2.1	2.1	2.1	0.9	1.3	1.0	0.3	0.3	-0.4	-0.4	-0.1	0.2	0.2	0.2	0.2	0.2	0.2
3.5	2.9	3.1	4.7	5.9	7.7	7.1	5.3	4.9	4.5	4.3	4.9	3.9	3.3	3.2	2.7	2.8	2.6	2.4	2.3
0.7	-2.0	-2.8	0.3	4.2	8.8	8.4	6.6	5.2	4.2	4.5	-	-	-	-	-	-	-	-	-
1.4	3.7	3.1	3.6	2.6	0.5	1.4	1.4	1.3	1.9	1.9	1.5	2.3	2.1	2.0	2.4	2.4	2.5	2.6	2.7
3.5	3.0	2.8	2.4	2.4	2.2	2.4	2.1	2.1	1.9	2.2	2.2	2.4	2.3	2.4	2.3	2.5	2.4	2.5	2.4
5.1	4.2	3.9	3.6	3.7	3.1	3.0	2.9	3.1	2.6	2.7	2.7	3.0	2.6	2.8	2.8	3.1	2.8	2.9	3.0
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95.1	77.2	46.5	40.4	81.2	68.9	30.9	36.2	72.5	77.2	51.9	43.4	81.0	82.0	52.0	50.0	82.0	83.0	53.0	52.0
8.2	6.1	3.6	3.0	6.6	5.2	2.3	2.6	5.6	5.5	3.6	2.9	5.9	5.5	3.4	3.2	5.7	5.3	3.3	3.2
29.8	34.4	31.8	31.7	31.3	36.5	23.1	29.8	36.9	38.5	21.3	28.3	38.0	39.0	24.0	29.0	39.0	40.0	26.0	30.0
110.5	-2.1	-30.1	5.1	51.5	5.4	-52.4	11.1	43.9	31.2	-58.4	3.3	56.0	16.0	-59.0	12.0	58.0	13.0	-61.0	15.0
9.5	-0.2	-2.3	0.4	4.2	0.4	-3.9	0.8	3.4	2.2	-4.0	0.2	4.1	1.1	-3.9	0.8	4.0	0.8	-3.8	0.9
-40.3	-3.8	10.3	-12.0	7.7	-26.4	-37.1	-35.5	2.0	-15.4	-38.0	-	-	-	-	-	-	-	-	-
25.4	24.1	22.2	21.8	20.7	21.5	22.1	22.7	22.6	22.9	23.2	23.1	22.7	22.7	22.5	22.4	22.2	22.1	22.0	21.8
27.0	26.5	26.1	25.7	25.4	25.6	25.7	25.9	25.7	25.7	25.7	25.6	25.3	25.3	25.3	25.3	25.3	25.2	25.1	25.1
-0.7	-2.6	-4.3	-6.0	-6.3	-3.7	-1.6	0.8	0.2	-0.8	-1.4	-2.7	-3.3	-3.2	-3.1	-2.5	-1.0	-1.3	-1.4	-1.5
0.4	-1.3	-2.6	-3.7	-4.4	-2.1	-0.5	1.3	0.6	-1.1	-1.7	-3.0	-2.8	-1.3	-1.3	-0.7	0.0	-0.4	-0.6	-0.7
2.2	0.9	-1.1	-2.4	-4.4	-1.6	1.6	3.4	3.0	1.7	0.3	-1.3	-1.4	-1.0	-0.5	0.3	0.9	0.7	0.6	0.5
5.1	2.9	-0.9	-3.3	-6.1	-2.3	2.6	3.5	2.8	1.6	-1.2	-1.6	-0.9	-1.2	-0.2	-0.1	0.3	0.3	0.3	0.3
10.3	12.6	12.8	11.1	8.7	6.1	5.4	6.4	5.5	6.5	6.7	7.0	7.2	6.2	6.4	6.7	8.0	9.1	9.5	9.7
0.05	0.05	0.25	0.50	0.75	1.00	1.50	1.75	1.75	2.00	2.00	2.00	2.37	2.27	2.03	1.90	1.91	1.90	1.91	1.96
0.3	0.3	0.4	0.7	0.9	0.9	1.4	1.9	2.0	2.1	2.2	2.2	2.6	2.5	2.2	2.1	2.1	2.1	2.1	2.1

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