Monetary Policy Report

Spring 2021

Czech National Bank —— Monetary Policy Report —— Spring 2021

CNB CZECH NATIONAL BANK

This Monetary Policy Report was approved by the CNB Bank Board on 13 May 2021 and (with some exceptions) contains the information available as of 21 April 2021. By means of this document, the CNB fulfils its statutory duty to regularly inform constitutional officials and the public about monetary developments. Unless stated otherwise, the sources of the data are the CZSO or the CNB. All the reports published to date, along with the underlying data, are available on our website. A large part of the data we evaluate in our monetary policy decision-making can be found in the Chartbook, which is a parallel publication to the Monetary Policy Report.

Contents

— We maintain price stability

Under the Constitution of the Czech Republic and in accordance with primary EU law, the primary objective of the Czech National Bank is to maintain price stability. The central bank contributes to sustainable economic growth by maintaining a low-inflation environment. We have been pursuing price stability in an inflation targeting regime since 1998.

— We are transparent

Our monetary policy is based on a publicly announced inflation target of 2% and open communication with the public. We believe that by being transparent and predictable, the central bank assists households and companies in their economic decision-making.

— We look to the future

A decision made by the CNB Bank Board today will affect inflation 12–18 months ahead. The CNB's forecast describes the most likely future path of the economy as seen by our Monetary Department's economists. The forecast is produced four times a year and, along with a discussion of related risks and uncertainties, is the key, but not the only, input to the CNB Bank Board's monetary policy decisions.

— We decide on rates

The CNB's main monetary policy instrument is the two-week repo rate. The decision on the level of this rate sends an impulse through the financial market to the whole economy, ultimately affecting inflation in such a way as to keep it close to the target. The Bank Board meets eight times a year to discuss monetary policy issues. When making rate decisions, the members of the Bank Board discuss the current forecast and assess the newly available information and the risks and uncertainties of the forecast.

Governor's foreword

Dear Readers,

I see increasing grounds for optimism – albeit still quite cautious – in our current and future economic situation. After several waves of the pandemic and repeated shutdowns and reopenings of the economy, vaccination has at last been rolled out at a faster pace in recent weeks, reaching ever-younger age groups less threatened by the virus. Falling numbers of new cases, hospitalisations and deaths are enabling hospitals to return gradually to normal operation, and the time is nearing when the economic sectors most hit by the pandemic will start getting back to normal as well. Given the already high degree of immunisation, things should start looking up as the warm weather arrives, helping to curb the spread of the virus.

However, I don't want to create an illusion that the pandemic is behind us or that the coronavirus will soon disappear completely from our lives. I think it will stay with us for some time to come and will at least slow growth in countries where substantial progress has yet to be made with vaccination. Although the risk of the epidemic situation taking another turn for the worse remains high, primarily due to potential new strains of the virus, the overall economic risks are now much lower than before, partly because we are "learning to live with the virus" and because economies are capable of adjusting rapidly and effectively in a crisis.

We at the CNB expect the Czech economy to gradually recover from spring 2021 onwards, with consumer demand, which was very muted during the shutdowns, reviving markedly in the second half of the year. This will be aided by precautionary savings and above all by forced savings stemming from the restrictions in retail and services. Inflation will mostly be in the upper half of the tolerance band around our inflation target over the next two years. In hindsight, the coronavirus crisis lacked the features typical of a cyclical crisis and the disinflationary pressures proved weaker than we had expected at the start of the pandemic. Nevertheless, my colleagues on the Bank Board and I are convinced that the right time for raising interest rates again has not come yet and that rushing this step would be a mistake. Conversely, we regard a potential slight lag in increasing rates as a smaller error, owing mainly to the probable persistence of the above uncertainties and to fiscal consolidation, which is likely to start in 2022 and last for years.

While the slogan during the pandemic was "hands, face, space", I believe the period ahead will be characterised by "vaccination, reopening, recovery". I hope the spring issue of our Monetary Policy Report will make for an interesting and inspiring read.

On behalf of the Czech National Bank

Jiří Rusnok

Governor

The decision, and the current outlook and its risks

At its May meeting, the Bank Board kept the two-week repo rate unchanged at 0.25%, in line with the baseline scenario of the CNB's new macroeconomic forecast. This scenario expects interest rate stability initially, followed by a rise in rates from roughly the middle of this year onwards. The rise in rates will ensure stabilisation of inflation close to the target in the future as the adverse effects of the coronavirus pandemic subside thanks to emerging herd immunity. A more gradual fading of the pandemic, linked with lengthier lockdowns and a cyclical downturn at home and abroad, which could have anti-inflationary impacts, is a risk to the forecast. A risk in the opposite direction stems from the disruption to global production and supply chains and its pass-through to prices.

The winter wave of the pandemic caused by the spread of the UK strain of the coronavirus in the Czech Republic led the government to extend and further tighten its anti-epidemic measures in February and March. Retail and services stayed closed, resulting in a renewed decline of the domestic economy in Q1. Besides a continued fall in household consumption, the decline was intensified by a partial drop in the production and exports of domestic industry, which until recently had been showing a promising recovery from the first wave. The wobble in industry is due to the temporary disruption of supplies of some commodities, materials and components stemming mainly from currently overloaded global production and transport capacity, which we believe will be short-lived.

Given the still fragile pandemic situation, the Czech government can be expected to be very cautious about easing its anti-epidemic measures. Retail, services, recreational, sports and health activities, and tourism will thus continue to be restricted to varying degrees for much of this year. The initially slow process of vaccination of the Czech population is likely to pick up pace significantly in the months ahead, gradually helping to achieve herd immunity. It can therefore be expected that the economy will gradually return to normal and mobility and social contact will near their pre-pandemic levels.

The labour market cooling due to the ongoing shutdowns of the domestic economy is being reflected in a slowdown in fundamental wage growth (i.e. wage growth adjusted for statistical and one-off effects) in market sectors. The decline in employment and the increase in the jobless total also continued in early 2021, despite ongoing government programmes to protect jobs in the sectors affected.

Inflation fell close to the CNB's 2% target in 2021 Q1, mainly due to slower growth in food prices, which has been highly volatile recently. Administered prices meanwhile stopped rising amid a continued decrease in electricity prices. Conversely, motorists are probably not too happy about the current rise in fuel prices in reaction to the recent sharp increase in global crude oil prices. Core inflation, which had been the driver of headline inflation for the whole of 2020, remained elevated in Q1. This reflected an only slight opening of the output gap into negative territory last year. Much of the observed decline in the Czech (and foreign) economy was due to a short-term fall in potential output resulting from the shutdowns. Domestic inflation is currently being affected by continued pandemic-related cost pressures from the domestic and foreign economy, showing up mainly as faster growth in industrial producer prices.

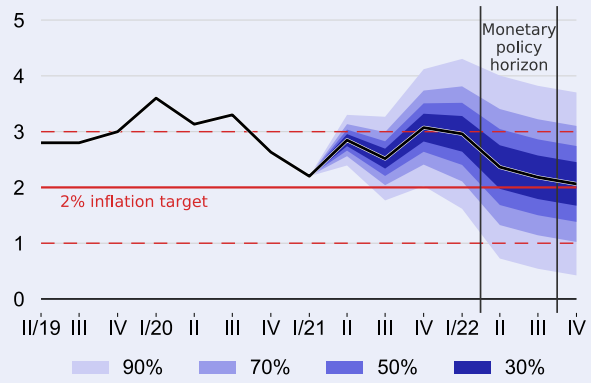
Annual GDP growth will temporarily shoot up to 6% in Q2, although mostly due to a low base. The Czech economy will not see truly robust and lasting growth until the anti-epidemic measures are relaxed more significantly during the second half of the year. Economic growth will benefit significantly from renewed strong household consumption, boosted among other things by goods and services purchases involuntarily deferred during the shutdowns. However, households' optimism will be partly curbed by a continued moderate rise in the jobless total and temporarily subdued wage growth.

The extension of existing government compensation schemes and the introduction of new ones will lead to continued fiscal expansion for most of this year. This is aimed mainly at protecting jobs in the sectors affected and supporting household incomes. To a lesser extent, household consumption will also be stimulated by a reduction in personal income tax introduced at the start of 2021. Next year, however, fiscal policy will turn restrictive due to the discontinuation of government support measures.

Exports of Czech firms will soon return to dynamic growth as the current problems in industry and international trade subside and external demand gradually recovers. Productivity can also be expected to start rising in mid-2021 as the anti-epidemic measures are lifted and the economy reopens.

Inflation will rise towards the upper boundary of the tolerance band in the quarters ahead, returning to the 2% target from above over the monetary policy horizon

headline inflation; y-o-y in %; confidence intervals in colours



The monetary policy horizon is 12–18 months ahead. This is the period when the Bank Board's current decision has the greatest impact on inflation.

Following a drop last year, the domestic economy will return to modest growth in 2021 and pick up more strongly in 2022

y-o-y changes in % (unless otherwise indicated); changes in pp compared to previous forecast in brackets

	2021	2022
Headline inflation (%)	**2.7** (0.7)	**2.4** (0.2)
GDP	**1.2** (-1.0)	**4.3** (0.5)
Average nominal wage	**4.8** (-0.4)	**3.7** (0.4)
3M PRIBOR (%)	**0.7** (0.0)	**1.6** (0.1)
Exchange rate (CZK/EUR)	**25.7** (-0.1)	**25.1** (0.2)

Green indicates a shift of the forecast to higher levels, or to a weaker koruna exchange rate, compared with the previous forecast. Red indicates a shift in the opposite direction.

The very complicated course of the pandemic in the Czech Republic so far and the extremely uncertain outlook for a return of the economy to normal are reflected in negative sentiment among Czech firms. Growth in corporate fixed investment will therefore recover only gradually this year. Total gross fixed capital formation growth will thus turn positive this year owing mainly to a renewed positive contribution of change in inventories amid continued buoyant growth in government investment.

Overall, Czech economic growth will only slightly exceed 1% owing to the adverse impacts of the pandemic in the first half of this year. Next year, GDP growth will pick up to more than 4%, due mainly to household consumption and investment reverting to steady, robust growth. The domestic economy will thus return to the pre-crisis level in late 2022 and the negative output gap will almost close. The recovery will also be aided by the CNB's monetary policy, which has been accommodative for some time now.

Inflation will rise close to the upper boundary of the tolerance band around the CNB's target in the next few quarters. In the months ahead, this will be due mainly to a jump in fuel prices. A rebound in food prices due to growth in world prices of agricultural commodities and domestic agricultural producer prices will have the same effect. The drop in core inflation will be slowed this year by the recent growth in foreign producer prices together with persisting solid domestic demand pressures and the price impacts of the reopening of the economy. A surge in consumer demand as the anti-epidemic measures are lifted will cause prices to go up, especially in services. By raising prices, service providers will try to improve their profit margins to make up at least partly for the low or zero sales they recorded during the shutdowns of the economy.

The fade-out of this year's high growth in fuel and food prices will help inflation to return gradually to the 2% target next year. Core inflation will also slow further as the supply and demand situation gradually gets back to normal. Monetary policy-relevant inflation, i.e. inflation adjusted for the first-round effects of changes to indirect taxes, will be below headline inflation over the entire forecast horizon owing to a further increase in excise duty on cigarettes. Besides the factors mentioned above, the decline in monetary policy-relevant inflation towards the target over the monetary policy horizon and its subsequent stabilisation will be supported by a gradual tightening of both the exchange rate and interest rate components of the monetary conditions.

The gradual reopening of the Czech economy, coupled with a recovery in external demand and the fade-out of the temporary problems in Czech industry, will foster continued firming of the exchange rate. The appreciating koruna will also reflect growth in the differential between domestic and euro area interest rates, as domestic market interest rates can be expected to rise from roughly the middle of this year onwards following an initial period of stability. This increase will reflect the monetary policy response to still appreciable inflation pressures amid a receding pandemic. Rates will continue to rise next year, with inflation anchored at the target and the economy gradually returning to the pre-crisis level.

I. ECONOMIC DEVELOPMENTS ABROAD

The extension of government measures to combat the pandemic and an initially sluggish pace of vaccination are adversely affecting our trading partners' economic performance in the first half of this year. On the other hand, the decline in external economic activity is being offset by strong demand for industrial production. Together with a marked rise in prices of crude oil and other commodities, this is being reflected in growth in inflation pressures in both the producer and consumer areas. However, these pressures will lessen next year. The stringent restrictive measures will be eased gradually as the pace of vaccination accelerates in the next few months, fostering a recovery of the euro area economy. The ECB's monetary policy will remain very accommodative.

The global economy will gradually recover from the pandemic due to the achievement of herd immunity and to huge fiscal and monetary stimuli

Global economic growth will start to accelerate in the second half of this year, when vaccination coverage in advanced countries will allow their economies to return gradually to normal, with most services reopening. The USA and China will grow the fastest (see Table I.1). A rise in long-term interest rates and an upward shift in their outlook can already be observed, especially in the USA and the UK (see Chart I.1).

According to leading indicators, the recovery of the global economy intensified at the start of the year, owing predominantly to industrial production. The large euro area economies and the USA, which are now recovering from the sharp downturns they recorded in the first half of last year, recorded the strongest growth. The recovery is being accompanied by strengthening international trade flows (see Chart I.2). However, disrupted supply chains and increasing inflation pressures across the product vertical remain a risk (see Box 1 below for details).

While industry around the world has now more or less recovered from the adverse effect of the pandemic and will continue to support the global economic recovery going forward, the services sector is still largely on its knees. Even in this sector, though, business is starting to pick up gradually, especially in financial services. The situation in services is improving above all in the USA and China, thanks in part to massive fiscal stimuli, while in the USA it is also being aided by rapid vaccination. Thanks to the Biden administration's USD 1.9 trillion stimulus approved in March, the fiscal impulse is set to contribute some 1.6 pp to US GDP growth this year. The measures are targeted at increasing households' disposable income and renewing infrastructure on a huge scale. The Japanese government has also provided considerable support to the epidemic-hit economy. Moreover, monetary policy remains highly accommodative in both countries. The fiscal impulse in China has been weaker than in the aforementioned countries.

Table I.1

The euro area economy will grow at a slower pace than the rest of the world this year due to a worse pandemic situation in the first half of the year

real GDP; y-o-y changes in %; source Refinitiv, CF

	2018	2019	2020 Q3	2020 Q4	2020	2021	2022
Euro area	1.9	1.3	-4.2	-4.9	-6.8	4.2	4.3
USA	3.0	2.2	-2.8	-2.4	-3.5	6.2	4.1
China	6.6	6.1	4.9	6.5	2.3	8.7	5.5
United Kingdom	1.3	1.4	-8.7	-7.3	-9.9	5.4	5.6

Chart I.1

In reaction to an elevated inflation outlook, longer-term yields have been rising since the start of this year, especially in the USA and the UK

ten-year government bond yields in %; source Bloomberg, Consensus Forecasts, CNB calculation

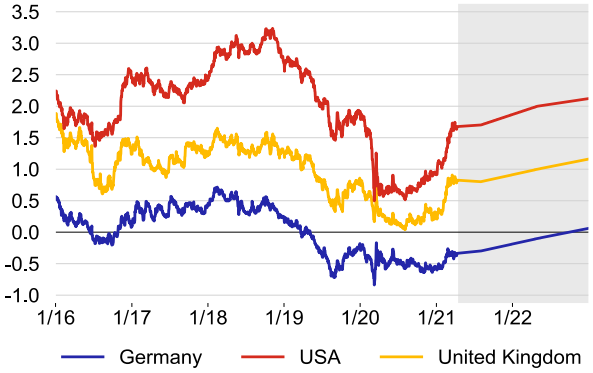
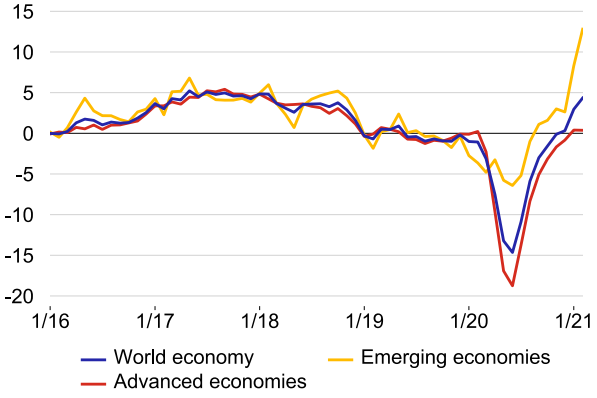


Chart I.2

Export activity, especially in emerging economies, is improving in line with the swift growth in industry around the world

y-o-y growth in goods exports in %; three-month moving averages; source CPB Netherlands Bureau for Economic Policy Analysis



Buoyant economic growth in the euro area will resume during the year owing to growing vaccination coverage and reopening economies

Economic activity in the effective euro area was adversely affected in 2020 Q4 by the autumn wave of the pandemic. This led to a further – but this time only modest – quarter-on-quarter decline in GDP. The effective euro area economy contracted by almost 6% overall last year, fluctuating below its potential, which has also been revised down significantly as a result of negative supply-side effects caused by forced government shutdowns. For this reason, the GDP decline observed last year fed through to the negative foreign output gap to lesser extent (see Chart I.3).

The euro area experienced the deepest decline in its economic cycle in 2020 Q2. By contrast, relaxation of restrictions owing to an improving epidemic situation led to a surge in supply (the potential of the economy) and a narrowing of the negative output gap in Q3. This was accompanied in large part by realisation of the effective demand of households, which made up at least partly for their unrealised consumption in the previous quarter. As the epidemic situation worsened again at the close of the year, the output gap turned more negative. Given the expected recovery, the economy will return to its potential output level over the forecast horizon, i.e. the negative output gap will gradually close.

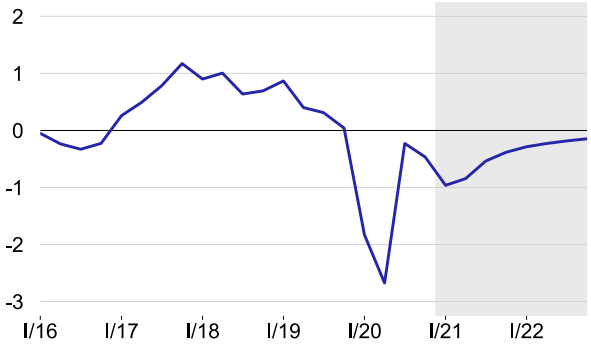
The positive expectations linked with the vaccination roll-out at the turn of the year were cooled by slow vaccination progress in Europe in the first few months of this year and the emergence of new strains of the coronavirus. The planned easing of the stringent anti-epidemic measures was thus gradually postponed. This had a negative effect for much of the first half of 2021.

Like other major economies, the euro area faced problems with delayed supplies of materials and components for industrial production and final goods. This disrupted production in industry and supplies to the consumer market. The quarter-on-quarter decline in GDP in the effective euro area will therefore be much deeper in 2021 Q1 than at the close of last year.[1] The economy will be 2.3% lower year on year. According to the forecast, Slovakia and Germany will be hit hardest, whereas Spain will record modest growth compared with the previous quarter.

Chart I.3

The slightly negative output gap will gradually close

output gap in effective euro area in %

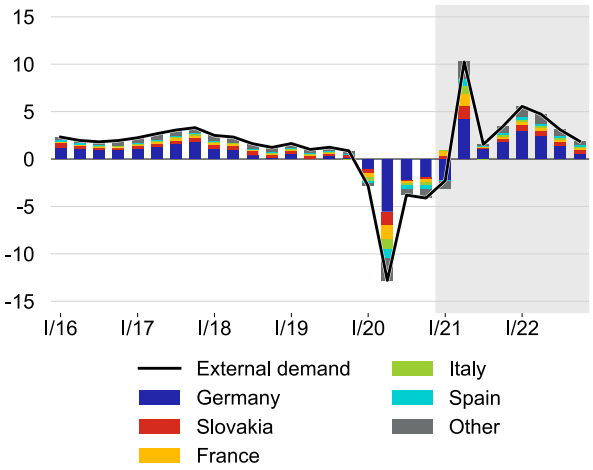


***In the effective euro area indicators of GDP, inflation and industrial producer prices**, Germany has a weight of around 50%. This is similar to its share in total Czech exports to the euro area. The weight of Germany in the euro area is meanwhile only one-third. This is the main difference between the effective indicators used in the forecast assumptions and the indicators normally used for the euro area proper.*

Chart I.4

After last year's contraction, the economies of all the key euro area countries will recover this year

annual GDP growth in % in effective euro area; contributions in pp; seasonally adjusted



1 According to Eurostat's flash estimate for some countries, GDP in the effective euro area fell by 1.2% quarter on quarter in 2021 Q1. This figure was not included in the forecast due to an earlier closing date.

COMPARISON WITH THE PREVIOUS FORECAST: Economic developments abroad

		2020	2021	2022	
GDP (in the effective EA)	y-o-y changes in % pp	**-5.9** (0.1)	**3.1** (-0.7)	**3.8** (-0.1)	The downward revision of the GDP forecast is due mainly to the worse course of the pandemic in early 2021 and to later and slower reopening of economies.
Consumer prices (in the effective EA)	y-o-y changes in % pp	**0.6** (0.0)	**2.0** (0.6)	**1.4** (-0.2)	Higher energy prices coupled with growth in industrial prices will be reflected in higher cons. price inflation this year. Next year, by contrast, inflation pressures will ease slightly more.
Producer prices (in the effective EA)	y-o-y changes in % pp	**-1.6** (0.0)	**3.5** (2.0)	**1.1** (-0.3)	A favourable trend in demand for miscellaneous manufactured articles together with higher prices of oil and other industrial commodities will foster higher prod. price inflation this year.
Brent crude oil price	USD/barrel	**43.2** (0.0)	**61.8** (9.6)	**59.1** (8.6)	The market curve for Brent crude oil futures has shifted higher compared to the winter forecast but retains a slightly falling slope.
3M EURIBOR	% pp	**-0.4** (0.0)	**-0.5** (0.0)	**-0.6** (0.0)	The 3M EURIBOR outlook is unchanged for this year and the next. The outlook for the shadow interest rate has shifted slightly higher.
Exchange rate	USD/EUR	**1.14** (0.00)	**1.21** (-0.01)	**1.22** (-0.01)	The euro-dollar exchange rate forecast remains roughly the same as in the winter forecast.

Note: Changes compared to the previous forecast in brackets (a green label indicates an increase in value and a red label a d ecrease)

The euro area will return to buoyant growth as the restrictions are eased and the services sector is reopened as expected (see Chart I.4). This is suggested by leading indicators and high-frequency indicators, which remain favourable despite industrial production having decreased in February. The manufacturing PMI firmed to a record high in March (due mainly to Germany, which is good news for Czech industry). This, coupled with an improvement in the services PMI, caused the composite indicator to move into the expansion band. Retail sales in the euro area also picked up in February. A continued positive trend is suggested by a major improvement in the European Commission consumer confidence indicator in March. The economic sentiment indicator also increased (see Chart I.5). Despite the renewed deterioration in the epidemic situation observed in France and Germany, these countries recorded higher electricity consumption in the first ten days of April.[2] The European economy is thus probably slowly getting used to life with the pandemic.

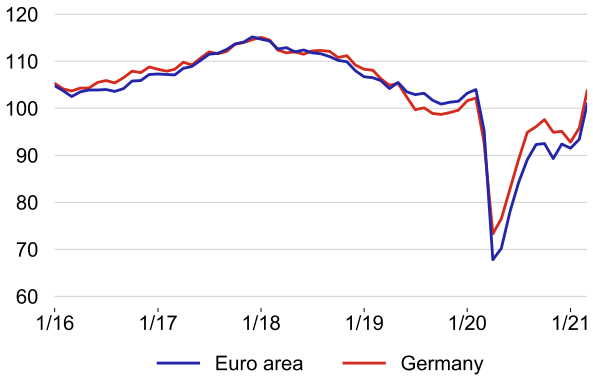
By comparison with the winter forecast, the growth outlook for the effective euro area in 2021 has been revised down due to the worse pandemic situation in early 2021. In Q2, however, other sectors besides industry will also start to contribute to the overall growth. As mentioned above, the negative output gap has been revised towards a significantly narrower gap compared with the winter forecast. This better matches

2 peak-hour temperature-adjusted electricity consumption according to an analysis conducted by the Bruegel think tank

Chart I.5

Confidence in the euro area economy rose sharply in March

Economic Sentiment Index (ESI); source European Commission



Industrial producer prices in the effective euro area *are one of the main forecast areas with regard to the external environment. They are monitored separately for categories closely linked with oil prices, such as crude oil and natural gas, coke and refined oil products, chemicals and chemical products, rubber and plastics, and basic metals. These categories are included in the energy component of industrial producer prices and have a share of about 20%. Price developments in the other industrial sectors correspond to the core component of foreign industrial producer prices, which is important, among other things, for assessing the price competitiveness of the domestic economy.*

the observed inflation pressures, especially in industry. In 2022, the recovery will accelerate slightly further. However, the risks of worse economic developments persist. Those risks stem from potential lower effectiveness of vaccines to new strains of the coronavirus and from growth in government bond yields, which would cause problems for most governments with rapidly rising debt levels.[3]

Higher oil prices and strong demand in industry will foster a marked rise in producer prices this year

The pressures on industrial producer prices will strengthen considerably this year (see Chart I.6). In addition to growth in prices of oil and other commodities, stronger demand for industrial goods will have an inflationary effect, reflected in faster growth in core producer prices. However, these one-off factors linked with the coronavirus pandemic will fade out at the close of this year (see Box 1). Annual industrial producer price inflation in the effective euro area will therefore slow towards 1% in 2022.

Consumer price inflation in the effective euro area will increase temporarily. Besides rising energy prices, this reflects one-off factors in the form of higher VAT and taxation of carbon dioxide emissions in Germany. In the second half of the year, the gradual reopening of most services should also push up prices. Inflation in the effective euro area will thus exceed 2% this year. Next year it will slow again after the above effects drop out.

The ECB reacted to the increase in longer-term government bonds yields by pledging to increase the pace of asset purchases under its existing programmes

The 3M EURIBOR outlook remains negative, while the shadow interest rate edged up in late 2020 and early 2021 (see Chart I.7). Prompted by the rise in government bond yields, the ECB decided at its March meeting to accelerate its asset purchases, which had been lagging behind the volumes approved in December 2020. Nevertheless, in the outlook, the effect of unconventional monetary policy on the 3M EURIBOR shadow interest rate is gradually diminishing given the expected gradual slowdown in the pace of purchases by the ECB.

In April, as vaccination accelerated and optimism rose in the euro area, yields increased further and their spreads vis-à-vis US government bond yields narrowed. As expected, the ECB left its monetary policy settings unchanged in April. It will continue to purchase assets under the Pandemic Emergency

3 The variant of more complicated fade-out of the pandemic, accompanied by some elements of cyclical decline, is described in the longer-lasting pandemic scenario in section IV.

Chart I.6

Foreign producer prices will jump this year, with both main components contributing

annual industrial producer price inflation in effective euro area in %; contributions in pp; y-o-y changes in Brent crude oil price in %

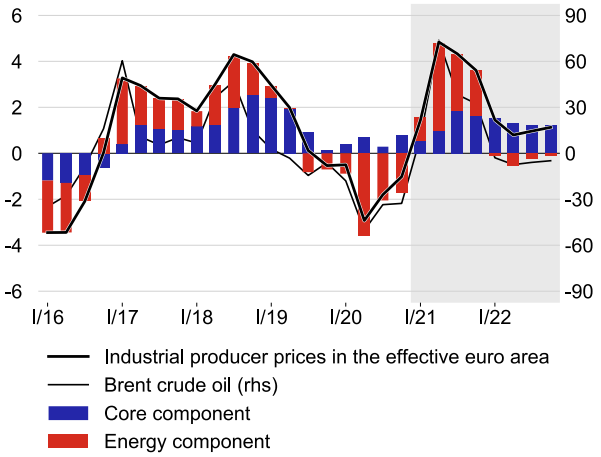
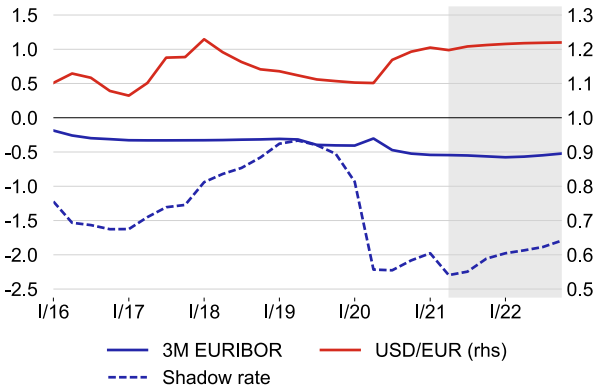


Chart I.7

The euro area interest rate outlook reflects expectations of still highly accommodative ECB monetary policy

3M EURIBOR and shadow interest rate in %; USD/EUR nominal exchange rate



The shadow ECB interest rate *is an estimated hypothetical rate combining the effects of the ECB's conventional and unconventional monetary policy instruments into a single aggregate indicator.*

Purchase Programme at an increased pace until at least the end of June. The euro will strengthen slightly against the dollar.

BOX 1 Elevated inflation pressures in industry grip the world economy

Since the onset of the autumn wave of the coronavirus pandemic, different trends have been visible around the world in industry and in certain services sectors, which have been hit harder by government measures to limit social contact and curb the contagion. These restrictions have been reflected in growth in forced (involuntary) savings by households and redirection of household demand from services to goods. The changes in consumption behaviour have been amplified by restrictions on the movement of people, massive use of working from home and the introduction of distance learning at schools. These global processes have resulted in a swift recovery (and even a short-term overheating) of industry, accompanied by strong inflation pressures. Global industrial production returned to the 2019 average as early as November 2020, due mainly to emerging economies (China in particular). Consumer demand, especially for durable goods, had already recovered by June 2020 in year-on-year terms both in the USA and the euro area, amid a persisting contraction in GDP.

With industry still making up for the loss of production it recorded in the first half of 2020, the increased global demand for miscellaneous manufactured articles has run into capacity constraints as regards the production of some specific components. One example is a shortage of semiconductors and plastics, which is slowing production in the automotive industry and elsewhere. Moreover, chip production has been hit by a fire at a plant in Japan and by swings in the weather in Texas and Taiwan. All sectors reliant on central processing units, which most household appliances contain nowadays, have thus been affected. The current shortage of plastics is due to an overstretched chemical industry. Demand for packaging materials has risen as well, partly because of an increase in parcel shipments. Capacity constraints in freight services have also proved to be a bottleneck, causing delays in supplies of commodities, materials and components and subsequent production shortfalls, especially in just-in-time manufacturing sectors. Freight rates have therefore rocketed since the end of last year because of a lack of free containers in Asian ports (see Chart 1). Moreover, the calming of the situation was postponed in late March when a giant container ship blocked the Suez Canal for a week.

Chart 1

Container transport prices soared in late 2020

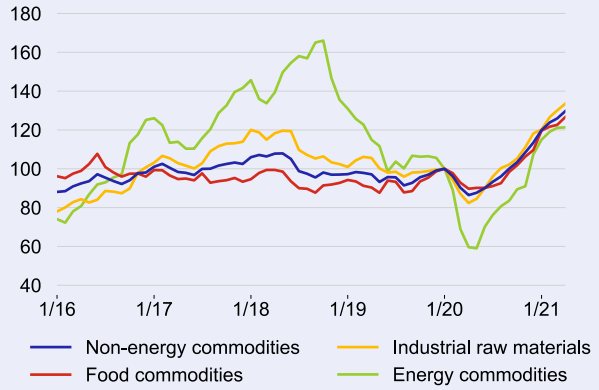
USD/container; Freightos Baltic Index (FBX); source Refinitiv Datastream

Another consequence of the coronavirus pandemic is growth in dollar prices of commodities, which have been rising almost continuously since May 2020. In March 2021, the non-energy commodity price index was up by almost 46% (the food commodity price sub-index by 37% and the industrial commodity price sub-index by 58%) and the energy commodity price index by as much as 109% (see Chart 2). Initially, these rises merely offset the previous falls caused by the outbreak of the pandemic in China and the drastic drop in demand there. Currently, however, prices of non-energy commodities are at several-year highs. Besides higher demand from manufacturing, their growth has been driven by a weakening dollar and accommodative central bank monetary policies combined with fiscal stimuli. On the supply side, the growth in commodity prices has been bolstered by sudden production outages (due, among other things, to quarantines) and intentional oil production caps introduced in OPEC+

Chart 2

Non-energy commodity prices are at several-year highs

indices based on prices in USD (1/20 = 100); source Bloomberg; CNB calculation



countries (see Chart 3). Although the growth in prices of most commodities has slowed recently, the ensuing price pressures in manufacturing remain strong.

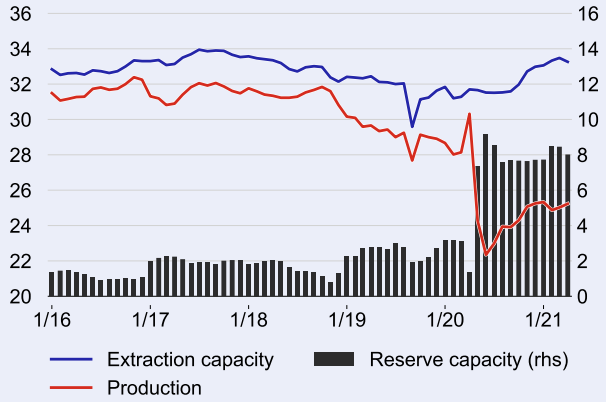
Industrial firms initially absorbed the rising costs in their margins. As demand has grown, however, they have started to reflect them in their final production prices. This is gradually pushing up the prices of both consumer and capital goods, and it is only a matter of time before these tendencies pass through to prices of related services.

The elevated inflation pressures have already shown up on financial markets as a rise in longer-term bond yields. Short-term interest rates nonetheless remain low, as central banks are keeping their monetary policies highly accommodative due to concerns that the pandemic will continue to have negative impacts.

Chart 3

Reduced extraction has fostered growth in oil prices

extraction capacity and oil production in OPEC+ countries; millions of barrels a day; source EIA



The CNB's current forecast is based on the assumption that the elevated foreign inflation pressures in industry are temporary and will fade out by the end of this year. As restrictive government measures are eased and social contact is renewed, part of global demand will be redirected back to the services sector. Together with demand for goods being gradually satisfied, this will cause the inflation pressures in the production sector to lessen. Deferred consumption is also more likely to be channelled back into services, which have been restricted the most during the pandemic. As vaccination progresses and the pandemic recedes, we expect the problems with supplies in currently overloaded global production chains to subside. The current difference between the trends in industry and services should therefore disappear as economies return to normal. This will lead to a decline in inflation pressures in the production sector next year.

II. THE REAL ECONOMY AND THE LABOUR MARKET

The Czech economy continues to suffer from the impacts of the coronavirus pandemic. Government shutdowns have been constraining much of wholesale, retail and services with short breaks for over a year now, and the same will largely apply even after a partial easing in May. Household consumption will thus be subdued in the first half of the year, despite continued government support. Besides the shutdowns, economic performance is being adversely affected by supply shortfalls in global production chains. This is having an adverse impact on some domestic industrial sectors. The labour market will cool slightly further in the coming quarters and not recover until next year. The economy will be able to reopen in the next few months as vaccination coverage increases, contributing massively to achieving herd immunity. Household and corporate sentiment will simultaneously improve. Household spending, deferred during the pandemic, will foster faster growth in household consumption, which will become a driver of the economic recovery. Industry will start running smoothly again in the second half of the year.

The pandemic and the related measures will continue to dampen domestic economic activity in the first half of this year[4]

The direct impacts of the fight against the pandemic on economic growth will be smaller than last year (see Chart II.1). This stems mainly from the situation in industry and related sectors, which have escaped the impacts of the pandemic for the last six months or so. Like at the end of last year, the government's anti-epidemic measures have mainly been affecting wholesale, retail and services, which are closely linked to household consumption. These sectors are also trying to cope with the adverse situation, even though they have limited room to do so. Sales have moved largely onto the internet and firms are using walk-up windows and various forms of delivery.[5] The direct economic impacts of the fight against the pandemic were smaller in Q1 than in spring 2020, even though the Stringency Index has been higher so far this year than a year earlier (see Chart II.2).

The first wave of relaxation of pandemic measures with a major economic impact will come in May, both in retail and services. The measures will continue to be relaxed as the vaccination coverage rate rises, reflecting increasing deliveries of vaccines to the Czech Republic (see Chart II.3). Even so, the government's cautious approach to easing measures means that the level of restrictions will remain higher in the summer months than last year. The achievement of herd immunity during the summer will enable most

Chart II.1

Government anti-epidemic measures are mainly affecting wholesale, retail and services, while industry has hardly been affected by the administrative restrictions at all

impact of pandemic on gross value added index; contributions in pp; February 2020 = 100

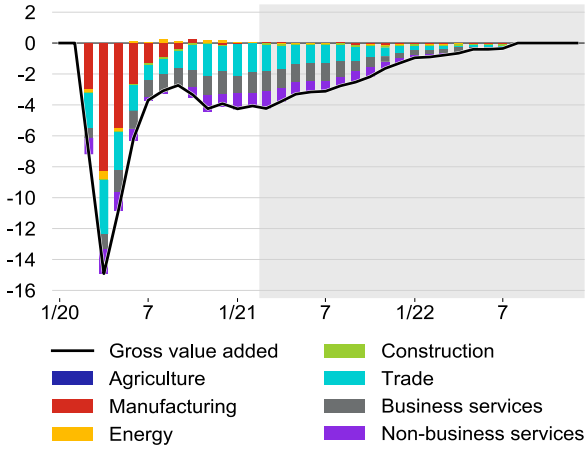
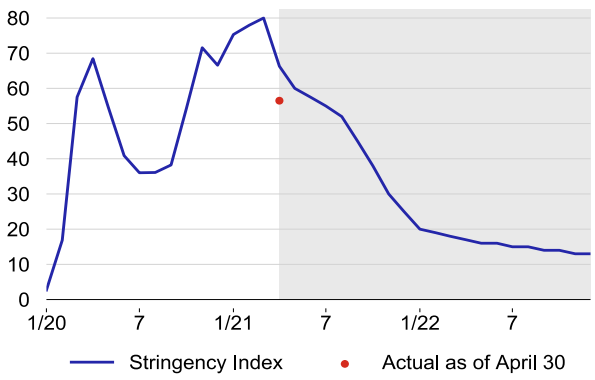


Chart II.2

After peaking in March, the Stringency Index started to decline and will continue to do so for the rest of the year; however, the restrictions during spring and summer 2021 will be rather greater than last year

average monthly values of daily index
https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker



4 According to a preliminary CZSO estimate, Czech GDP declined by 0.3% quarter on quarter in 2021 Q1. This figure was published on 30 April 2021 and is not part of the forecast due to the earlier closing date of the latter. As usual, the supply and demand component structure of GDP is not available for the preliminary estimate.

5 Moreover, part of activity in the services sector has probably moved into the unofficial economy.

measures to be lifted before the end of the year. Some preventive measures (such as the wearing of masks in public buildings) will remain in effect next year, but their direct economic impact will be negligible.

Economic activity will recover appreciably in the second half of the year as retail and services reopen and industry begins to run smoothly again

Quarterly GDP growth will be subdued in the first half of the year and later recover quickly. Annual growth will be highly volatile throughout 2021, briefly leaping to 6% in Q2 due mostly to a low base (see Chart II.4). In whole-year terms, the Czech economy will grow by more than 1%. The slowly receding pandemic and the related anti-pandemic measures will continue to drag on household consumption in the first half of the year. This will be counteracted by fiscal policy, which, unlike in the previous forecast, is expansionary this year as well. Government consumption will also be rather higher.

Household consumption expenditure will increase quickly as the economy reopens significantly during the summer (see Chart II.5). People's spending will thus also be a driver of economic growth next year as sentiment improves. This will be aided by a gradual turnaround on the labour market and the release of forced savings created during the shutdowns. Growth in household consumption will pick up further next year amid only negligible direct economic impacts of the pandemic.

Besides government shutdowns, the production and export performance of the domestic economy is currently suffering due to problems with supplies of materials and components to industrial sectors because of overloaded global supply chains (see Box 1 in section I). In the Czech Republic, this applies mainly to the automotive industry, but other sectors (such as manufacture of computers and consumer electronics) have also been hit hard. This will lead to net exports making a negative contribution to quarterly GDP growth, which is lower than in the winter forecast, in the first half of the year. We expect these global supply chain issues to disappear and exports and industry to recover in the second half of the year

The persisting shutdowns are continuing to lower economic potential; a temporary deterioration in industry opened the output gap further into negative territory

The shutdowns in wholesale, retail and services will continue to negatively affect potential output, whose growth will thus remain subdued in the first half of the year. In addition, worsening sentiment among households and firms in the winter months, with the latter being due also to issues in international goods trade, is reflected in a more negative output gap (see Chart II.6). Growth in potential output will pick up in the second half of the year as the economy reopens. As

Chart II.3

After a slow start in early 2021, the rate of vaccination will pick up in the spring and summer thanks to increased supplies, especially from Pfizer/BioNTech; a large part of the population will be vaccinated by the end of the summer

deliveries of vaccines to Czech Republic and course of vaccination– left-hand scale: vaccination rate in %; right-hand scale: numbers of doses in thousands by manufacturer; source Ministry of Health

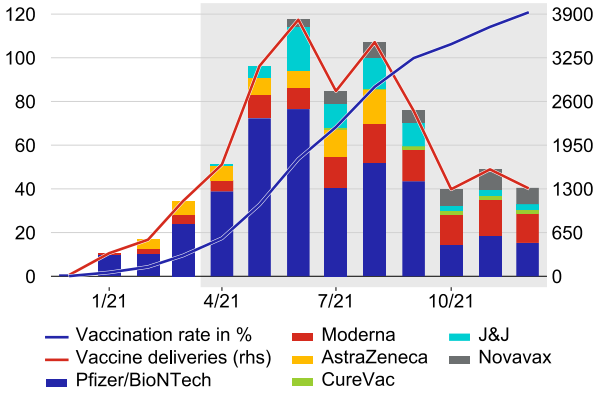


Chart II.4

GDP will grow only slightly this year overall and its annual growth will be highly volatile during the year; economic growth will pick up appreciably next year

annual percentage changes; seasonally adjusted; confidence intervals

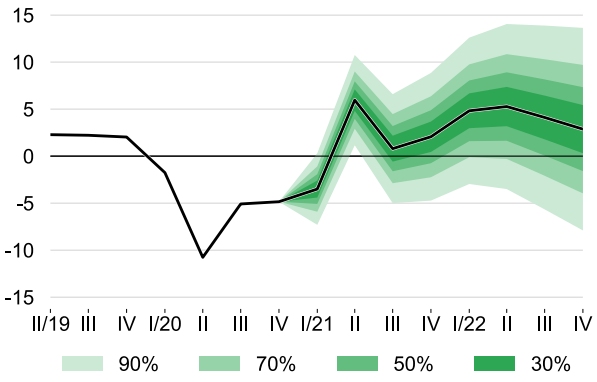
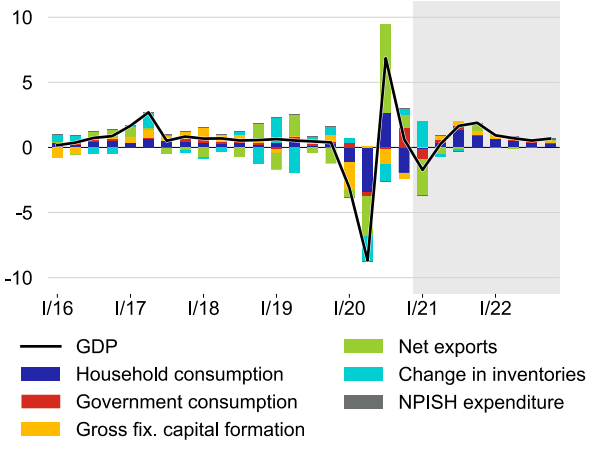


Chart II.5

GDP growth will recover in the second half of the year due mainly to household consumption

GDP; q-o-q changes in %; contributions in pp; constant prices; seasonally adjusted



the problems in industry clear up and corporate and household sentiment improves, the output gap will narrow at the same time, almost closing at the far end of the forecast.

The estimate of the phase of the economic cycle has shifted appreciably compared to the winter forecast. The change in view is due to the developments observed previously during the pandemic. It turns out that the Czech (and foreign) economy coped with the pandemic beyond expectations last year. Aggregate demand fell only to a limited extent, aided by easy fiscal and monetary policies, with households partially transferring their spending from services to (miscellaneous manufactured) articles, real estate, housing-related goods and so on. The domestic labour market cooled partly, but not significantly. This was reflected in only gradually decreasing inflation, which remains above the target. For this reason, the domestic (and foreign) output gap has been revised towards a smaller widening into negative territory, i.e. a less anti-inflationary effect, during last year.

Fiscal policy, which is continuing to dampen the decline in economic activity this year, is still playing an important role in the course of the pandemic

Real government consumption will continue to rise this year on average, albeit more slowly due to last year's high expenditure (see Chart II.7). Its nominal non-wage component will be supported by extraordinary vaccination and testing-related health care spending. Planned non-wage expenditure that was postponed due to the coronavirus will also be made. By contrast, real growth in government consumption will be dampened by continued growth in its deflator, which will reflect extraordinary second-wave bonuses paid to health and social services workers.

Following last year's exceptionally high contribution of fiscal policy to GDP growth (around 1.5 pp), this year's fiscal impulse is also forecasted to be strongly positive. It will continue to be implemented predominantly via support for household income and consumption (see Chart II.8). Compared to the winter forecast, which expected the fiscal stimulus to start to subside this year, the spring forecast contains additional measures approved on an ongoing basis to support households and firms in response to the continuing pandemic. The CNB modified the fiscal impulse calculation methodology and switched to using partial fiscal multipliers (see Box 2).

Chart II.6

The economy will be below its potential throughout 2021; the negative output gap will almost close next year

output gap in % of potential output

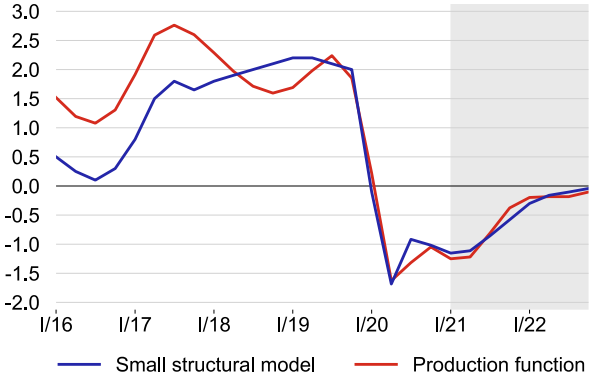


Chart II.7

Household consumption will start to rise quickly again this year; growth in government consumption will be positive most of the time

household and government consumption; y-o-y changes in %; constant prices; seasonally adjusted

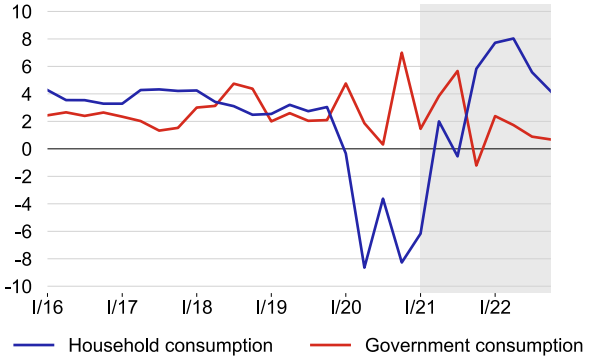
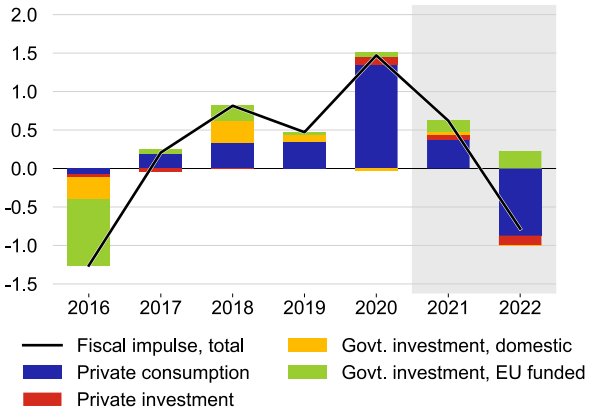


Chart II.8

The contribution of fiscal policy to GDP growth will remain positive this year, mainly via support for household income and consumption

fiscal impulse; contributions to GDP growth in pp



BOX 2 Partial fiscal multipliers – a new feature of the CNB forecast

Identifying the impacts of fiscal measures on economic activity is an important part of our analytical and forecasting work. To quantify the effect of fiscal policy on economic activity in the CNB forecast, we primarily work with the fiscal impulse calculated using the bottom-up method. One of the two key parameters used to calculate it is the value of the fiscal multiplier.[1]

To calculate the fiscal impulse, we previously (since 2005) used a single fiscal multiplier of 0.6, which we expertly adjusted where necessary. Specifically, in the previous forecast we worked with a fiscal multiplier of 0.6 lowered to 0.3 for changes in labour taxation (in response to the abolition of the super-gross wage and the increase in the tax deductible bonus for individuals).

However, experience has shown that this approach has its limits. The main motivation for enhancing our approach is to take account of the fact that different discretionary measures have different effects on economic activity. We know from the literature[2] and from our own economic research that revenue-side discretionary fiscal measures have less effect on GDP growth than expenditure-side ones with the same budgetary impact. The impacts of fiscal measures also differ across expenditure and revenue categories. Moreover, the structure of discretionary measures plays an important role at times such as the current coronavirus pandemic, when major discretionary changes are being made on the government revenue and expenditure side. To calculate the fiscal impulse, we therefore now use partial fiscal multipliers for the individual discretionary changes on the government revenue and expenditure sides.

The partial fiscal multiplier *represents the degree to which fiscal discretion in a given revenue or expenditure category affects real GDP.*

Table 1

Values of partial fiscal multipliers for the main government revenue and expenditure categories

Revenues	
Social contributions paid by the employer	0.4
Excise duties	0.3
Labour taxation	0.3
Capital taxation	0.1
Expenditures	
Government investment	0.7
Government consumption	0.6
Other expenditures	0.5

Note: The government consumption multiplier is relevant to the wage component of government consumption entering the calculation of the fiscal impulse. Non-wage consumption expenditure is taken into account in the model forecast through the direct channel of government consumption.

We configured the partial fiscal multipliers – which we use for the first time ever in this year's spring forecast – for the individual government revenue and expenditure categories using values (see Table 1) based on available empirical estimates for the Czech Republic.[3] The settings of the partial multipliers respect the prevailing view in the literature that expenditure multipliers are higher than revenue ones. We assume that the highest government expenditure multiplier effect is generated by additional government investment. This is because, in addition to affecting aggregate demand, government investment improves the production potential of the economy and boosts private investment growth. An increase in government investment thus has a bigger macroeconomic impact on real GDP than an increase in social benefits of the same amount. By contrast, the lowest multiplier effect is produced by a change in capital taxation on the government revenue side. The low multiplier results from the fact that investment responds to the change in capital taxation but the resulting capital stock adjustment response is small due to the additional costs of changing the investment amount.

The switch to calculating the fiscal impulse using partial fiscal multipliers means that the estimated effect of fiscal policy on economic activity in the past is slightly lower on average. This is because partial fiscal multipliers, which are mostly lower than the single multiplier of 0.6 used up to now, are applied to discretionary fiscal measures. The methodological change leads to a 0.3 pp decrease in the estimated positive fiscal impulse for 2020. However, the estimated impact of last year's discretionary budgetary measures on economic activity remains high (at 1.5 pp on real GDP growth), reflecting the strongly expansionary (stabilising) effect of fiscal policy last year.

—

1 This topic is analysed in the box *The fiscal impulse in CNB forecasts* in Monetary Policy Report – Winter 2021.

2 See, for example, Coenen, G. et al. (2012): *Effects of fiscal stimulus in structural models*, American Economic Journal, Macroeconomics, 4(1): 22–68.

3 The revenue-side and government consumption multiplier values are set on the basis of the CNB's satellite fiscal DSGE model estimated for the Czech Republic (Ambriško, R., 2016: *Growth-friendly fiscal strategies for the Czech economy*, CERGE-EI Working Papers wp563). The government investment multiplier is set by expert judgement based on theory and available empirical estimates.

Fiscal stabilisation measures are mitigating the pandemic's adverse effects in the household sector

Household consumption kept falling in Q1 due to the ongoing shutdowns. The restrictions paralysed wholesale and retail, restaurants and a wide range of services most of all. Worse consumer sentiment also had a negative impact. Fiscal support measures had the opposite effect, but, given the limited options for buying goods and especially services, we expect the fiscal stimulus to be partially delayed to the rest of the year.

Thanks to government support, the continued labour market cooling has so far been reflected only slightly in nominal gross disposable income growth (see Chart II.9). Supported by recovering contributions of wages and salaries and entrepreneurs' income, it will significantly outpace household consumption growth until mid-2021. The saving rate will thus rise further to historical highs. In the second half of the year, it will start to decline (and consumption growth will overtake disposable income growth) as the economy reopens. Despite falling gradually, though, the saving rate will remain noticeably above the pre-pandemic level at the end of 2022, as households will draw only partially on their previous forced and precautionary savings (see Box 3).

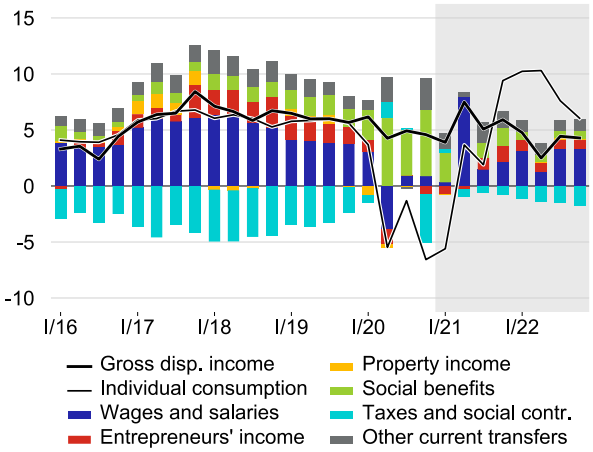
As the economy reopens, consumption-hungry households will begin to return to their usual shopping habits and will also realise part of their previously involuntarily deferred consumption

Despite a partial easing of anti-pandemic measures in Q2, a large part of services will remain closed. This will temporarily slow the recovery in household consumption growth. The situation will change in the summer, when household consumption growth will surge as vaccination coverage rises and the measures are eased further, this time significantly. Household consumption will be dampened only marginally by government restrictions next year and will grow by more than 6% overall, despite growth in market interest rates. Household consumption will reach the pre-pandemic level at the end of 2022.

Chart II.9

Disposable income will grow at a similar pace overall this year as last year and will lag well behind household consumption growth from the end of the year onwards

household consumption and gross disposable income; y-o-y changes in %; contributions in pp; current prices; seasonally unadjusted



BOX 3 The pandemic has dramatically increased the household saving rate

The ongoing coronavirus pandemic and the related government measures have been reflected in social and economic life since last spring. Due to shutdowns of retail and services, Czech households had no other option than to curb their consumer appetite in spring 2020. Amid a continued solid labour market situation, these circumstances have led the household saving rate to soar to an unprecedentedly high level (see Chart 1). In this box, we take a closer look at the structure of savings and offer our view of how part of them will be treated through deferred consumption.

For the purposes of our analysis, we divide savings into current and additional savings. Current savings are savings which households would create over the usual business cycle even if there were no pandemic. We calculate this part of savings as the long-term average savings rate times real gross disposable income (RGDI). We then deduct current savings from total observed savings to obtain the total additional savings households have created due to the pandemic. In the pandemic lockdown period, i.e. in 2020 Q1–2021 Q1, households set aside additional savings totalling around CZK 260 billion at constant prices (see Chart 2).

We then subdivide additional savings based on households' motive for creating them, specifically into precautionary and forced savings. Precautionary savings are created by households due to the fear of loss of employment or a drop in income during the pandemic and are largely cyclical in nature. This buffer is therefore very unlikely to be released even after shops and services reopen in the foreseeable future, due to expectations of a further, if only partial, cooling of the labour market. Given the high level of government support provided to economic agents during the pandemic and the low level of interest rates, which is discouraging the creation of additional savings, precautionary savings are, based on our analysis, relatively small. We thus ascribe most of the excess to forced savings created solely as a result of closed shops and services. We estimate them at around CZK 200 billion.

We identified the sizes of the two components of excess savings using a regression model[1] on a sample of data from the pre-pandemic period. The precautionary component is obtained by subtracting current savings from the product of the model-based estimate of the saving rate and observed RGDI. Forced savings are therefore given by difference between observed savings and the sum of current and precautionary savings.

We expect that part of forced savings will be used for deferred (additional) consumption from the middle of

Chart 1

The saving rate will start to fall after the pandemic measures are eased, but it will not have returned to the pre-pandemic level by the end of 2022

saving rate in %

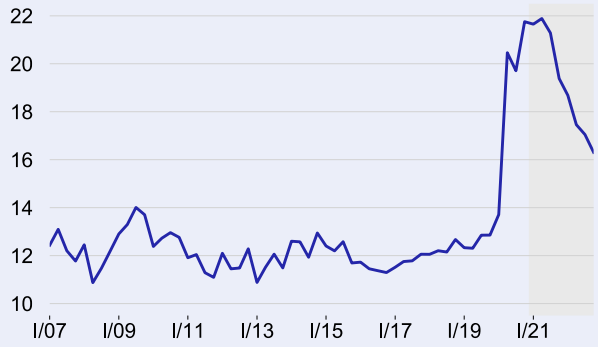
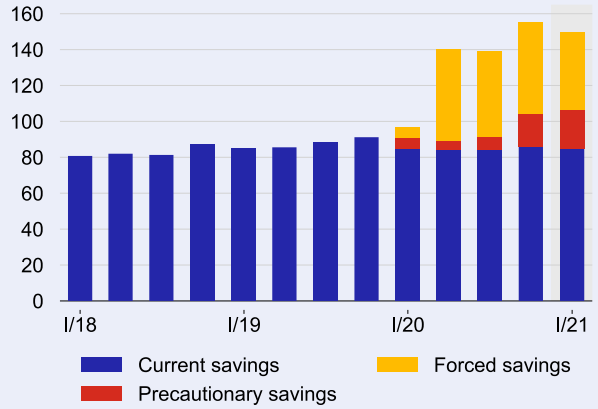


Chart 2

Forced savings due to the inability to spend on consumption during shutdowns account for the bulk of additional household savings

household savings in CZK billions; constant prices; seasonally adjusted



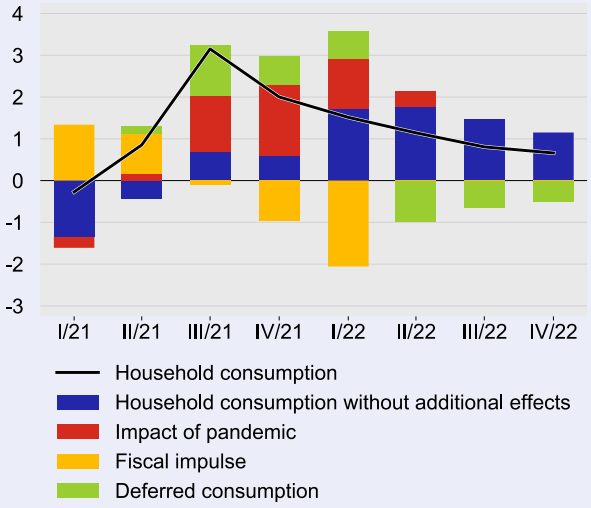
this year onwards, especially once shops and services reopen. People will spend mainly on items such as clothing and footwear, household equipment, travel, recreational, cultural, sports and entertainment services and restaurants. Based on the weights of these items in the consumer basket and the amount of forced savings, we estimate that deferred consumption will run to more than CZK 50 billion.

As for the time frame over which deferred consumption will materialise, we expect it to increase gradually until the start of next year and then diminish (see Chart 3). Quarter-on-quarter household consumption growth will be affected by other factors as well. In the second half of 2021, consumption will pick up due to the return of individual sectors to normal, as shown by the contribution of the pandemic. Household consumption without additional measures will simultaneously act in the same direction, reflecting the prospect of an imminent turnaround in the labour market situation. The labour market will start to improve at the start of next year. By contrast, the fiscal impulse will begin to dampen household consumption growth once government support measures are discontinued.

Chart 3

The effect of deferred consumption will be strong in the second half of this year

household consumption; q-o-q changes in %; contributions in pp; constant prices; seasonally adjusted



Note: The impact of the pandemic represents the effect of shutdowns of the economy and the subsequent return to normal consumer behaviour, in terms, for example, of how often people go to the cinema, restaurants and so on. On top of that factor, there will be the effect of deferred consumption, i.e. people going to the cinema, restaurants and so on temporarily more often than before the pandemic.

1 The analysis is based on Mody, A., Ohnsorge, F., & Sandri, D. (2012). *Precautionary savings in the Great Recession*, IMF Economic Review, 60(1): 114–138. The explained variable in the model is the saving rate. The expected unemployment rate, the expected RGDI, the wealth-to-RGDI ratio and the 3M PRIBOR enter the model as explanatory variables.

COMPARISON WITH THE PREVIOUS FORECAST: The real economy and the labour market

		2020	2021	2022	
GDP	y-o-y changes in % pp	**-5.6** (0.2)	**1.2** (-1.0)	**4.3** (0.5)	The GDP forecast for this year has been revised downwards due to the longer duration of the pandemic and the wobble in industry recorded in the first half of this year.
Household consumption	y-o-y changes in % pp	**-5.2** (-0.2)	**0.2** (-0.8)	**6.3** (1.5)	Growth in household consumption will be more subdued this year than in the winter forecast, reflecting longer-lasting and broader-based shutdowns and their more gradual fade-out.
Government consumption	y-o-y changes in % pp	**3.5** (1.0)	**2.4** (0.7)	**1.4** (-0.8)	Compared to the winter forecast, growth in government consumption is slightly higher this year due to additional health care expenditure and somewhat lower next year.
Gross fixed capital formation	y-o-y changes in % pp	**-8.1** (0.8)	**-1.0** (-0.5)	**4.0** (-0.3)	The forecast for fixed investment is slightly lower this year and the next due to a worse initial situation in industry.
Net exports	contr. to GDP growth pp	**-0.3** (0.1)	**0.0** (-1.1)	**-0.1** (0.4)	Temporary overloading of global production chains has caused the export performance of industry to decline and pushed down the expected contr. of net exports to GDP this year.
Employment	y-o-y changes in % pp	**-1.3** (-0.1)	**-0.9** (0.0)	**0.5** (0.0)	The outlook for employment is unchanged from the previous forecast.
Unemployment (ILO)	% pp	**2.6** (0.1)	**3.5** (-0.1)	**3.5** (0.0)	A more moderate cooling of the labour market will be reflected in slightly lower growth in the unemployment rate this year compared to the winter forecast.
Average monthly nominal wages	y-o-y changes in % pp	**4.4** (1.2)	**4.8** (-0.4)	**3.7** (0.4)	The minor revision to wage growth in the spring forecast is linked mostly with statistical effects.

Note: Changes compared to the previous forecast in brackets (a green label indicates an increase in value and a red label a d ecrease)

The labour market will cool slightly further, while wage growth will remain volatile

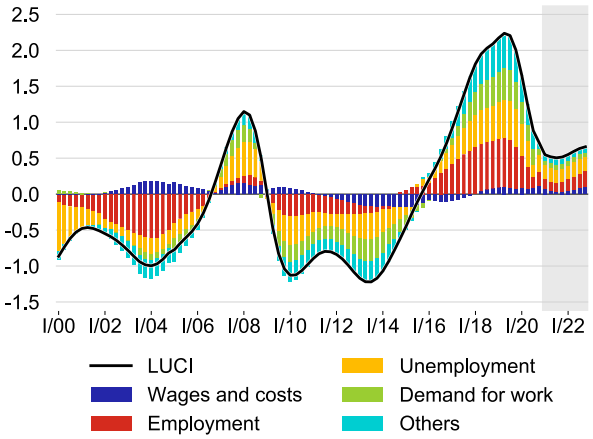
The worse pandemic situation and the related economic impacts at the start of this year were reflected in the labour market, which cooled slightly further. However, the overall labour market situation remains relatively good from the long-term perspective. This is confirmed by the Labour Utilisation Composite Index (LUCI), which is still above its steady-state level (see Chart II.10). The labour market will continue to cool gradually in the first half of this year and the LUCI should thus gradually decline further. It will rebound slightly next year as the labour market recovers.

Wage growth in market sectors continues to be affected by a number of one-off factors going beyond the fundamental trend. These include in particular the statistical effects of a drop in the wages of employees drawing attendance allowance or wage compensation in the event of quarantine. Employees not working as a result of pandemic-related obstacles to work also saw a partial drop in wages, and some of them are receiving only partial wage compensation. In addition, extraordinary "Covid" bonuses will be paid in the health

Chart II.10

The Labour Utilisation Composite Index (LUCI) will decline slightly further this year but will remain above its steady-state level

LUCI; vertical axis shows standard deviations



care sector in the spring (as at the end of last year).[6] These effects will be visible mainly in 2021 Q2, when year-on-year wage growth in market sectors as recorded in the official statistics will surge due to the unwinding of last year's negative statistical effects combined with the payment of the aforementioned extraordinary bonuses in health care. In terms of the economic interpretation of wage growth, it thus makes more sense to monitor estimated fundamental wage growth (see Chart II.11).

Fundamental wage growth in market sectors will continue to slow until mid-2021 and then rebound

Fundamental market wage growth will start to rise gradually at the end of the year after the pandemic's negative effects on the labour market fade away. This will occur as a result of the reopening of the economy in the spring and summer and improving expectations. Nevertheless, given the uncertainty going forward and the usual substantial labour market inertia, wage growth will remain subdued until the end of 2022 and will be distinctly below its long-term 5% level.

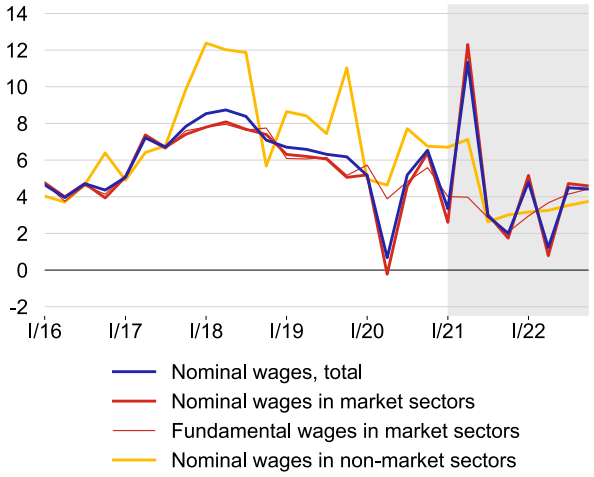
In non-market sectors, the high wage growth observed in previous years will continue to subside this year. In January, pay in education was raised significantly, while wages of other employees in the non-market sector were increased only slightly. As in market sectors, wage growth in non-market sectors will be very volatile, due both to the base effects of the extraordinary bonuses paid to the security forces last year and to statistical effects related to take-up of attendance allowance.

Growth in wages and salaries will be very volatile over the entire horizon due to the effect of the aforementioned extraordinary factors on average wage growth. Although growth in the wage bill slowed at the start of this year, it will rise sharply in Q2 due to the aforementioned surge in average wage growth. However, growth in wages and salaries will show a more pronounced and sustained recovery next year. This will be linked with a gradual revival of the labour market as a result of an economic recovery and improved expectations of firms. The decline in employment will thus subside and growth in the fundamental component of market wages will pick up. In real terms, wages and salaries will also start to rise more visibly next year (see Chart II.12). This will contribute to a continued recovery in growth in household consumption.

Chart II.11

Fundamental wage growth will initially slow further and then start to recover gradually at the end of this year, while wage growth in non-market sectors will slow sharply this year

nominal wages; y-o-y changes in %

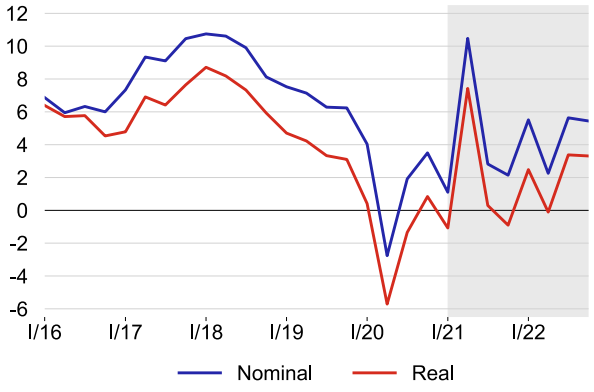


The fundamental market wage *is the officially reported wage adjusted for certain one-off pandemic-linked statistical effects (attendance allowance, quarantine, and partial wage compensation) and for extraordinary bonuses in health care and social services.*

Chart II.12

Growth in wages and salaries will remain volatile and generally subdued

volume of wages and salaries; y-o-y changes in %



6 Most health facilities are privately run, so bonuses paid to their employees are included in wage growth in market sectors.

The decline in employment will weaken gradually until the end of the year, while the jobless total will grow only slightly

The fall in the converted number of employees was much larger than that in the physical number, as average hours worked per employee decreased sharply. As demand for labour starts to grow again due to the reopening of the economy, growth in average hours worked will pick up somewhat earlier than growth in the number of employees, as it has done in the past when the economy has returned to growth.

From the sectoral point of view, the decline in employment will be due mainly to services in market sectors such as hotels and restaurants. By contrast, the decrease in employment in industry will fade out in mid-2021 due to a recovery in external demand.

The general unemployment rate will rise until the second half of 2021 despite government support measures and still solid labour demand in sectors not directly affected by the pandemic (see Chart II.13). This can be seen in a still high number of job vacancies and robust creation of new jobs, and in continued distinct placement of job applicants in job vacancies via labour offices. We expect the share of unemployed persons to follow a similar trend as the general unemployment rate.

The wobble in industry, the initially adverse pandemic situation abroad and the domestic lockdowns will be reflected at first in muted growth in exports of goods and services, which, however, will recover significantly in the second half of the year

Domestic producers, particularly those in industry, faced shortages of some materials and parts early this year, which reduced their export performance. Exports of services, especially in the tourism sector, will also be subdued this year due to the initially very adverse epidemic situation. As the domestic economy subsequently reopens and restrictions abroad are also lifted, growth in exports will recover rapidly despite the appreciating exchange rate, averaging 8% in 2021 as a whole. The growth will slow slightly next year but will remain strong.

Year-on-year growth in imports will also be volatile this year, due partly to base effects (see Chart II.14). Import-intensive private investment activity will not recover until the second half of the year as the situation in investment-intensive industry improves and business sentiment generally picks up. Likewise, imports for household consumption will not accelerate until the economy reopens. As a result, the contribution of net exports to GDP growth will be roughly neutral this year. The same will hold in 2022, when the growth rates of the two components of foreign trade will converge.

Chart II.13

The labour market will not recover appreciably until next year

employment, y-o-y changes in %; general unemployment rate in %; seasonally adjusted

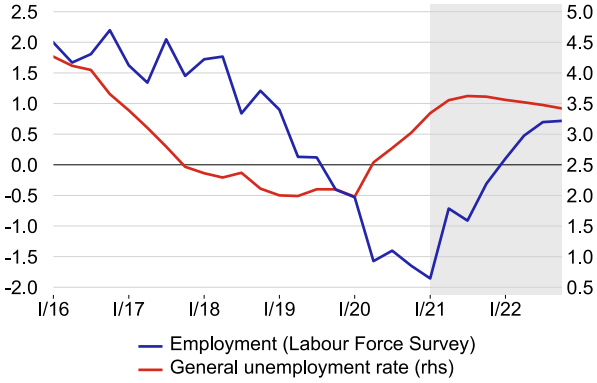
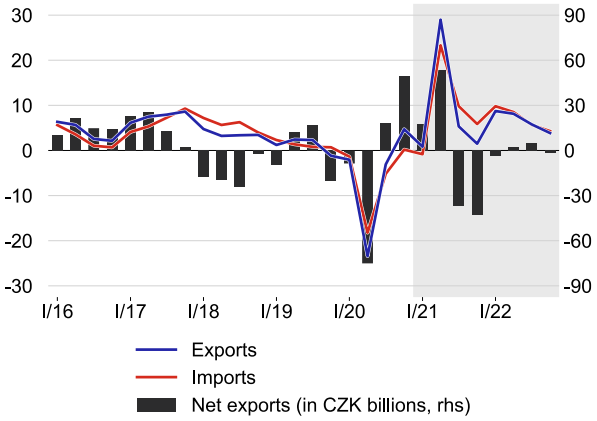


Chart II.14

Exports will primarily reflect the temporary wobble in industry this year, while imports are also being affected by domestic shutdowns

real exports and imports; y-o-y changes in % and CZK billions; seasonally adjusted



Investment activity will recover in the second half of this year due the reopening of the economy and the restart of industry

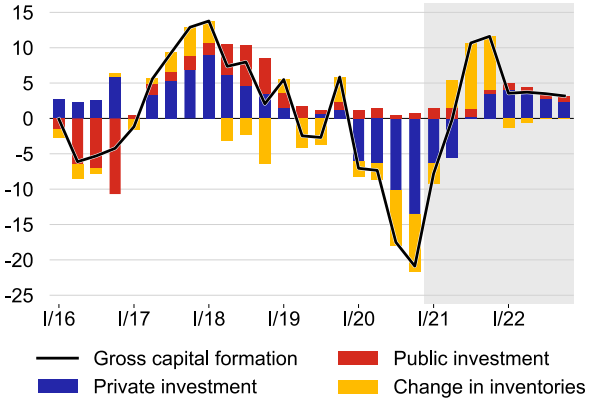
The subdued fixed investment growth in the first half of this year primarily reflects worse business sentiment in sectors constrained by shutdowns of the economy for a year now. The aforementioned drops in production in industry caused by shortages of some materials and parts are having the same effect. This will also motivate firms to increase additions to inventories, especially during the first half of this year (see Chart II.15).

The situation in industry will improve in the near future. However, the difficulties in the functioning of international value chains will not be removed until the second half of the year. Together with the reopening of the economy and the full restart of industry, this will lead to a recovery in private investment growth. Public investment will continue to rise at a solid pace over the entire forecast horizon. Despite this, total fixed investment will decline this year, albeit only slightly. Growth in total gross capital formation will thus be driven by the aforementioned increase in additions to inventories. Gross capital formation will grow by 3% overall this year. Next year its growth will accelerate slightly, with all components contributing.

Chart II.15

Growth in private investment activity will not recover until the second half of this year, while government investment will rise steadily over the entire forecast horizon

investment activity; y-o-y changes in %; contributions in pp; constant prices; seasonally adjusted



III. INFLATION

Following its recent drop close to the 2% target, inflation will rise back towards the upper boundary of the tolerance band in the quarters ahead. This will be due initially to a sharp increase in fuel prices. Later, however, food prices will start to rise significantly again, and administered prices will also begin to go up at the end of the year. All this will be going on amid only gradually falling core inflation. Its decline will be slowed by significant domestic demand pressures and brisk growth in industrial prices abroad. These factors have stronger inflationary effects in the new forecast than in the previous one, owing to a revision of the foreign and domestic output gaps to less negative levels. The overall inflation pressures will start to ease in the autumn as the current elevated growth of import prices subsides. Conversely, the contribution of domestic price pressures to overall costs will rise slightly over the forecast horizon owing to a gradual reopening of the domestic economy and a pick-up in wage growth. Inflation will return close to the target next year, aided by a gradual moderation of the expansionary nature of the monetary conditions. Headline inflation will be slightly above monetary policy-relevant inflation owing to a rise in excise duties.

Consumer price inflation will rise towards the upper boundary of the tolerance band over the rest of this year and fall close to the target next year

A major factor underlying the return of headline inflation (see Chart III.1) to the upper boundary of the tolerance band in 2021 Q2 is a surge in year-on-year growth in fuel prices (see Chart III.2). It reflects both last year's low base and the recent sharp rise in oil prices. Prices at filling stations will fall slightly next year due to stable oil prices and a gradually appreciating koruna.

Growth in food prices, which remains temporarily subdued in the first half of this year, will pick up substantially in the second half of the year (see Chart III.2). In addition to appreciable domestic demand pressures, this will be due to growth in global agricultural commodity prices, to which domestic agricultural and food producers respond. Besides rising crop prices, food prices will be affected by another outbreak of African swine fever in South-East Asia. It will be reflected in domestic pork prices in the coming months. Food price inflation will peak at the end of 2021 and will gradually decrease towards 2% as the aforementioned inflationary effects fade out.

Despite slowing a little, core inflation remained high in 2021 Q1 due to growth in prices of goods and services. Core inflation will keep falling slightly in Q2 (see Chart III.2). In addition to the fade-out of some of the positive second-round effects stemming from last year's changes in VAT not being reflected in consumer prices, this will reflect the low motivation of service providers to change their prices at a time of initially continuing lockdowns. Domestic demand will start to manifest itself in upward price pressures as anti-epidemic measures begin to be eased at the end of the spring and during the summer, aided by deferred consumption. This will allow goods retailers and

Chart III.1

Inflation will rise towards the upper boundary of the tolerance band around the target in the quarters ahead and will decrease close to 2% at the monetary policy horizon

headline inflation; y-o-y in %; confidence interval

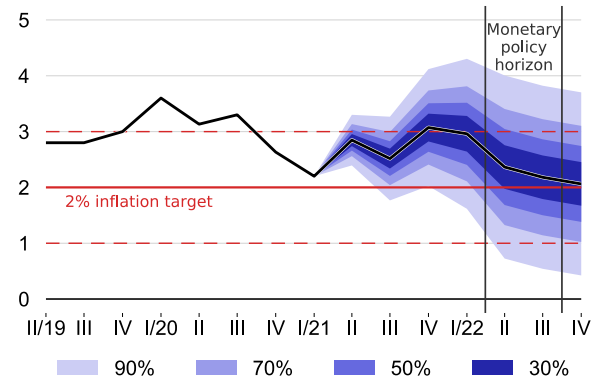
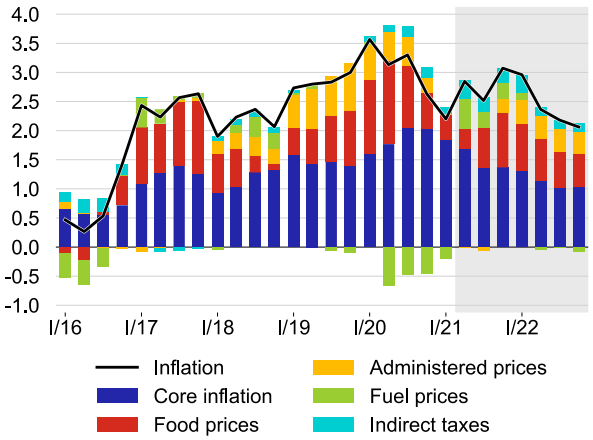


Chart III.2

Inflation will be dominated by core inflation in the coming quarters; the temporarily subdued contribution of food prices will intensify again

structure of inflation; y-o-y changes in %; contributions in pp



service providers, whose activities have been hit hard by the pandemic, to increase their profit margins. Businesses will try to make up at least partly for lost revenue incurred during the preceding lockdown of the economy by raising their prices. These effects will slow the decline in core inflation in the second half of this year. Renewed growth in industrial producer prices abroad will have the same effect this year. These factors also lie behind the revision of the core inflation outlook compared with the winter forecast.

COMPARISON WITH THE PREVIOUS FORECAST: Prices

		2020	2021	2022	
Consumer prices	y-o-y changes in % pp	**3.2** (0.0)	**2.7** (0.7)	**2.4** (0.2)	The upward revision of the inflation forecast this year is due to all its components except administered prices, whose growth remains temporarily subdued.
Administered prices	y-o-y changes in % pp	**3.1** (0.0)	**0.3** (-0.3)	**2.8** (0.1)	The decrease in administered price inflation this year is mainly due to lower heating costs.
Core inflation	% pp	**3.4** (0.0)	**2.8** (0.7)	**2.0** (0.0)	A more substantial recovery in inflation abroad and stronger domestic demand, supported to a greater extent by deferred consumption, have moved the core inflation outlook for this year upwards.
Food prices (incl. alc. bev. and tobacco)	y-o-y changes in % pp	**4.2** (0.0)	**2.3** (0.8)	**2.6** (0.3)	Faster growing domestic agricultural producer prices in response to stronger growth in global prices of agricultural commodities are reflected in higher food price inflation.

Note: Changes compared to the previous forecast in brackets (a green label indicates an increase in value and a red label a decrease)

Conversely, an appreciating koruna will have a downward effect on core inflation over the entire forecast horizon. As the aforementioned inflationary effects subside, core inflation will stabilise close to 2% in the course of 2022.

The currently elevated overall inflation pressures will ease during the autumn as the strong growth in import prices fades away

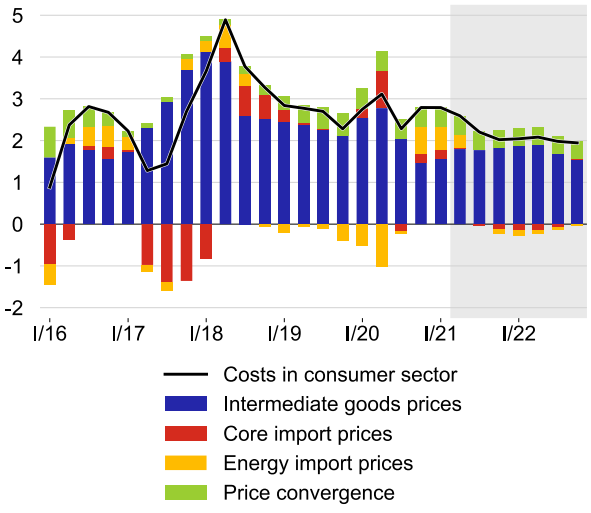
Growth of total costs, which, together with margins, is the driver of growth in consumer prices, remained elevated in late 2020 and early 2021 (see Chart III.3). Energy import price growth had a significant inflationary effect linked with the surge in oil prices. This will be reflected in a positive contribution of the energy component to growth in costs in Q2 as well.

Despite the anti-inflationary effect of significant appreciation of the koruna, the contribution of core import prices will initially have a broadly neutral effect on growth in total costs. The overheating of foreign industry amid temporary difficulties in global production and supply chains is reflected in solid growth in the core component of foreign producer prices this year. At the same time, the observed rise in agricultural commodity prices on world markets will push up import prices in the months ahead.

Chart III.3

The overall inflation pressures will gradually ease this year; growth in costs will then stabilise near its steady-state level, with the domestic economy making the dominant contribution

costs in consumer sector; q-o-q changes in %; contributions in pp; current prices; annualised



The overall inflation pressures will gradually ease this year as the two components of import prices (core and energy) turn from inflationary to anti-inflationary. This will also be aided by continued appreciation of the koruna and, from this autumn, by renewed muted quarter-on-quarter growth in foreign industrial prices.

Conversely, the dominant contribution of the domestic economy to total costs will grow slightly most of the time

Growth in domestic costs remained subdued at the turn of the year and will stay low during the spring months (see Chart III.4). This is mainly due to a gradual cooling of the labour market, which has reduced the positive contribution of wages. The temporary deterioration in Czech industrial output amid ongoing shutdowns in services and retail was reflected in a negative contribution of the price of capital in Q1. However, this anti-inflationary effect was simultaneously offset by a deterioration in labour efficiency. A cautious easing of the across-the-board epidemiological measures this spring will keep the contributions of capital and labour efficiency temporarily subdued.

Growth in domestic costs will start to pick up in the middle of this year on the back of a sharp rise in domestic demand. In addition to normal consumer behaviour being restored, there will be increased consumer appetite and spending of forced savings. The economic recovery, which will meanwhile be supported by growth in exports as the difficulties in industry fade away, will foster a gradual increase in the contribution of wages. However, the inflation pressures from the domestic economy will be dampened to a large extent by improving labour efficiency due to people returning to their workplaces after the shutdowns in services and retail end. After a temporary rise, overall growth in domestic costs will stabilise close to its steady-state level next year.

Administered price inflation will be muted for most of the year but will start to rise sharply in the autumn as the temporary decrease in energy prices subsides

The decrease in electricity and gas prices observed since the end of 2020 will not last long (see Chart III.5). A marked rise in energy prices for households is expected in the autumn, amid adjustments to price lists for the new heating season. Electricity prices in particular will be affected by the current record-high price of emission allowances. Water supply and sewerage collection charges will also increase, as will other regulated items in the consumer basket. This will lead administered price inflation to rise gradually to 3% in late 2021 and early 2022. Growth in administered prices will remain elevated throughout 2022, driven by all its main components, with rising electricity prices having the dominant effect.

Chart III.4

The initially subdued growth in domestic costs will return to its steady-state level over the course of this year

costs in intermediate consumption sector; q-o-q changes in %; contributions in pp; current prices; annualised

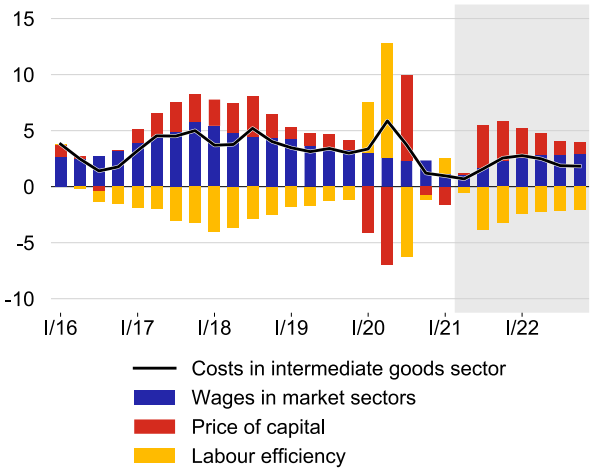
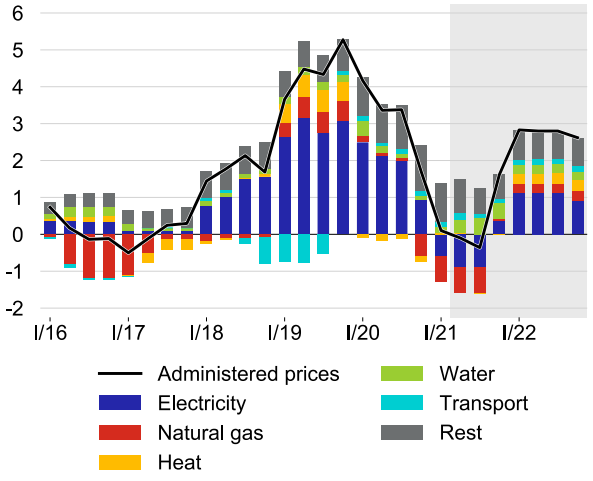


Chart III.5

Administered price inflation will be only temporarily muted; prices will start to go up again in the autumn and increase further in 2022

administered prices; y-o-y changes in %; contributions in pp; including taxes



Changes to excise duties will steer headline inflation slightly above the target at the monetary policy horizon

In addition to the gradual unwinding of the effects of the changes made to VAT and excise duties in 2020 and early 2021, the February increase in excise duties on tobacco products will be reflected in inflation this year. Excise duties on tobacco products will go up by another 5% in the next phase at the beginning of 2022. This is expected to pass through fully to cigarette prices. We estimate the overall effect of this change on inflation in 2022 at around 0.1 pp (see Chart III.6). These changes will not affect monetary policy-relevant inflation, so monetary policy will not respond to them. This is because they are one-off changes in the price level caused by the corresponding pass-through of changes to indirect taxes, which the central bank ignores. Monetary policy-relevant inflation will thus fall towards the inflation target over the monetary policy horizon (see Chart III.7). This will be supported by monetary policy gradually becoming less accommodative.

Chart III.6

The first-round effects of changes to indirect taxes will reflect increases in excise duty on tobacco this year and the next; the second-round effects of last year's VAT changes will fade out this year

first-round and second-round effects of tax changes; y-o-y changes in %; contributions in pp; including taxes

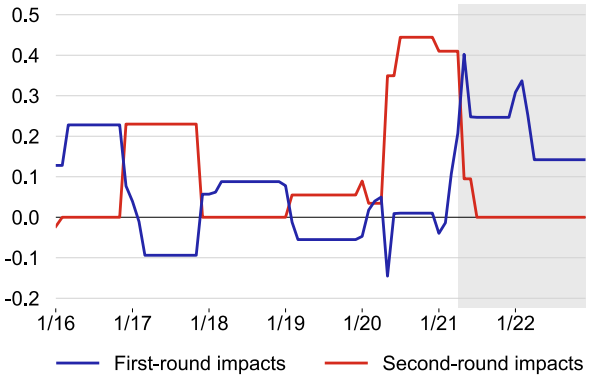
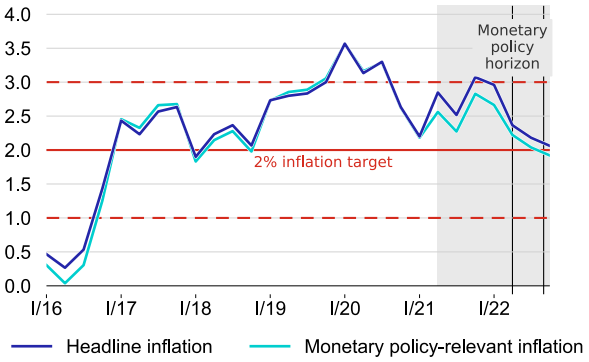


Chart III.7

Monetary policy-relevant inflation will decrease towards the 2% target over the monetary policy horizon; headline inflation will remain slightly above the target due to changes in excise duties

headline and monetary policy-relevant inflation; in %



BOX 4 Assessment of the fulfilment of the inflation target over the last two years

Maintaining price stability – the primary mandate of the CNB – involves regularly assessing the fulfilment of the inflation target and determining the causes of any past deviations of actual inflation from the central bank's target. Such evaluations were a standard part of the Inflation Report until 2020, and since 2021 they have formed a part of its successor, the Monetary Policy Report. This approach reflects the CNB's high degree of monetary policy transparency and the responsibility it feels towards experts and the general public.

Starting with this Report, we will once a year evaluate the deviation of monetary policy-relevant inflation from the 2% target over the previous eight quarters. The period currently under examination runs from 2019 Q2 until the start of 2021. Inflation was close to the upper boundary of the tolerance band around the CNB's 2% target for most of the period under review, and even rose temporarily above that level (i.e. above 3%). It then dropped close to the target in late 2020 and early 2021 (see Chart 1). The results of the analysis provide a view of the origin of the inflation pressures faced by monetary policy in the past. The deviations of inflation from the target are presented in the form of a decomposition (see Chart 2) into the contributions of categories of unexpected structural shocks,[1] which were identified using the g3+ core projection model.[2]

Economic developments abroad have had a constant strong anti-inflationary effect in the past two years. Industrial producer prices abroad had the largest impact. They rose only moderately in 2019 and even declined in 2020. The anti-inflationary effect of the foreign environment was amplified last year by the unprecedented fall in the global economy following the outbreak of the coronavirus pandemic.

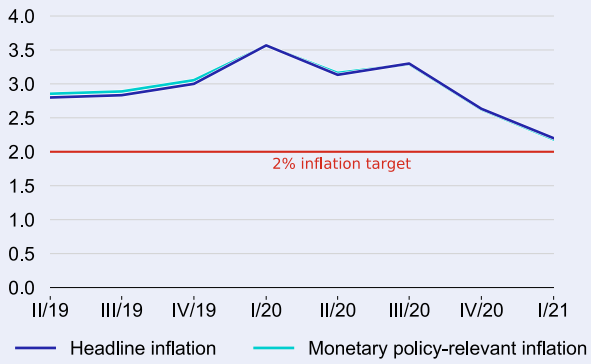
The primary objective of monetary policy *is to maintain price stability. Since January 1998, i.e. for more than 20 years, the CNB has been applying an inflation targeting regime which aims to keep inflation close to a declared target. Since 2010, the target has been set in the form of 2% year-on-year growth in the consumer price index with a tolerance band of ±1 pp. This target is in line with the practice in advanced economies.*

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

Chart 1

Inflation was above the 2% target in the period under observation, and fell close to the target at the turn of this year

headline and monetary policy-relevant inflation in %



Conversely, the markedly overheated domestic economy contributed positively to the deviation of inflation from the target until the end of 2020. In 2019, its inflationary effect reflected both a sizeable increase in administered prices and continued brisk wage growth owing to significant labour market tightness. A partial cooling of the labour market occurred during 2020 when the Czech economy was hit by the adverse effects of the coronavirus pandemic. The effects of the first wave of the pandemic on the Czech economy last spring were inflationary overall, as the deterioration in labour efficiency outweighed the contraction in economic activity. However, subdued domestic demand increasingly slowed inflation in the course of 2020 due to the autumn reintroduction and tightening of government anti-epidemic measures targeted at retail and services. In early 2021, the effect of subdued domestic demand even outweighed the inflationary effect of the temporary deterioration in labour efficiency.

In hindsight, monetary policy was excessively accommodative until the end of 2020. In 2019, this reflected increased caution in the central bank's monetary policy decision-making about further interest rate increases, owing to significant uncertainty in international trade. Before the outbreak of the pandemic, interest rates were therefore below the level consistent with the standard monetary policy reaction function. The forecast published at the start of 2020 signalled an increase in inflation above the upper boundary of the tolerance band around the target. This was mainly due to second-round effects associated with changes to indirect taxes (a VAT cut) in a situation of persisting strong fundamental inflation pressures in the domestic economy. The Bank Board raised interest rates by 25 basis points in February in line with the forecast contained in Inflation Report I/2020.

However, the calm economic and monetary situation was brutally disrupted in March 2020 by the outbreak of the global coronavirus pandemic. The anti-epidemic measures adopted worldwide affected global trade and limited social contact. This in turn had a negative impact on economic activity and the consumer and investment behaviour of households and firms. The result was a deep economic downturn both in the Czech Republic and globally, to which countries reacted through their fiscal and monetary policies. The CNB also responded to the adverse economic developments and the outlook for a decrease in inflation by cutting interest rates rapidly and sharply.[3] A significant weakening of the koruna, which worked as an automatic stabiliser (adjustment mechanism), also helped to ease the monetary conditions. It can be said that the accommodative effect of the two components of the monetary conditions offset the anti-inflationary effect of the foreign and domestic economies in early 2021.

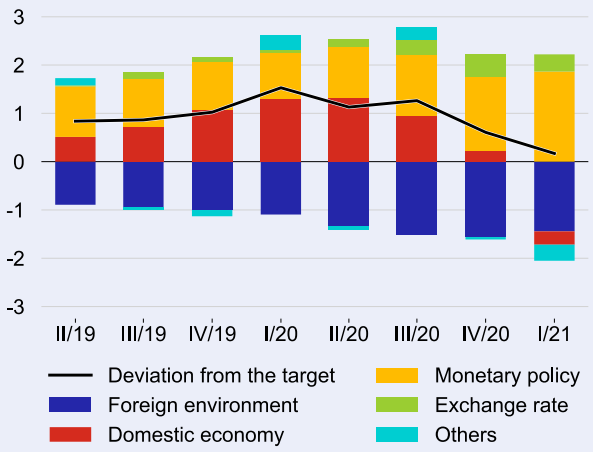
At its meetings in 2019, the Bank Board perceived the uncertainties and risks of the macroeconomic forecasts at the time initially as balanced and later as anti-inflationary, based mainly on concerns of a more pronounced demand slowdown in the Czech Republic's main trading partner countries. In 2020, the Bank Board repeatedly assessed the uncertainties and risks of the forecasts as being very substantial. The Bank Board considered the course of the pandemic and its economic and price effects to be the main risk. It also took into account other uncertainties relating to the reaction of domestic fiscal policy, internal policy developments in the USA, the manner of the exit of the UK from the EU and the structure of the supply and demand factors underlying inflation. The exchange rate, which was highly volatile in 2020, was also a significant uncertainty for the Bank Board.

Inflation was above the upper boundary of the tolerance band for most of 2020, owing mainly to the inertial effect of the previous overheating of the economy, and fell close to the 2% target only at the close of the year. From this perspective, it can be said that monetary policy should have been tighter in 2019. Nonetheless, its accommodative effect offset the anti-inflationary impacts of the pandemic last year. With the benefit of current knowledge of the strong effects and risks associated with the current economic situation, it can also be said that monetary policy had created sufficient room for relaxing interest rates in the pre-pandemic period, room which it used in spring 2020. As a result, the CNB, unlike other central banks, did not need to deploy unconventional monetary policy instruments. Inflation expectations remain firmly anchored to the 2% target and the CNB is fulfilling its price stability mandate.

Chart 2

The markedly positive deviation of inflation from the target last year was mainly due to the previous overheating of the domestic economy and the relaxed setting of monetary conditions

deviation of monetary policy-relevant inflation from CNB's 2% target, contributions in pp



*We distinguish two types of price effects in relation to **changes to indirect taxes** – first-round and second-round. The first-round effects are the calculated price changes due to the indirect tax changes implied by full (accounting) pass-through of the tax changes to prices of the relevant items of the consumer basket. The second-round effects capture the price changes due to indirect tax changes going beyond their first-round effects. The second-round effects may be positive or negative. In the case of a tax increase (decrease), they are positive if the prices of the items concerned rise (fall) more (less) than implied by mechanistic pass-through of the tax changes. Conversely, they are negative if prices rise (fall) less (more) than the tax increase (decrease) would imply. The CNB applies escape clauses to the first-round effects of indirect tax changes. This means that the CNB looks past them when setting its monetary policy.*

—

1 Unexpected structural shocks offer a model-based interpretation of the evolution of economic variables.

2 The g3+ core prediction model is used to prepare the CNB's macroeconomic forecasts, which are the key input to the Bank Board's monetary policy decision-making. The g3+ model is also used to evaluate the fulfilment of previous forecasts and to determine the sources of deviations of the actual figures from the evaluated forecasts and the inflation target. For details see *The g3+ model: An upgrade of the Czech National Bank's core forecasting framework*, CNB WP 7/2020.

3 The CNB's measures in response to the Covid-19 pandemic were examined in greater detail in a box in Inflation Report III/2020.

IV. MONETARY POLICY

At its May monetary policy meeting, the CNB Bank Board unanimously kept interest rates unchanged. The two-week repo rate thus remained at 0.25%, the discount rate at 0.05% and the Lombard rate at 1%. The Bank Board assessed the uncertainties and risks of the new forecast as being less substantial than in the previous forecasts and as broadly balanced overall. A more gradual fading of the pandemic, linked with lengthier lockdowns and a cyclical downturn at home and abroad, which could have anti-inflationary impacts, is a risk to the forecast. A risk in the opposite direction stems from the disruption to global production and supply chains and its pass-through to prices.

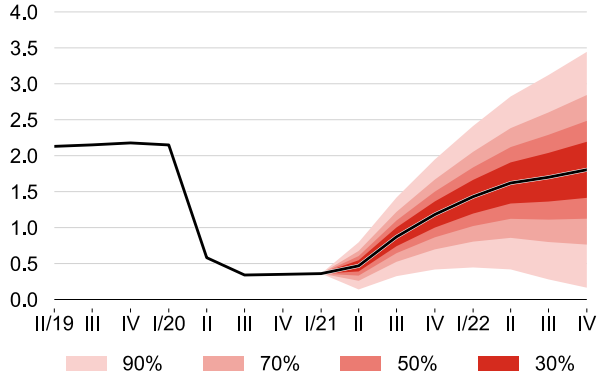
Consistent with the forecast is stability of market interest rates initially, followed by a rise in rates from roughly the middle of this year onwards

The initial stability of market interest rates reflects a continued need for easy monetary policy responding to the impacts of the pandemic and government epidemic restrictions, most notably the continued shutdowns in services and retail. Price pressures from the domestic and foreign economy, the resumption of economic life in the rest of this year and a further improvement in economic activity next year will require an increase in market interest rates from roughly the middle of this year onwards (see Chart IV.1). In particular, growth in consumer demand linked with the gradual reopening of the economy this summer and autumn will have an inflationary effect. An improvement in the condition of industry and a gradual recovery in wage growth will also push up prices. The interest rate component of the monetary conditions will continue to get less easy and move toward a neutral stance next year, when economic activity will return to the pre-crisis level amid a decline in inflation close to the CNB's 2% target.

Chart IV.1

Over the forecast horizon, interest rates are initially stable and start to rise from roughly the middle of this year onwards

3M PRIBOR in %; confidence interval



***3M PRIBOR market interest rates** are money market reference rates with a maturity of three months, which are closely linked to the CNB's monetary policy rates. The CNB's key rate is **the two-week (2W) repo rate**, paid on commercial banks' excess liquidity as absorbed by the CNB in two-week repo operations. The difference between the 3M PRIBOR and the 2W repo rate fluctuates over time and is currently 0.1 pp.*

The koruna will appreciate further

The koruna's exchange rate has been affected by the epidemic situation. The koruna briefly depreciated in late February and early March as the pandemic situation worsened. It started to appreciate again in March in the light of a gradually improving domestic epidemic situation. Growth in foreign investors' interest in koruna assets has been apparent since the start of the year. Overall, the koruna has appreciated against the euro since the start of the year. The exchange rate averaged CZK 26.1 to the euro in Q1 and was fluctuating around CZK 25.9 to the euro at the end of April. The koruna also appreciated against the dollar.

We expect the exchange rate to average CZK 25.8 to the euro in Q2. This mainly reflects an improving epidemic situation. The fade-out of the temporary wobble in industry and the slow reopening of the economy, coupled with gradual growth in vaccination coverage, will lead to further appreciation (see Chart IV.2). This will

also be fostered by a widening interest rate differential vis-à-vis the euro area due to a rise in domestic market rates. The exchange rate will thus appreciate slightly beyond CZK 25 to the euro by the end of next year.

The market interest rate outlook is lower than the CNB forecast; the exchange rate path expected by analysts is close to the central bank's forecast

The market outlook for short-term FRA rates has remained broadly stable since the Bank Board's monetary policy meeting in February. The market thus continues to expect a gradual rise in the 3M PRIBOR at the one-year horizon (see Chart IV.3). This is in line with analysts' expectations in the FMIE and FECF surveys. The analysts were unanimously expecting the 2W repo rate to be left at 0.25% at the Bank Board's May monetary policy meeting. Most of the analysts expect the CNB's key repo rate to be raised to 0.50% or 0.75% at the one-year horizon, while two believe it will rise as high as 1%. The outlooks for a gradual increase in key interest rates are also reflected in the outlook for the koruna's exchange rate. The analysts expect the koruna to appreciate slightly on average (see Table IV.1), as in the CNB forecast. However, their comments emphasise the high uncertainty associated with the impact of the coronavirus pandemic on future economic developments. This uncertainty is reflected in a wide spread of the estimates. The difference between the minimum and maximum expected rates against the euro at the one-year horizon is almost CZK 2.

The Bank Board members' communications suggested rate stability

The Bank Board members' communications in the weeks leading up to the May monetary policy meeting were indicating no change to the CNB's key rates at this meeting. According to some Bank Board members, the first increase of the 2W repo rate might occur in the second half of this year. However, the majority opinion is that the high degree of uncertainty means that the Bank Board's communications regarding future monetary policy normalisation should not be tied to a specific moment in time but should be made conditional on clear signals of a receding pandemic.

Chart IV.2

The koruna will appreciate, strengthening slightly beyond CZK 25 to the euro by the end of next year

CZK/EUR exchange rate; confidence interval

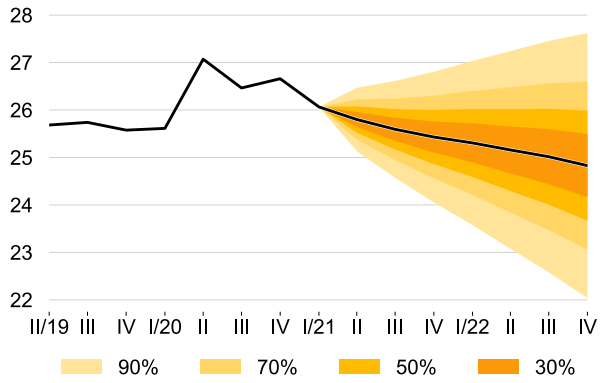
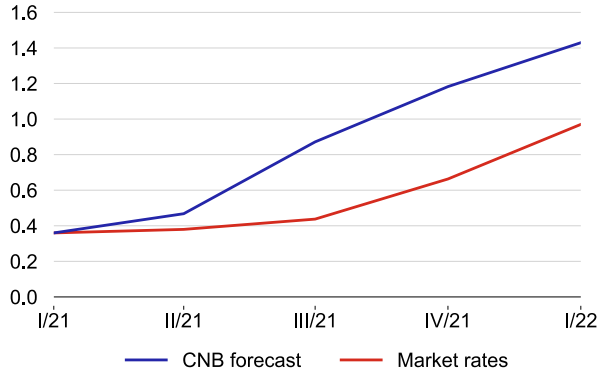


Chart IV.3

The market rate outlook is lower than the CNB forecast

3M PRIBOR, FRA in %

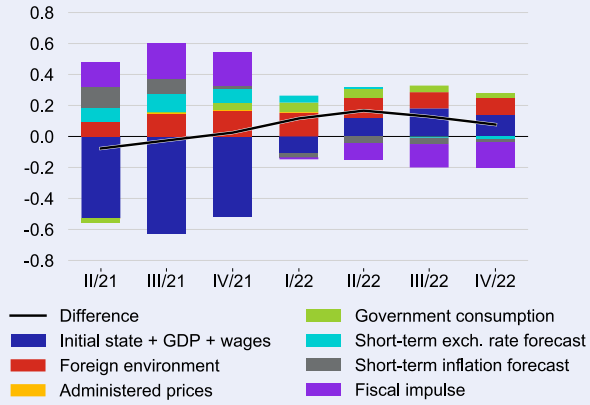


Note: Market rates represent for 2021 Q1 and 2021 Q2 the 3M PRIBOR and for 2021 Q3–2022 Q1 the average values of the FRA 3*6, 6*9 and 9*12 rates for the last 10 trading days as of 30 April 2021.

COMPARISON WITH THE PREVIOUS FORECAST: Interest rates and the exchange rate

The interest rate path is initially similar to that in the previous forecast but shifts slightly higher next year

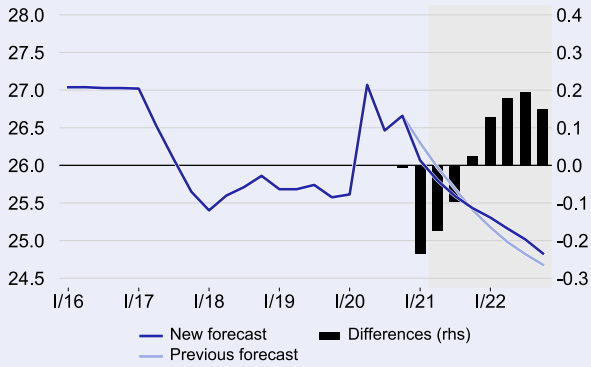
decomposition of changes in 3M PRIBOR forecast in pp



- A temporarily worse domestic economic outlook is reflected in an initially negative contribution of the **initial conditions + GDP + wages** category, while the recovery of the Czech economy is more pronounced next year and leads to higher rates
- **The fiscal impulse** temporarily fosters slightly higher rates. Unlike in the previous forecast, it is expansionary this year due to greater government support for the domestic economy
- **External developments**, especially the outlook for somewhat less accommodative ECB monetary policy coupled with a higher oil price, foster slightly higher domestic rates
- **The short-term forecast for domestic inflation** fosters slightly higher rates in the quarters ahead
- **The short-term exchange rate forecast** also fosters slightly higher rates, since the change in the interpretation of external GDP towards a less anti-inflationary initial effect is consistent with a stronger exchange rate of the koruna in Q2 compared with the short-term forecast

The outlook for the koruna exchange rate remains similar to that in the winter forecast

change in CZK/EUR exchange rate forecast; differences in CZK – right-hand scale



- The exchange rate path is broadly in line with the previous forecast
- In the near term, the slightly stronger exchange rate of the koruna mainly reflects the rate observed in mid-April
- The subsequent more moderate appreciation of the koruna compared with the winter forecast reflects the outlook for a more gradual domestic recovery this year

The protracted period of a low 2W repo rate gradually passed through to market and client rates, but the trend has been reversing recently

Money market interest rates remain at their early May 2020 levels. At that time, the CNB lowered its key rate significantly in response to the expected negative economic impacts of the pandemic. Rates with longer maturities started to increase at the end of last year; domestic IRS rates and government bond yields both

rose further in Q1.[7] This initially reflected the CNB's communications regarding future monetary policy normalisation, but developments on foreign financial markets later prevailed (see Chart IV.4).

The interest rate on loans for house purchase remained at a low level close to 2% in Q1. However, growth in market interest rates with longer maturities is putting upward pressure on mortgage prices. The interest rate on loans to corporations has recently increased slightly and is also near 2%. This has been fostered by growth in banks' interest margins, reflecting their stronger risk perceptions and a slight deterioration in loan portfolio quality. Ex ante real interest rates in the said segments are close to zero and are negative for deposits.

Growth in loans for house purchase remains strong, while growth in loans to households for consumption and loans to corporations has weakened

Growth in loans for house purchase rose further in 2021 Q1. It was affected by growth in demand fostered by low mortgage rates and diminishing concerns of a pandemic-related fall in property prices. The relaxation of the CNB's macroprudential instruments last year also seems to have had an effect. According to the forecast, growth in house purchase loans will slow this year, mainly due to an expected increase in interest rates. Also, according to the Bank Lending Survey, banks overall expect demand for house purchase loans to fall in Q2. Growth in consumer credit will remain subdued this year owing to lower demand and supply.

In the case of corporate loans, demand for investment loans remains weak, while demand for operational financing has increased. Banks do not expect any major change in demand for loans in this segment in 2021 Q2. The CNB forecast also assumes that growth in loans to corporations will be flat in Q2 and pick up quickly in the second half of the year as economic activity increases (see Chart IV.5).

Growth in household deposits at banks and growth in the gross savings rate remained strong, due to deferred consumption and increased caution. In an environment of high uncertainty, growth in corporate deposits also increased.

Chart IV.4

Domestic interest rates with longer maturities have increased similarly to rates in other countries, the USA in particular

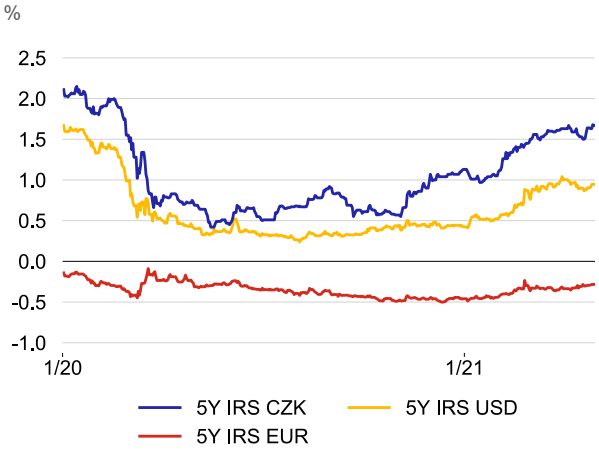
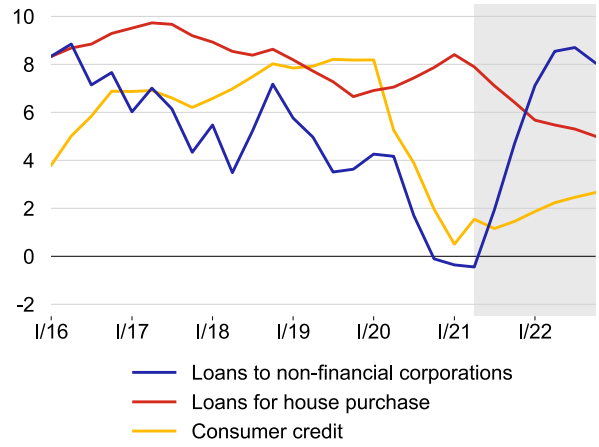


Chart IV.5

Growth in loans to corporations will pick up as economic activity recovers; by contrast, growth in loans for house purchase will slow

annual rates of growth in %



7 This was also reflected in primary auctions of government bonds, which the Czech Ministry of Finance issued to enable the government to finance the fiscal stabilisation measures it has adopted. Bond yields rose by as much as 1 pp. T-bills and government bonds with various maturities totalling CZK 266 billion (almost half of the planned borrowing requirement for this year) were issued on the primary market in the first four months of 2021.

A longer-lasting pandemic coupled with lengthier shutdowns at home and abroad remains a risk to the materialisation of the baseline scenario of the forecast

Despite the gradual increase in herd immunity to the coronavirus, whether through vaccination or previous infection, it is not clear how quickly the anti-epidemic restrictions will be lifted.[8] In addition, difficulties with the manufacture and distribution of vaccines may slow down the vaccination process in the Czech Republic and worldwide. The sluggish pace of vaccination in less advanced economies could also be a problem, as these countries could easily become a source of new strains of the coronavirus for the rest of the world, strains which current vaccines may not be effective against. Persisting concerns about the coronavirus could lead to lengthier shutdowns of the economy at home and abroad than assumed in the baseline scenario of the forecast. There is also a risk of longer shutdowns being reflected in negative sentiment of households and firms. This would lead to a longer economic downturn with elements of a cyclical recession. A longer-lasting pandemic scenario was constructed to describe this risk.[9] In this scenario, negative impacts of longer-lasting shutdowns are assumed not only in the services sector, but also in industry, which has mostly recorded solid growth so far. Even in the above scenario, industry is not hit directly by the administrative restrictions, but it will be adversely affected by a drop in external and domestic demand.

8 On 22 April, the Czech government published a plan for progressively easing the restrictions in "packages". The timing of the packages will depend on the epidemic situation. The Stringency Index fell to 56 on 30 April, below the assumption in the baseline scenario of the forecast for April 2021.

9 A similar scenario was prepared in Monetary Policy Report – Winter 2021.

Longer-lasting pandemic scenario

In this scenario we assume that the positive effects of vaccination will be felt with a large lag, due to problems with vaccine manufacture and distribution and to possible new strains of the coronavirus. The retreat of the pandemic and the opening of the economy will thus be slower than assumed in the baseline scenario both at home and abroad.

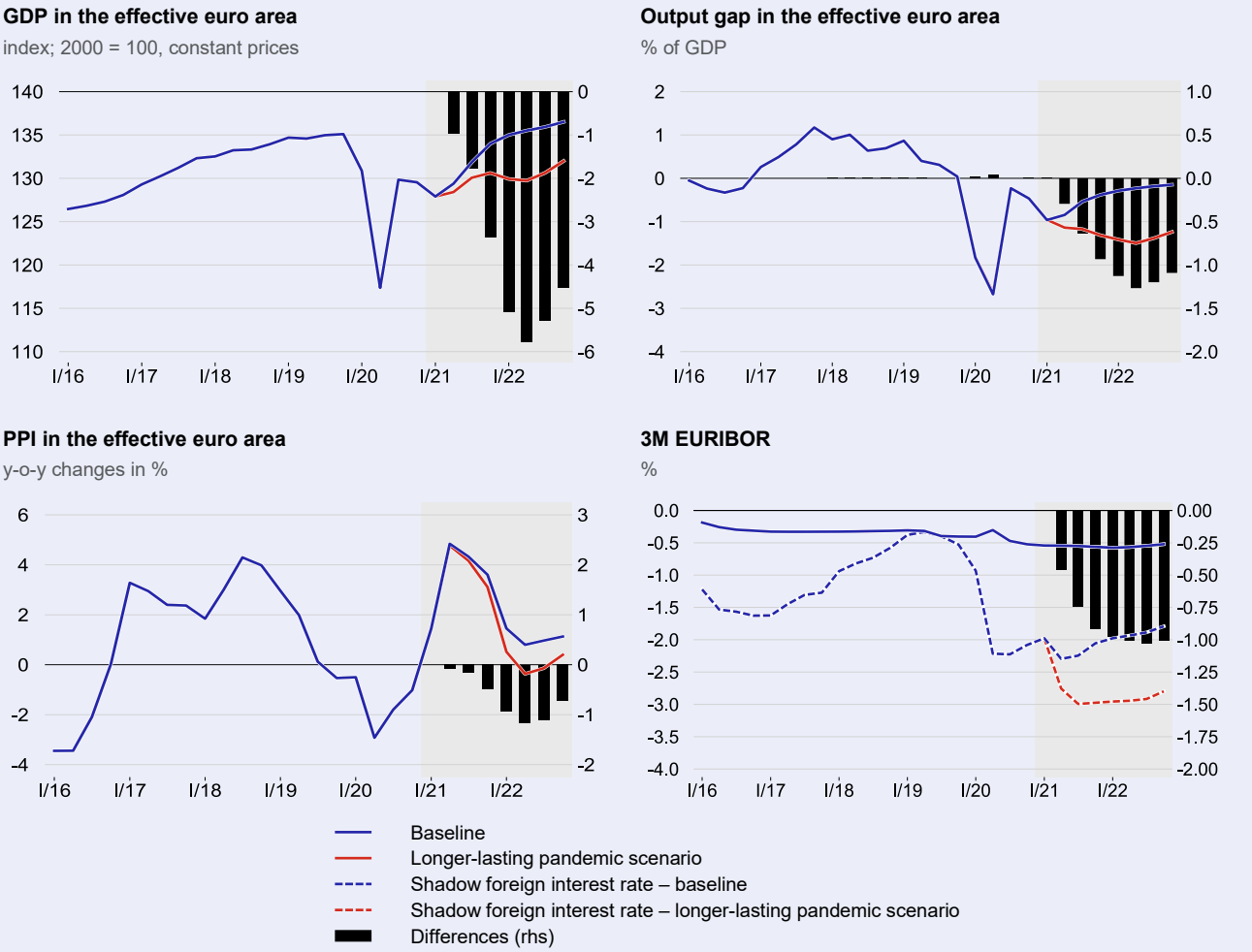
In the external assumptions of the scenario, we therefore additionally consider growing negative cyclical demand effects, which will be reflected not only in the services sector, but also in industry. The worse economic prospects of consumers and firms (in excess of the baseline scenario) will be reflected in a decline in private consumption and corporate investment. A longer-lasting adverse course of the pandemic will result in a downturn in international trade and a decrease in productivity and supply in the global economy.

The scenario leads to a markedly slower economic recovery in the euro area than in the baseline scenario (see Chart IV.6). The decline in GDP mainly reflects a decrease in potential output due to limited factor productivity during the longer-lasting shutdowns. However, it will also be reflected to a lesser extent in the output gap opening into more negative territory. Longer-lasting anti-inflationary demand effects are consistent with a further easing of monetary conditions by the ECB using an unspecified combination of instruments, which will be reflected in a drop in shadow interest rates relative to the baseline scenario. The result is slightly slower growth in consumer and core producer prices than in the baseline scenario. At the same time, the negative contribution of energy prices – reflecting a lower oil price outlook owing to a slower global economic recovery – manifests itself significantly in more subdued overall producer price inflation, which will stagnate in 2022.

Chart IV.6

The ECB responds to the anti-inflationary situation by easing monetary policy markedly further

comparison of baseline scenario with longer-lasting pandemic scenario – foreign variables



Worse global economic developments are simulated in this scenario using the NiGEM global model. The direct negative demand effect of a drop in economic activity on energy commodity prices is simulated using a three-country DSGE model – see *V. Audzei, J. Brůha (2020). A model of the euro area – China and the United States: Trade links and trade wars*, CNB WP 6/2020.

We also assume that the shutdowns in the domestic economy are lifted more slowly than in the baseline scenario. Epidemiological measures will also have to remain in place to a large extent for the rest of 2021, with a more appreciable easing not happening until summer 2022. This will be reflected in negative sentiment of firms and households and will lead to a stronger economic downturn with elements of a cyclical recession.[1]

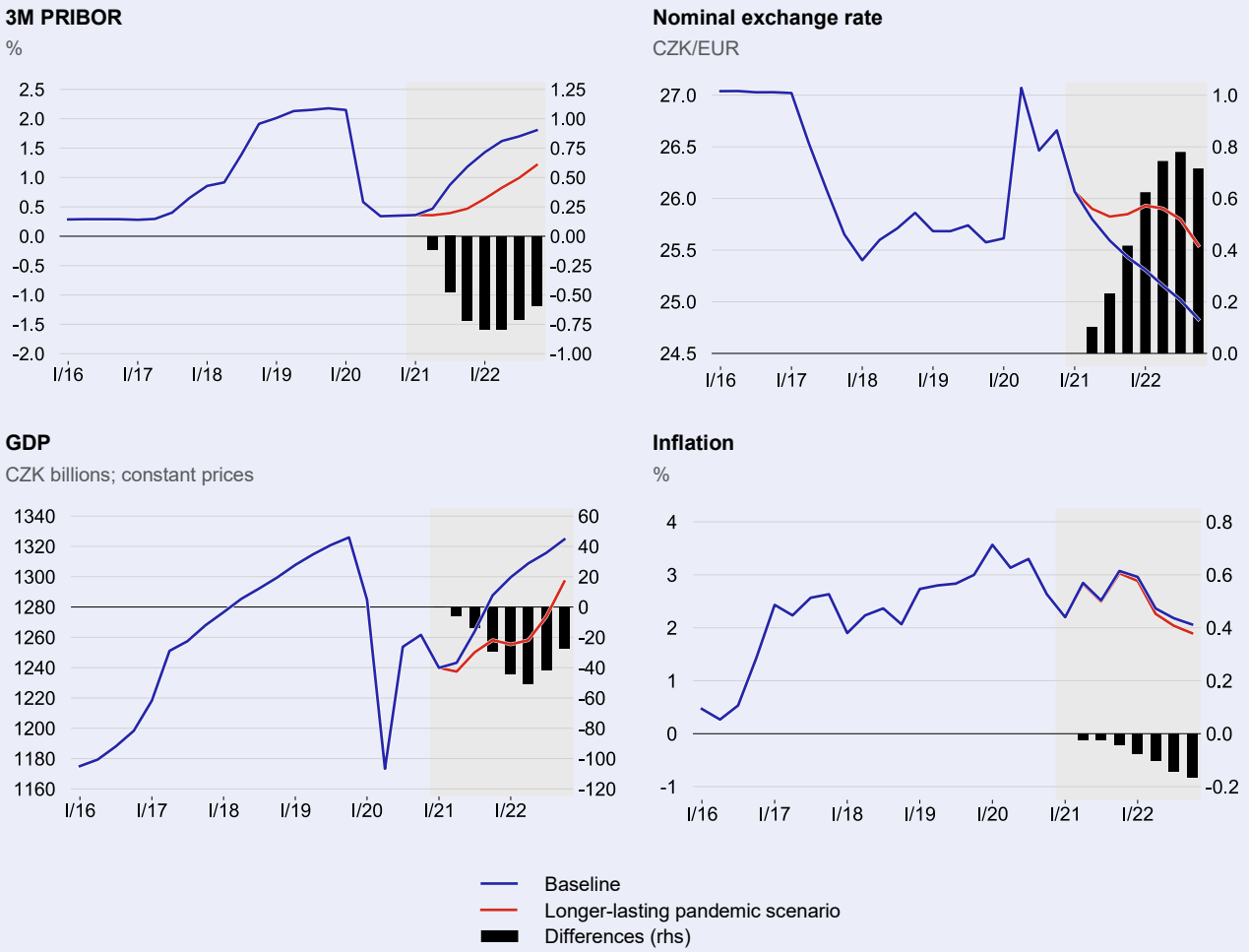
The weaker external demand coupled with the stronger domestic cyclical impacts of the more gradually receding pandemic will result in substantially slower growth of the Czech economy (see Chart IV.7). The more negative foreign output gap over the entire outlook fosters a weaker koruna via lower demand for Czech exports. The more muted external demand, along with worse sentiment of corporations, will also result in much lower investment activity of Czech firms. The worse income situation of households and lower consumer appetite amid the continued shutdowns will be reflected in a larger decline in household consumption this year. Next year, consumption will recover – albeit less significantly than in the baseline scenario – as across-the-board anti-epidemic restrictions are relaxed cautiously. The savings accumulated during the shutdowns will be spent later and to a more limited extent than in the baseline scenario.

The lower demand for domestic production and slower wage growth will foster more subdued overall inflation pressures and a need to increase interest rates later than in the baseline scenario. Interest rates will therefore not be raised until the start of next year in this scenario. The easier interest and exchange rate components of the monetary conditions than in the baseline scenario will ensure that inflation will be close to the inflation target at the monetary policy horizon.

Chart IV.7

A longer-lasting contraction of the Czech economy leads to a need to increase domestic interest rates later

comparison of baseline scenario with longer-lasting pandemic scenario – domestic variables



1 A discretionary response of domestic fiscal policy is not assumed in this scenario, as the room for fiscal policy manoeuvre will already be limited.

A slower fade-out of the pandemic would require interest rates to remain at their current levels for longer

The longer-lasting pandemic scenario shows that lengthier shutdowns accompanied by cyclical impacts would result in substantially weaker growth of the Czech economy and more muted inflation pressures overall. A need to increase market interest rates in this scenario thus does not arise until the start of next year, i.e. much later than in the baseline scenario.

Increasing interest rates this year would lead to an undershooting of the inflation target if the pandemic were to recede more gradually

To illustrate the possible magnitude of the monetary policy error, we prepared a simulation in which the central bank raises interest rates this year in line with the baseline scenario but the pandemic recedes more slowly and its impacts on the economy match those in the longer-lasting pandemic scenario. According to this simulation, pursuing less accommodative monetary policy than these negative developments call for will result in inflation falling below the inflation target. A further decrease in inflation will be prevented by a slight reduction in interest rates next year, when the monetary policy response to the observed developments is correct. However, inflation will not return to the target even at the monetary policy horizon.

By contrast, longer-than-forecasted interest rate stability would lead to the target being significantly overshot if the assumptions of the baseline scenario were to materialise

Concerned about a slower fade-out of the pandemic, the central bank may wait until it has sufficiently conclusive information that the pandemic has receded and the economy has successfully recovered from it, and may therefore leave interest rates at their current levels until the end of this year. However, if the feared longer-lasting economic downturn does not occur and the foreign and domestic economies evolve in line with the baseline scenario (which the central bank will only confirm ex-post), too accommodative monetary policy will lead to distinctly higher inflation. According to the relevant monetary policy simulation, inflation would markedly exceed the upper boundary of the tolerance band around the inflation target at the end of this year. A period of rate stability this year would thus have to be followed by a significant monetary policy tightening. However, not even a rapid rise in rates above the baseline scenario levels would deliver achievement of the inflation target at the monetary policy horizon in this monetary policy simulation.

Monetary policy in the g3+ model *sets interest rates taking into account the deviation of expected monetary policy-relevant inflation from the 2% target at the monetary policy horizon. The inflation outlook takes on board the forecasts for all relevant macroeconomic variables. The emphasis on the monetary policy horizon reflects the gradual transmission of interest rates to future economic developments and in turn to inflation. By concentrating on inflation at this horizon, the central bank simultaneously abstracts from short-term inflation shocks. Their impact can be controlled by monetary policy to only a minimal extent. In addition, any efforts to mitigate them quickly would cause high interest rate volatility, which would destabilise the economy. Too abrupt changes in rates are also prevented by intentional rate smoothing by the central bank. Nonetheless, active monetary policy stabilises inflation at the target in the long run. This is usually accompanied by gradual movement of interest rates towards their neutral long-run level (3%).*

The monetary policy horizon *is the future time period which the CNB focuses on when making its monetary policy decisions and which reflects the lag in the transmission of monetary policy. This time period is roughly 12–18 months ahead.*

Simulations of rate growth and stability under different pandemic scenarios

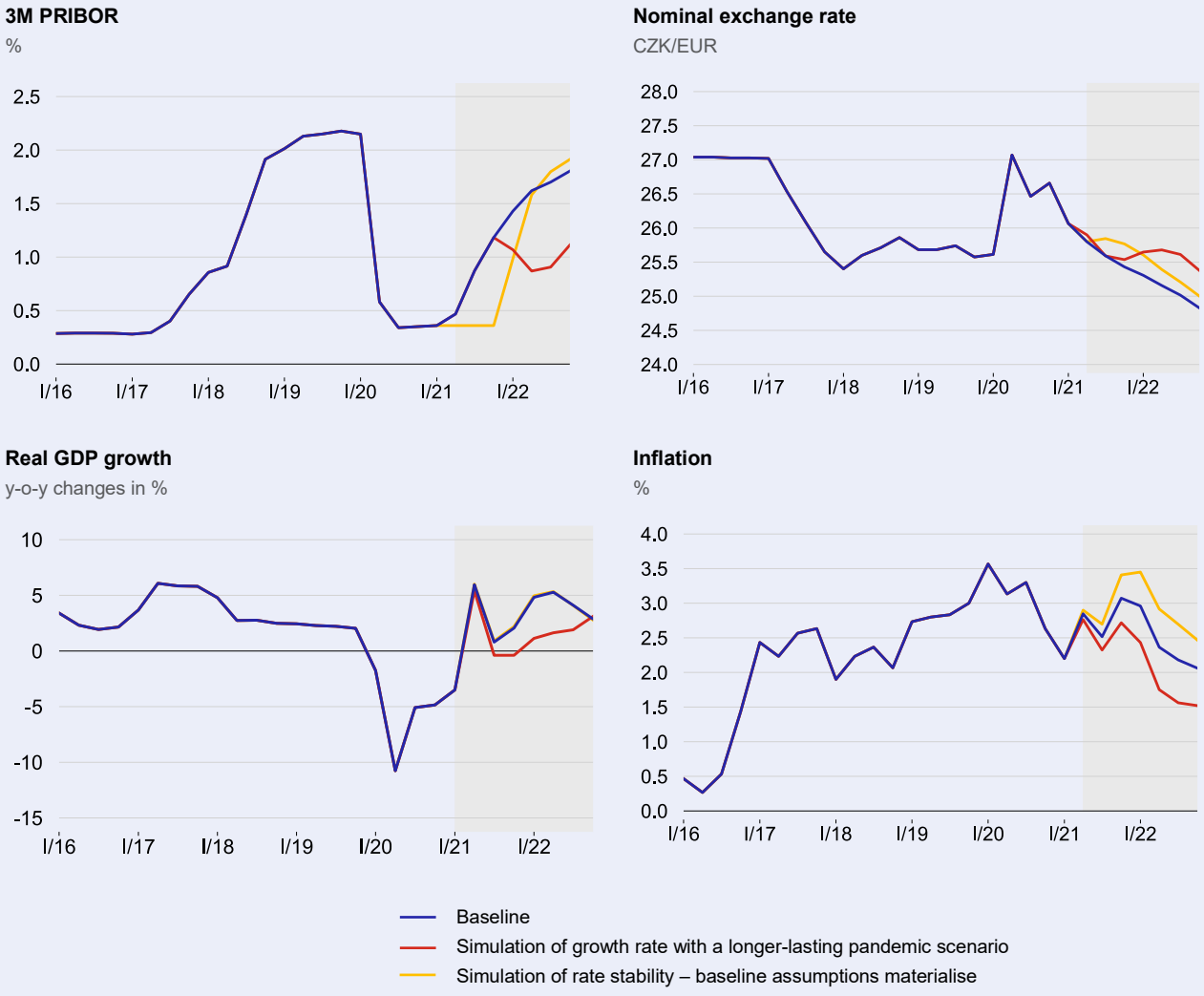
Two hypothetical situations are examined in these monetary policy simulations.

The first simulation (the red line in the charts) captures the situation where the longer-lasting pandemic scenario materialises but interest rates rise in the second half of this year in line with the baseline scenario. The assumption regarding the average exchange rate (CZK 25.9 to the euro) in Q2 is the same as in the longer-lasting pandemic scenario. Less accommodative monetary policy than would be appropriate in a situation of a slower lifting of shutdowns will result in inflation falling below the inflation target, albeit within the bounds of the tolerance target. Next year, when monetary policy responds endogenously to the situation, interest rates temporarily decline modestly. This will support inflation, or stop it falling any further. However, inflation will remain below the inflation target at the monetary policy horizon (see Chart IV.8).

Chart IV.8

Inflation would not reach the inflation target at the monetary policy horizon if monetary policy was set inappropriately to either side in the second half of this year

comparison of baseline scenario with monetary policy simulations



The second simulation (the yellow line in the charts) describes the situation where interest rates stay unchanged until the end of this year while the assumptions and path of the baseline scenario (an easing of anti-pandemic restrictions and an economic recovery) materialise. At the same time, it maintains the assumption of an average exchange rate of CZK 25.8 to the euro in 2021 Q2. The simulation assumes active communication by the Bank Board regarding the intention to keep interest rates stable for longer than assumed in the baseline scenario of the forecast. The expectation of constant rates until the year-end leads to more gradual appreciation of the koruna in this simulation due to a stable interest rate differential. Lower rates and weaker exchange rate compared to the baseline scenario result in distinctly higher inflation, which will markedly exceed the upper boundary of the tolerance band

around the inflation target at the end of this year. In order to tame inflation subsequently, the central bank will need to quickly increase rates to just above the baseline scenario levels at the start of next year. This notwithstanding, inflation will stay visibly above the 2% target, and thus above the baseline scenario path, for the whole of next year, i.e. over the monetary policy horizon. The weaker koruna than in the baseline scenario will support domestic exporters. However, this will be reflected in imperceptibly higher GDP growth relative to the baseline scenario (see Chart IV.8).

The uncertainties of the forecast include the causes, size and duration of the disruption to global production and supply chains

Amid the ongoing pandemic and the related anti-epidemic measures, the increased global demand for miscellaneous manufactured articles has in recent months run into capacity constraints as regards the production of some commodities and components and capacity shortages in freight transport in virtually all countries (see Box 1 in section I). This is being accompanied by strong inflation pressures in industry, which the forecast assumes to be only temporary. However, there is uncertainty regarding the exact causes of the production and transport capacity shortages, their pass-through to tradables prices and their potential drag on Czech industry. At the same time, this situation shows clearly that the impacts of the pandemic are not just anti-inflationary in nature.

Analysts' inflation expectations remain anchored at the inflation target at the one-year horizon (see Table IV.1). However, indicators of the longer-term inflation expectations of analysts and firms, inflation expected by households, and public concerns about price growth have increased slightly in recent months.

Table IV.1

Inflation expected by analysts is very close to the inflation target

1Y horizon; annual percentage changes unless otherwise indicated

	12/20	1/21	2/21	3/21	4/21
FMIE:					
CPI	2.1	2.1	2.2	2.1	2.0
CPI, 3Y horizon	2.0	2.0	2.0	2.0	2.1
Real GDP in 2020	3.5	3.4	3.4	3.3	3.2
Real GDP in 2021		4.6	4.6	4.4	4.4
Nominal wages in 2020	2.9	3.2	3.3	3.4	3.5
Nominal wages in 2021		4.4	4.2	4.4	4.2
CZK/EUR exchange rate (level)	25.6	25.5	25.2	25.3	25.3
2W repo rate (%)	0.4	0.4	0.6	0.6	0.7
1Y PRIBOR (%)	0.7	0.7	0.9	1.0	1.1
Corporations:					
CPI	2.4			2.3	
CPI, 3Y horizon	2.7			2.8	
CF:					
Real GDP in 2020	3.8	3.6	3.5	3.4	3.3
Real GDP in 2021		4.9	4.7	4.7	4.6
Nominal wages in 2020	2.9	2.9	3.2	3.0	3.5
Nominal wages in 2021		4.0	4.2	4.0	4.1
CZK/EUR exchange rate (level)	25.7	25.6	25.6	25.4	25.6
3M PRIBOR (%)	0.5	0.6	0.6	0.7	0.8

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	US Energy Information Administration
EIA	Environmental Impact Assessment
EIU	Economist Intelligence Unit
ESA	European System of Accounts
ESCB	European System of Central Banks
ESI	Economic Sentiment Indicator
ESR	electronic sales registration
EU	European Union
EUR	euro
EURIBOR	Euro Interbank Offered Rate
FDI	foreign direct investment
FECF	Foreign Exchange Consensus Forecasts
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
MFI	monetary financial institutions
MLSA	Ministry of Labour and Social Affairs
m-o-m	month-on-month
MPR	Monetary Policy Report
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
q-o-q	quarter-on-quarter
repo rate	repurchase agreement rate
rhs	right-hand scale
USD	US dollar
VAT	value added tax
WTI	West Texas Intermediate
y-o-y	year-on-year

Key macroeconomic indicators

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
DEMAND AND SUPPLY												
Gross domestic product												
GDP (CZK bn, constant p. of 2015, seas. adjusted)	4323.3	4292.6	4290.7	4387.7	4627.5	4740.7	4994.7	5153.6	5269.3	4973.5	**5034.5**	**5248.8**
GDP (CZK bn, current p., seas. adjusted)	4058.3	4087.8	4141.8	4344.6	4627.5	4794.8	5117.4	5415.7	5751.4	5654.4	**5881.1**	**6289.5**
GDP (%, y-o-y, real terms, seas. adjusted)	1.8	-0.7	0.0	2.3	5.5	2.4	5.4	3.2	2.2	-5.6	**1.2**	**4.3**
GDP (%, q-o-q, real terms, seas. adjusted)	-	-	-	-	-	-	-	-	-	-	**-**	**-**
Household consumption (%, y-o-y, real terms, seas. adjusted)	0.4	-1.1	0.9	1.4	3.9	3.7	4.0	3.3	2.9	-5.2	**0.2**	**6.3**
Government consumption (%, y-o-y, real terms, seas. adjusted)	-3.5	-1.9	2.4	1.0	1.8	2.5	1.8	3.8	2.2	3.5	**2.4**	**1.4**
Gross capital formation (%, y-o-y, real terms, seas. adjusted)	1.8	-4.1	-4.3	7.1	13.1	-4.0	6.6	7.7	1.5	-13.2	**3.0**	**3.5**
Gross fixed capital formation (%, y-o-y, real terms, seas. adjusted)	1.1	-3.2	-2.2	3.3	9.8	-3.1	5.1	10.0	2.2	-8.1	**-1.0**	**4.0**
Exports of goods and services (%, y-o-y, real terms, seas. adjusted)	9.2	4.4	0.3	8.7	6.2	4.1	7.6	3.7	1.2	-6.0	**8.0**	**6.6**
Imports of goods and services (%, y-o-y, real terms, seas. adjusted)	6.7	2.7	0.1	10.0	6.9	2.7	6.5	5.8	1.3	-6.1	**8.9**	**7.0**
Net exports (CZK bn, constant p. of 2015, seas. adjusted)	230.1	289.0	295.6	283.1	276.4	337.4	400.7	337.3	336.8	320.7	**311.5**	**314.1**
PRICES												
Main price indicators												
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	**2.7**	**2.4**
Regulated prices (14.58%)* (%, y-o-y, average)	4.7	8.6	2.2	-3.0	0.0	0.2	0.0	1.8	4.4	3.1	**0.3**	**2.8**
Food prices (incl. alcoholic beverages and tobacco) (26.41%)* (%, y-o-y, average)	4.3	2.9	3.1	1.8	0.1	0.2	3.6	1.6	2.6	4.2	**2.3**	**2.6**
Core inflation (55.61%)* (%, y-o-y, average)	-0.4	-0.3	-0.5	0.5	1.2	1.2	2.4	2.1	2.7	3.4	**2.8**	**2.0**
Fuel prices (3.40%)* (%, y-o-y, average)	7.2	6.0	-2.1	0.2	-13.5	-8.5	6.7	6.3	-0.4	-11.4	**7.3**	**-0.4**
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	3.2	**2.5**	**2.2**
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	0.1	**3.6**	**1.0**
Agricultural prices (%, y-o-y, average)	22.1	3.3	-12.1	4.7	-6.2	-6.0	7.4	-0.2	5.7	-3.2	**4.1**	**-0.4**
LABOUR MARKET												
Average monthly wage (%, y-o-y, nominal terms)	2.5	2.5	-0.1	2.9	3.2	4.4	6.7	8.2	6.4	4.4	**4.8**	**3.7**
Average monthly wage in market sectors (%, y-o-y, nominal terms)	2.9	2.6	-0.3	3.0	3.2	4.3	6.7	7.7	5.9	4.0	**4.8**	**3.8**
Average monthly wage (%, y-o-y, real terms)	0.6	-0.8	-1.6	2.6	2.8	3.8	4.3	6.0	3.6	1.2	**2.2**	**1.3**
Unit labour costs (%, y-o-y)	0.5	3.6	0.9	1.6	-0.4	3.1	3.9	6.2	4.3	5.9	**3.5**	**0.2**
Aggregate labour productivity (%, y-o-y)	2.1	-1.2	-0.4	1.7	3.9	0.9	3.6	1.8	2.1	-4.2	**2.3**	**3.7**
ILO general unemployment rate (%, average, age 15–64, seas. adjusted)	6.8	7.0	7.0	6.2	5.1	4.0	2.9	2.3	2.0	2.6	**3.5**	**3.5**
Share of unemployed persons (MLSA) (%, average, seas. adjusted)	6.7	6.8	7.7	7.7	6.5	5.5	4.2	3.2	2.8	3.6	**4.2**	**4.2**
Employment (ILO) (%, y-o-y)	0.3	0.4	1.0	0.8	1.4	1.9	1.6	1.4	0.2	-1.3	**-0.9**	**0.5**
Full-time employment (%, y-o-y)	-0.3	0.0	-1.0	1.1	2.1	1.8	2.2	1.5	0.3	-2.6	**-0.7**	**0.9**
PUBLIC FINANCE												
Government budget balance (ESA2010) (CZK bn, current prices)	-109.7	-159.3	-53.2	-90.2	-29.8	34.1	76.7	49.4	17.9	-348.0	**-482.5**	**-342.0**
Government budget balance / GDP** (%, nominal terms)	-2.7	-3.9	-1.3	-2.1	-0.6	0.7	1.5	0.9	0.3	-6.2	**-8.2**	**-5.4**
Government debt (ESA2010) (CZK bn, current prices)	1613.7	1805.3	1840.2	1818.9	1836.0	1754.7	1749.7	1734.6	1739.9	2153.0	**2614.9**	**2947.6**
Government debt / GDP** (%, nominal terms)	39.7	44.2	44.4	41.9	39.7	36.6	34.2	32.1	30.3	38.1	**44.4**	**46.9**
EXTERNAL RELATIONS												
Current account												
Trade balance (CZK bn, current prices)	75.5	123.8	167.0	220.0	187.7	258.5	259.3	200.9	239.8	285.2	**292.8**	**290.5**
Trade balance / GDP (%, nominal terms)	1.9	3.0	4.0	5.1	4.1	5.4	5.1	3.7	4.2	5.0	**5.0**	**4.6**
Balance of services (CZK bn, current prices)	81.3	77.6	70.4	55.7	86.6	106.6	124.6	120.0	106.0	104.6	**100.0**	**116.0**
Current account (CZK bn, current prices)	-84.8	-63.3	-21.8	7.9	20.7	85.2	79.1	24.1	19.2	203.5	**139.3**	**81.5**
Current account / GDP (%, nominal terms)	-2.1	-1.5	-0.5	0.2	0.4	1.8	1.5	0.4	0.3	3.6	**2.4**	**1.3**
Foreign direct investment												
Direct investment (CZK bn, current prices)	-46.8	-121.3	7.4	-80.4	49.7	-186.5	-45.9	-51.0	-137.1	-73.1	**-110.0**	**-70.0**
Exchange rates												
CZK/USD (average)	17.7	19.6	19.6	20.8	24.6	24.4	23.4	21.7	22.9	23.2	**21.3**	**20.6**
CZK/EUR (average)	24.6	25.1	26.0	27.5	27.3	27.0	26.3	25.6	25.7	26.5	**25.7**	**25.1**
MONEY AND INTEREST RATES												
M3 (%, y-o-y, average)	1.0	5.1	5.1	5.1	7.3	9.1	11.7	6.6	6.3	9.0	**10.5**	**7.9**
2W repo rate (%, average)	0.75	0.05	0.05	0.05	0.05	0.05	0.50	1.75	2.00	0.25	**0.61**	**1.53**
3M PRIBOR (%, average)	1.2	1.0	0.5	0.4	0.3	0.3	0.4	1.3	2.1	0.9	**0.7**	**1.6**
EXTERNAL ASSUMPTIONS												
Foreign GDP (%, y-o-y, seas. adjusted, efective)	2.9	0.3	0.2	1.9	1.9	2.0	2.8	1.9	1.2	-5.9	**3.1**	**3.8**
Foreign GDP (%, q-o-q, seas. adjusted, efective)	-	-	-	-	-	-	-	-	-	-	**-**	**-**
Foreign HICP (%, y-o-y, seas. adjusted, efective)	2.8	2.6	1.6	0.6	0.4	0.3	1.6	2.0	1.5	0.6	**2.0**	**1.4**
Foreign PPI (%, y-o-y, seas. adjusted, efective)	5.3	2.1	-0.1	-1.6	-2.5	-2.3	2.7	3.3	1.1	-1.6	**3.5**	**1.1**
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	-32.7	**42.9**	**-4.2**
3M EURIBOR (%, average)	1.4	0.6	0.2	0.2	0.0	-0.3	-0.3	-0.3	-0.4	-0.4	**-0.5**	**-0.6**
USD/ EUR (average)	1.4	1.3	1.3	1.3	1.1	1.1	1.1	1.2	1.1	1.1	**1.2**	**1.2**

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

	2020				2021				2022			
	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV
DEMAND AND SUPPLY												
Gross domestic product												
GDP (CZK bn, constant p. of 2015, seas. adjusted)	1284.8	1173.3	1253.8	1261.6	**1239.9**	**1243.2**	**1263.8**	**1287.7**	**1299.6**	**1308.8**	**1315.7**	**1324.7**
GDP (CZK bn, current p., seas. adjusted)	1442.0	1330.0	1427.8	1454.6	**1423.2**	**1461.1**	**1479.8**	**1517.0**	**1542.4**	**1563.3**	**1582.3**	**1601.6**
GDP (%, y-o-y, real terms, seas. adjusted)	-1.8	-10.8	-5.1	-4.8	**-3.5**	**6.0**	**0.8**	**2.1**	**4.8**	**5.3**	**4.1**	**2.9**
GDP (%, q-o-q, real terms, seas. adjusted)	-3.1	-8.7	6.9	0.6	**-1.7**	**0.3**	**1.7**	**1.9**	**0.9**	**0.7**	**0.5**	**0.7**
Household consumption (%, y-o-y, real terms, seas. adjusted)	-0.3	-8.6	-3.6	-8.3	**-6.2**	**2.0**	**-0.5**	**5.8**	**7.7**	**8.0**	**5.6**	**4.2**
Government consumption (%, y-o-y, real terms, seas. adjusted)	4.8	1.9	0.3	7.0	**1.5**	**3.8**	**5.7**	**-1.2**	**2.4**	**1.7**	**0.9**	**0.7**
Gross capital formation (%, y-o-y, real terms, seas. adjusted)	-7.1	-7.3	-17.5	-20.9	**-7.8**	**-0.2**	**10.7**	**11.6**	**3.6**	**3.7**	**3.5**	**3.2**
Gross fixed capital formation (%, y-o-y, real terms, seas. adjusted)	-4.9	-5.0	-9.6	-12.8	**-5.0**	**-4.0**	**1.4**	**4.1**	**4.9**	**4.4**	**3.5**	**3.2**
Exports of goods and services (%, y-o-y, real terms, seas. adjusted)	-2.1	-23.4	-3.1	4.7	**0.8**	**29.0**	**5.3**	**1.5**	**8.7**	**8.1**	**5.8**	**3.9**
Imports of goods and services (%, y-o-y, real terms, seas. adjusted)	-1.4	-18.2	-5.2	0.2	**-0.8**	**23.3**	**9.8**	**5.9**	**9.8**	**8.5**	**5.7**	**4.3**
Net exports (CZK bn, constant p. of 2015, seas. adjusted)	66.1	22.3	109.6	122.6	**83.4**	**75.6**	**72.6**	**79.9**	**80.1**	**77.8**	**77.8**	**78.4**
PRICES												
Main price indicators												
Consumer Price Index (%, y-o-y, average)	3.6	3.1	3.3	2.6	2.2	**2.8**	**2.5**	**3.1**	**3.0**	**2.4**	**2.2**	**2.1**
Regulated prices (14.58%)* (%, y-o-y, average)	4.2	3.4	3.4	1.7	0.1	**-0.1**	**-0.4**	**1.6**	**2.8**	**2.8**	**2.8**	**2.6**
Food prices (incl. alcoholic beverages and tobacco) (26.41%)* (%, y-o-y, average)	4.8	5.5	4.0	2.4	1.6	**1.3**	**2.6**	**3.6**	**3.1**	**2.7**	**2.3**	**2.1**
Core inflation (55.61%)* (%, y-o-y, average)	2.9	3.2	3.7	3.7	3.3	**3.0**	**2.4**	**2.5**	**2.4**	**2.0**	**1.8**	**1.9**
Fuel prices (3.40%)* (%, y-o-y, average)	1.3	-19.4	-14.1	-13.2	-5.8	**18.2**	**8.5**	**8.1**	**3.0**	**-1.9**	**-0.2**	**-2.4**
Monetary policy-relevant inflation (%, y-o-y, average)	3.6	3.2	3.3	2.6	2.2	**2.6**	**2.3**	**2.8**	**2.7**	**2.2**	**2.0**	**1.9**
Partial price indicators												
Industrial producer prices (%, y-o-y, average)	1.4	-0.6	-0.3	0.1	1.5	**4.3**	**4.4**	**4.1**	**2.3**	**0.5**	**0.5**	**0.7**
Agricultural prices (%, y-o-y, average)	-3.6	-3.2	-3.2	-3.1	-1.3	**3.9**	**7.7**	**7.0**	**2.3**	**-2.9**	**-2.5**	**1.7**
LABOUR MARKET												
Average monthly wage (%, y-o-y, nominal terms)	5.2	0.7	5.2	6.5	**3.3**	**11.3**	**3.0**	**2.0**	**4.8**	**1.2**	**4.5**	**4.4**
Average monthly wage in market sectors (%, y-o-y, nominal terms)	5.2	-0.2	4.6	6.4	**2.6**	**12.3**	**3.0**	**1.7**	**5.2**	**0.8**	**4.7**	**4.6**
Average monthly wage (%, y-o-y, real terms)	1.5	-2.3	1.8	3.8	**1.1**	**8.5**	**0.4**	**-1.1**	**1.8**	**-1.1**	**2.3**	**2.4**
Unit labour costs (%, y-o-y)	5.5	4.7	7.0	6.4	**4.2**	**6.9**	**1.5**	**1.4**	**0.1**	**-3.0**	**1.3**	**2.5**
Aggregate labour productivity (%, y-o-y)	-1.0	-8.8	-3.8	-2.9	**-1.4**	**6.8**	**1.8**	**2.3**	**4.7**	**4.7**	**3.4**	**2.1**
ILO general unemployment rate (%, average, age 15–64, seas. adjusted)	2.0	2.5	2.8	3.0	**3.3**	**3.6**	**3.6**	**3.6**	**3.6**	**3.5**	**3.5**	**3.4**
Share of unemployed persons (MLSA) (%, average, seas. adjusted)	2.8	3.7	3.8	3.9	**4.0**	**4.3**	**4.3**	**4.3**	**4.2**	**4.2**	**4.2**	**4.1**
Employment (ILO) (%, y-o-y)	-0.5	-1.6	-1.4	-1.6	**-1.9**	**-0.7**	**-0.9**	**-0.3**	**0.1**	**0.5**	**0.7**	**0.7**
Full-time employment (%, y-o-y)	-1.1	-3.4	-3.1	-2.9	**-2.2**	**-0.8**	**-0.1**	**0.1**	**0.7**	**1.0**	**1.1**	**1.0**
PUBLIC FINANCE												
Government budget balance (ESA2010) (CZK bn, current prices)	-	-	-	-	-	-	-	-	-	-	-	-
Government budget balance / GDP** (%, nominal terms)	-	-	-	-	-	-	-	-	-	-	-	-
Government debt (ESA2010) (CZK bn, current prices)	-	-	-	-	-	-	-	-	-	-	-	-
Government debt / GDP** (%, nominal terms)	-	-	-	-	-	-	-	-	-	-	-	-
EXTERNAL RELATIONS												
Current account												
Trade balance (CZK bn, current prices)	66.7	29.2	78.8	110.4	**96.1**	**85.7**	**56.8**	**54.1**	**101.3**	**88.2**	**51.8**	**49.2**
Trade balance / GDP (%, nominal terms)	4.9	2.2	5.4	7.3	**7.2**	**5.8**	**3.8**	**3.4**	**7.0**	**5.6**	**3.2**	**3.0**
Balance of services (CZK bn, current prices)	37.0	27.6	30.3	9.8	**15.0**	**30.0**	**27.0**	**28.0**	**32.0**	**34.0**	**27.0**	**23.0**
Current account (CZK bn, current prices)	84.0	16.8	84.6	18.1	**87.2**	**42.2**	**4.6**	**5.2**	**106.3**	**11.6**	**-23.1**	**-13.3**
Current account / GDP (%, nominal terms)	6.2	1.3	5.8	1.2	**6.5**	**2.9**	**0.3**	**0.3**	**7.3**	**0.7**	**-1.4**	**-0.8**
Foreign direct investment												
Direct investment (CZK bn, current prices)	6.5	-34.3	21.2	-66.5	**-27.5**	**-27.5**	**-27.5**	**-27.5**	**-17.5**	**-17.5**	**-17.5**	**-17.5**
Exchange rates												
CZK/USD (average)	23.2	24.6	22.6	22.4	21.6	**21.6**	**21.2**	**21.0**	**20.8**	**20.7**	**20.5**	**20.4**
CZK/EUR (average)	25.6	27.1	26.5	26.7	26.1	**25.8**	**25.6**	**25.4**	**25.3**	**25.2**	**25.0**	**24.8**
MONEY AND INTEREST RATES												
M3 (%, y-o-y, average)	8.6	8.2	9.5	9.9	**10.8**	**11.3**	**10.2**	**9.7**	**8.6**	**7.8**	**7.5**	**7.5**
2W repo rate (%, average)	1.90	0.25	0.25	0.25	0.25	**0.36**	**0.76**	**1.07**	**1.32**	**1.51**	**1.59**	**1.69**
3M PRIBOR (%, average)	2.1	0.6	0.3	0.4	0.4	**0.5**	**0.9**	**1.2**	**1.4**	**1.6**	**1.7**	**1.8**
EXTERNAL ASSUMPTIONS												
Foreign GDP (%, y-o-y, seas. adjusted, efective)	-2.8	-12.8	-3.8	-4.1	**-2.3**	**10.2**	**1.5**	**3.4**	**5.6**	**4.7**	**3.1**	**1.9**
Foreign GDP (%, q-o-q, seas. adjusted, efective)	-3.1	-10.3	10.6	-0.2	**-1.3**	**1.2**	**1.9**	**1.6**	**0.8**	**0.4**	**0.3**	**0.4**
Foreign HICP (%, y-o-y, seas. adjusted, efective)	1.5	0.7	0.3	0.0	**1.3**	**1.9**	**2.3**	**2.5**	**1.4**	**1.3**	**1.4**	**1.4**
Foreign PPI (%, y-o-y, seas. adjusted, efective)	-0.5	-2.9	-1.8	-1.0	**1.5**	**4.8**	**4.3**	**3.6**	**1.5**	**0.8**	**1.0**	**1.1**
Brent crude oil (in USD/barrel) (%, y-o-y, average)	-19.3	-50.7	-29.9	-27.7	31.3	**95.5**	**43.0**	**35.5**	**-1.2**	**-5.8**	**-5.1**	**-4.3**
3M EURIBOR (%, average)	-0.4	-0.3	-0.5	-0.5	-0.5	**-0.5**	**-0.6**	**-0.6**	**-0.6**	**-0.6**	**-0.5**	**-0.5**
USD/ EUR (average)	1.1	1.1	1.2	1.2	1.2	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**

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

Issued by:
CZECH NATIONAL BANK
Na Příkopě 28
115 03 Praha 1
Czech Republic

Contact:
COMMUNICATIONS DIVISION
GENERAL SECRETARIAT
Tel.: 224 413 112
www.cnb.cz

ISSN 2695-1177 (Print)
ISSN 2695-1185 (Online)