Monetary Policy Report

——— Winter 2021

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

CNB CZECH NATIONAL BANK

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,

The coronavirus pandemic turned our lives upside down and threw the world economy into a crisis for which a historical comparison is hard to find. Many firms, countless households and even entire sectors found themselves facing huge, literally existential uncertainties overnight, and policymakers were forced to come up with solutions and take steps that had been thought impossible until recently. Governments and central banks around the world reacted to the pandemic very swiftly and forcefully, due not only to the extraordinary pressures faced by economies and markets, but also to the lessons learned during the financial and debt crisis.

As a result of the pandemic and the ensuing closures, our economy in 2020 saw its biggest decline since the establishment of the Czech Republic. However, the recession could have been even deeper and more painful had targeted fiscal support not been provided to the hardest hit sectors, branches and occupations. Thanks mainly to fiscal policy, unemployment has risen only modestly so far. The CNB reacted to the risks by rapidly cutting interest rates in three steps and taking other measures to maintain financial stability.

In early 2021, it is clear that the road to recovery will be neither easy nor short. Although the vaccination rollout offers a light at the end of the tunnel, the spread of new and more aggressive strains of the virus is repeatedly postponing the easing of restrictions both in the Czech Republic and in neighbouring countries, with which our economy is closely interlinked. This is happening at a time when many businesses and households have run out of financial buffers and their ability to face a further extension of closures is at its lowest since the pandemic started. By contrast, the still good shape of domestic industry, and above all of sectors that have found new growth opportunities in this crisis, is promising.

The Czech economy entered the coronavirus crisis with an overheated labour market. This had led to relatively high inflation, above the upper boundary of our target. In the last year, however, inflation has fallen close to the target, and our current outlook suggests it will stay at this level for the next two years.

Unless unforeseen adverse events occur, the next change in interest rates is likely to be an increase. However, my colleagues and I will very cautiously consider when to start interest rate normalisation and how quickly to pursue it, so as to avoid undermining the future recovery and weakening our ability to achieve the inflation target.

I hope the first issue of our brand new Monetary Policy Report, which is replacing the Inflation Report after 23 years, will make for an interesting and inspiring read. I trust you will appreciate its new look and above all the shift to even greater transparency of our monetary policy considerations. I look forward to opening each issue with a brief outline of a key current topic.

On behalf of the Czech National Bank

Jiří Rusnok

Governor

The decision, and the current outlook and its risks

At its February 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 gradual rise in rates from roughly the middle of this year onwards. The rise in rates will be a reaction to inflation stabilising close to the target as the adverse effects of the second wave of the coronavirus pandemic subside thanks to emerging herd immunity. Longer lockdowns at home and abroad and an ensuing further deterioration in the financial situation and sentiment of businesses and households are the main risk to this outlook. This could materialise owing to a potential combination of multiple adverse pandemic factors, including virus mutations and sluggish vaccination.

The second wave of the coronavirus pandemic hit the Czech Republic at full force during the autumn, halting the economy's promising recovery from the first wave induced by the lifting of epidemiological measures in the summer. The measures were retightened in response to the second wave, first during autumn and then – after a brief easing before Christmas – even more so at the year-end. The Czech government reintroduced shutdowns in retail and services, which affected the domestic economy at the turn of the year. Given the severe course of the pandemic during the winter, the government can be expected to ease the current anti-epidemic measures only cautiously during the first half of the year. The nascent vaccination effort offers a light at the end of the tunnel. The economy can be probably expected to return to normal functioning and mobility and social contact to essentially get back to the pre-pandemic level in 2022, following the expected achievement of herd immunity this summer.

The good news is that growth in the key sector of the economy, industry, which started in the summer, is continuing during the second wave of the pandemic. Industry, foreign trade (including freight transport) and global supply chains have so far proved resilient to the pandemic. This is evidenced by domestic industrial firms' solid export performance, which is slowing the fall in GDP at the turn of the year. However, the pandemic will continue to weigh on retail, services, recreational, sports and culture activities, and tourism for most of the first half of the year.

The labour market cooling due to last year's deep downturn is being reflected in a gradual slowdown in fundamental wage growth (i.e. wage growth adjusted for statistical effects) in market sectors. At the year-end, moreover, the decline in employment and the increase in the jobless total continued, despite government programmes to protect jobs in the sectors affected. Overall, fiscal measures markedly slowed the decline of the Czech economy in 2020, mainly by supporting household income and consumption.

After roughly a year, inflation returned to the tolerance band around the CNB's 2% target in autumn 2020 and fell further in December. This was due mainly to the fade-out of the previously swift growth in food prices and also to lower administered price inflation as a result of cheaper gas and electricity for households. By contrast, core inflation, which had been the driver of headline inflation for the whole of 2020, fell only marginally at the close of the year. Prices at filling stations continued to go down despite the recent rise in global oil prices, which, however, is being offset by a weaker dollar on world markets.

Despite continued government support, the current course of the pandemic is weighing on the sentiment of domestic businesses. Corporate fixed investment will thus be lower in 2021 than last year. Total gross capital formation will therefore switch to modest growth, mainly on the back of continued growth in government investment.

After a slower year-on-year fall in Q1, GDP growth will temporarily shoot up to over 7% in the spring owing to the drop in economic activity during the first wave in 2020. However, the Czech economy will not see truly robust and lasting growth before the summer. As they return to normal life, households will start to partly make up for the previous involuntary deferral of consumption. However, tight family budgets will preclude a rapid return of private consumption to the pre-pandemic level. A continued rise in the jobless total coupled with muted wage growth will dampen growth in households' income and curb their optimism.

Inflation will return close to the 2% target at the start of this year and will be slightly above the target over the monetary policy horizon

Headline and monetary policy-relevant inflation; in %
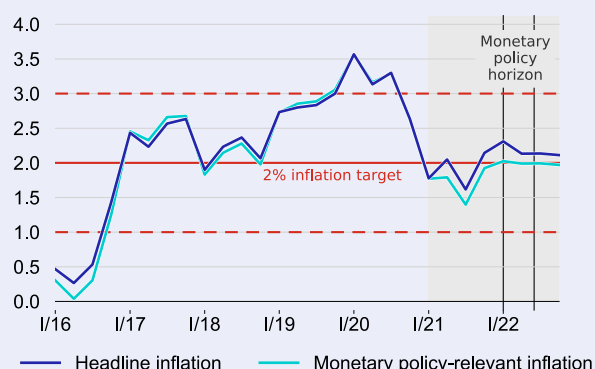
The monetary policy horizon is 12–18 months ahead. This is the period when the Bank Board's current decision has the greatest impact on inflation.

Following a drop last year, domestic economic activity will recover this year and GDP growth will pick up further in 2022

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

	2021	2022
Headline inflation (%)	2.0	2.2
	(-0.3)	(0.1)
GDP	2.2	3.8
	(0.5)	(-0.4)
Average nominal wage	5.2	3.3
	(2.4)	(-0.6)
3M PRIBOR (%)	0.7	1.5
	(0.0)	(0.1)
Exchange rate (CZK/EUR)	25.8	24.9
	(-0.8)	(-1.0)

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 discontinuation of most fiscal stabilisation measures will have the same effect, despite the extension of existing government compensation schemes and the introduction of new ones. Even the huge tax package fostering a marked decline in labour taxation will fail to reverse the resulting slightly restrictive effect of fiscal policy, as households will save much of the extra income, so this intended short-term stimulus to private consumption will have only a limited effect. By contrast, exports of Czech firms will continue to grow this year on the back of rising external demand and a limited impact of the pandemic on domestic and foreign industry and foreign trade. As anti-epidemic measures are lifted, labour productivity can be expected to rise from mid-2021 onwards thanks to businesses reopening and employees returning to their workplaces. Overall, the domestic economy will thus grow by over 2% this year, despite the initial adverse impacts of the second wave of the pandemic. GDP growth will pick up further next year as household consumption and investment return to steady growth. Together with a positive contribution of government consumption, this will lead to GDP growth of almost 4% in 2022. The Czech economy will thus return to the pre-crisis level in late 2022 and the negative output gap will close. The recovery will also be aided by the CNB's monetary policy, which has been accommodative for some time now.

Inflation will fall further in early 2021 and will fluctuate around the CNB's 2% target during the year. Core inflation will slow gradually, reflecting a drop in import prices owing to appreciation of the koruna and low inflation abroad. Subdued domestic fundamental wages and the unwinding of the positive second-round effects of last year's decrease in VAT

(not reflected in prices) will act in the same direction. Fuel prices will record a sharp year-on-year increase in the spring as the drop in oil prices observed last spring fades out, fostering higher inflation. This will later be joined by renewed growth in food prices driven by an upswing in agricultural producer price inflation. A rise in excise duty on tobacco will also put upward pressure on inflation from February onwards. Inflation will thus be slightly above the 2% target in the first half of next year, i.e. over the monetary policy horizon. Monetary policy-relevant inflation, which the central bank focuses on when making decisions, will be slightly lower than headline inflation over the entire outlook due to the above rise in excise duty. Stabilisation of inflation near the target will be supported by monetary policy gradually becoming less accommodative.

Improving financial market sentiment will foster continued firming of the exchange rate. The koruna will also be supported by the reopening of the Czech economy, combined with recovering external demand. The appreciating koruna will also reflect growth in the differential between domestic and euro area interest rates. This is because domestic market interest rates can be expected to rise gradually from roughly the middle of this year onwards, following an initial period of stability. This will reflect the monetary policy response to still appreciable inflation pressures amid a subsiding pandemic, a definitive end to which is now on the horizon thanks to the expected gradual achievement of herd immunity. Rates will continue to rise gradually next year, with inflation anchored at the target and with the prospect of the economy returning to the pre-crisis level.

I.   ECONOMIC DEVELOPMENTS ABROAD

The government measures in place in our trading partner countries during the second wave of the pandemic are having milder impacts than in spring 2020. However, the current restrictions will only be lifted very gradually, requiring continued fiscal and monetary stimuli. On the other hand, the decline in external economic activity is being softened by the resilience so far of the industrial sector. However, only with the arrival of summer can we expect some return to normality and thus a sustained and robust economic recovery. This should be helped along by gradual vaccination. Solid growth in industry, along with a higher oil price, will push industrial prices up in the near term. However, subdued foreign demand for Czech exports will outweigh the price effects. Overall, the external situation will therefore have an anti-inflationary effect on the Czech economy over the forecast horizon.

The global economy is holding up better against the negative impacts of the pandemic than in the first wave. Vaccination and resulting herd immunity offer a light at the end of the tunnel

Of the major global centres, Europe was hit hardest by the economic impact of the pandemic last year. The USA also recorded a major downturn, while China stayed in positive figures on average in 2020 as a whole (see Table I.1). The Chinese economy, which has been kept afloat in difficult times by strong government support, was the driver of the global recovery in the second half of 2020. The USD 900 billion fiscal stimulus and other support measures pledged by President Biden have brought hope of a faster recovery of the US economy. Despite a high number of new coronavirus cases, the US economy is in relatively good shape. The international trade situation is also expected to calm as a result of the new US administration and the Brexit trade deal (see Box 1). The Brexit agreement is good news for the UK economy, which has been severely tested by the pandemic and faces longer hard lockdowns as the government works to curb the spread of the more infectious (UK) strain of the virus.

The autumn wave of the pandemic is spilling over into this year. Many economies will experience a quarter-on-quarter slowdown in GDP growth, or even a drop in GDP, in Q1. However, since there are no major restrictions on cross-border movement of goods, international trade will play an important positive role in mitigating the pandemic's effects on global growth. Unlike services, global industry even continued to expand at the end of 2020, due mainly to the Asian economies (see Chart I.1). The contraction of economies will be moderated by accommodative fiscal and monetary policy. Central banks are saying they are in no hurry to normalise monetary policy (see Chart I.2). Besides the ECB, the Bank of Japan eased monetary policy further in December, expanding its asset purchase and loan support programmes.

Table I.1

The strong downturn that hit the global economy after the outbreak of the pandemic will be only partially erased by European economies this year

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

	2018	2019	2020 Q2	2020 Q3	2020	2021	2022
Euro area	1.9	1.3	-14.7	-4.3	-7.3	4.4	4.0
USA	3.0	2.2	-9.0	-2.8	-3.5	4.4	3.4
China	6.6	6.1	3.2	4.9	2.1	8.3	5.4
United Kingdom	1.3	1.3	-20.8	-8.6	-10.7	4.3	5.8

Chart I.1

Emerging Asian economies are the driving force behind the global industrial recovery

Y-o-y change in % in industrial production; source Netherlands Bureau for Economic Policy Analysis
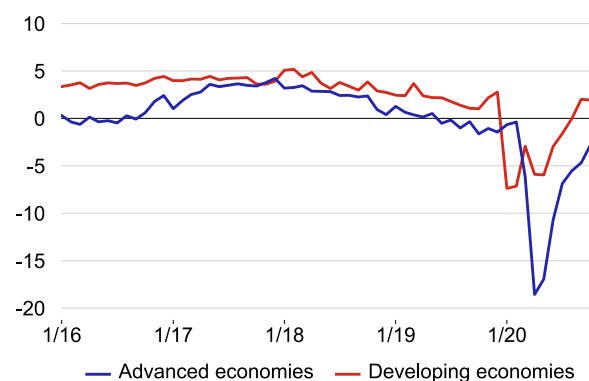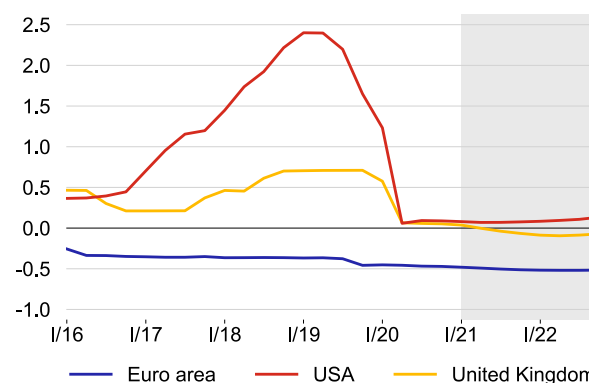

Chart I.2

The financial markets expect the major central banks' monetary policies to stay accommodative

Key interest rates in %; source Bloomberg; CNB calculation

COMPARISON WITH THE PREVIOUS FORECAST: Economic developments abroad

		2020	2021	2022	
GDP (in the effective euro area)	y-o-y changes in % pp	**-6.0** (1.2)	**3.8** (-0.7)	**3.9** (1.1)	The worse pandemic situation at the turn of the year is reflected in lower external demand growth this year. In 2022, it will conversely be higher.
Consumer prices (in the effective euro area)	y-o-y changes in % pp	**0.6** (0.0)	**1.4** (0.4)	**1.5** (0.0)	The outlook for consumer price inflation in our main trading partners is only higher this year due to higher expected inflation in Germany.
Producer prices (in the effective euro area)	y-o-y changes in % pp	**-1.6** (0.2)	**1.6** (1.2)	**1.4** (-0.6)	A favourable situation in industry coupled with growth in cost pressures will foster higher producer prices this year. In 2022, by contrast, there will be a slowdown in price growth.
Brent crude oil price	USD/barrel	**43.2** (0.7)	**52.2** (7.8)	**50.5** (4.1)	According to market outlooks, the price of Brent crude oil will slowly fall. The entire futures curve is significantly higher than in the autumn forecast, especially this year.
3M EURIBOR	% pp	**-0.4** (0.0)	**-0.6** (0.0)	**-0.5** (0.0)	The 3M EURIBOR outlook is unchanged.
Exchange rate	USD/EUR	**1.14** (0.00)	**1.22** (0.03)	**1.23** (0.03)	Continued, slightly faster, appreciation of the euro against the dollar can be expected.

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

The good news for this year is the rollout of the vaccine, which should make it possible to achieve herd immunity and gradually open up the economy. However, the vaccination process is currently slow due to supply shortfalls.

The resilience of European industry during the second wave of the pandemic will soften the fall in demand for Czech exports, while the expected recovery will lead to a gradual reopening of services

The promising global developments in the second half of 2020 had a positive effect on the economies of the Czech Republic's trading partners, especially Germany (see Chart I.3). Thanks to the easing of restrictions in the summer, the economic recovery far surpassed expectations, due mainly to a rapid upswing in international trade. However, some sectors, such as tourism, saw no recovery from the crisis even in the summer. Countries with a high share of these services in their domestic economies (for example, Spain) therefore came out of the first wave with major losses. Overall, the year-on-year decline in GDP in the effective euro area moderated to 4% in Q3.

The second wave of the pandemic led to the reintroduction of government restrictions in November. However, these were far milder than the spring shutdowns, only affecting services with a high degree of social contact. Moreover, some countries (Italy and Spain) had regional lockdowns only. The

Chart I.3

The opening of major trading partners' economies will have some positive effects on demand for Czech exports this year

Annual GDP growth in % in effective euro area; contributions in pp; seasonally adjusted
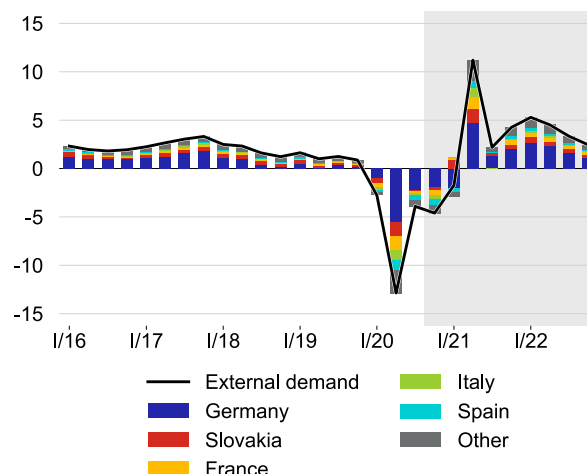
External demand for Czech exports is derived from the GDP growth of our euro area trading partners, taking into account their weights in Czech exports. Our highest-weight euro area trading partners are Germany (accounting for more than 50% of Czech exports to the euro area) and Slovakia (more than 10%), but we also pay close attention to the economies of France, Italy and Spain. For the purposes of the core g3+ forecasting model, growth in external demand for Czech exports is equal to four times euro area effective GDP growth.

ESI confidence indicator in services declined again due to the closures, while the situation in industry remained favourable (see Chart I.4). In December, the PMI in manufacturing for Germany even approached the record levels observed in 2018. In addition to positive developments in industry at the global level and strong demand from Asia, stockpiling by firms due to concerns over a no-deal Brexit undoubtedly contributed to this situation (see Box 1 at the end of this section).

The trend so far indicates that the drop in external demand was again more moderate in 2020 Q4 than in the first wave. France was certainly among the worst affected countries, while German GDP continued to increase marginally in quarter-on-quarter terms. Overall, we estimate that effective euro area GDP fell by around 6% year on year in 2020, less than we expected in the autumn.

Few countries, however, managed to bring the autumn wave under control, so the lockdowns had to be extended into the first months of 2021. This has postponed the previously expected demand recovery in Q1. The measures in Germany and Slovakia may even be tougher than they were on average in 2020 Q4. However, the vaccination rollout, which has been sluggish so far due to supply shortfalls, gives hope for the months ahead. The restrictions will thus be eased only gradually.

The expected opening of the services sector is associated with faster growth from 2021 Q2 onwards.[1] Overall, GDP growth in the effective euro area will reach 3.8% this year and stay there in 2022. We have thus lowered our outlook for this year compared with our autumn forecast, while the outlook for next year is more optimistic. The later, or more gradual, recovery this year will keep the estimated output gap negative for longer than in the previous outlook, although the gap unexpectedly moved quite a lot higher at the end of 2020 due to the strong recovery in the summer.

**Robust demand in industry and oil prices will push industrial prices up in the short term**

The different trends in industry and services will also be reflected in the assumptions regarding inflation abroad. Consumer price inflation excluding the effect of energy prices fell noticeably at the end of 2020. The decline in producer prices adjusted for energy prices (core prices) conversely halted. Solid demand in industry lies behind the expected acceleration of core producer prices, especially in the shorter term. The current growth in oil prices will also be reflected in industrial prices (see Chart I.5). By contrast, in

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1 A more complicated, longer-lasting pandemic, accompanied by some elements of cyclical decline, would threaten the economic recovery. This risk is examined in a longer-lasting pandemic-induced downturn scenario (see section IV).

Chart I.4

The shutdowns are constraining some services, but industry is proving resilient

Confidence indicator in manufacturing and services, a sub-index of the ESI confidence index (ESI); source Eurostat
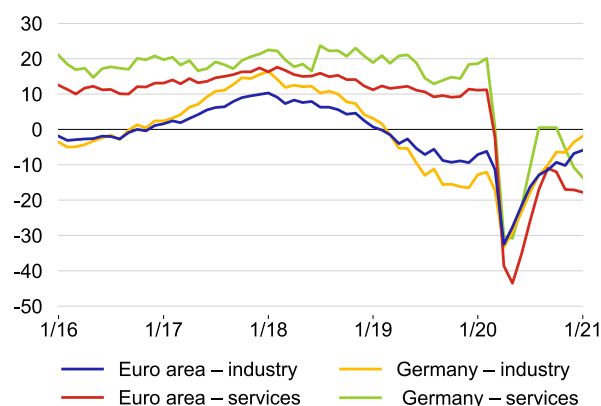
The assumptions of the forecast in the area of the external environment are based mainly on the CNB's forecasting models, but the outlooks for the 3M EURIBOR and the Brent crude oil price, for example, are derived from market contracts. Foreign analysts' outlooks are also a valuable source of information on expected trends in the global economy and exchange rates.

Chart I.5

Producer prices abroad will switch to year-on-year growth

Annual industrial producer price inflation in effective euro area in %; contributions in pp; y-o-y changes in % in Brent crude oil prices
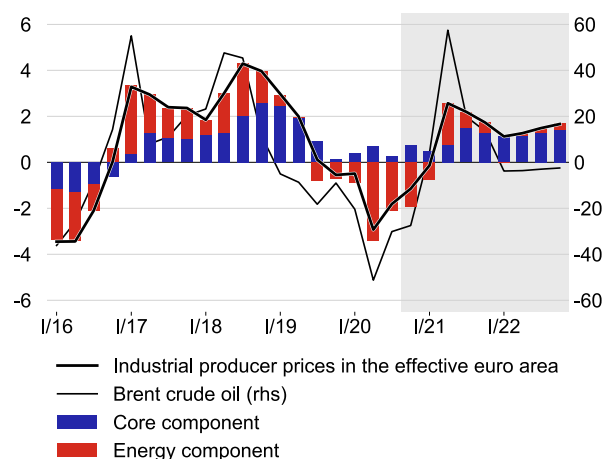
addition to rising energy prices, consumer price inflation will be driven this year by one-off impacts such as a VAT increase and carbon dioxide tax in Germany. Growth in foreign industrial prices will be muted next year owing to appreciation of the euro against the dollar and only gradual closure of the negative output gap.

The ECB responded to the economic contraction caused by the second wave of the pandemic by easing monetary policy further

The 3M EURIBOR outlook remained at negative levels (see Chart I.6). At its December meeting, the ECB increased its asset purchase programmes by EUR 500 billion and extended them until March 2022. The targeted longer-term refinancing operations programme was also extended. In January 2021, the ECB kept its highly accommodative monetary policy unchanged. The impact of the December increase in asset purchases is captured in the forecast through a slight deepening of the decline in shadow interest rates further into negative territory. The outlook for the euro-dollar rate has shifted towards a slightly stronger euro.

Chart I.6

The expectation that ECB monetary policy will remain accommodative is reflected in the outlook for rates abroad

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

—— 3M EURIBOR	—— USD/EUR (rhs)
- - - Shadow 3M EURIBOR	
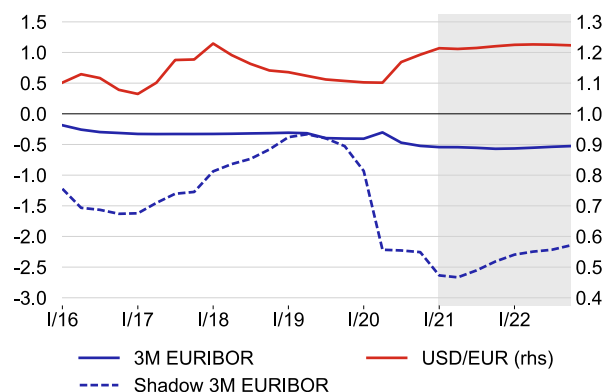
The shadow ECB interest rate is an estimated hypothetical rate combining the effects of the ECB's conventional and unconventional monetary policy instruments into a single aggregate indicator.

BOX 1   The trade deal between the EU and the UK

One of the key risks to the economy in Europe until recently was the threat of a no-deal Brexit. Although the referendum had been generally about exiting the EU, the UK's political representatives decided not only to leave the EU-28, but also to end the almost 40-year long partnership and membership in the customs union and the single market. The agreement on free movement of goods, services and capital thus ceased to apply after the UK left the EU last year. If no new trade agreement had been reached, trade relations between the two jurisdictions would have started to operate under World Trade Organisation terms at the end of the transition period on 1 January 2021. However, given the significant interconnectedness of the two economies (see Chart 1), this would have resulted in losses on both sides.

The threat of a sudden interruption of EU-UK trade flows has had major impacts on the financial markets more than once in the past. Growing fatigue due to the very slow progress became apparent on both sides in December 2020. Uncertainty increased in the financial markets and the bets on a no-deal Brexit prevailed (see Chart 2). The fear of supply disruptions sparked panic among British and EU firms, leading them to hastily engage in stockpiling before the year-end. The UK postponed the exit date at the last minute several times following the Brexit referendum in June 2016. On each occasion, this led to stockpiling by trading partners, as evidenced by data on the numbers of trucks transported through the Eurotunnel (see Chart 3) and by maritime freight traffic data collected at ports.

After nine months of negotiations, the UK and the EU finally managed to reach a compromise and strike a trade deal on Christmas Eve 2020. Mutual trade will not be subject to tariffs and quotas. In the case of movement of people, short-term trips of up to 90 days will still be possible, but visas will be required for longer visits. In the disputed areas that had been blocking the negotiations, the UK succeeded on only a few points. It had its way in the area of competition, i.e. it can now set its own standards and provide government support. The countries ultimately also agreed on a neutral committee to oversee dispute resolution. Conversely, the UK backed down on fisheries, so EU fishermen will only have to give up one-quarter of their current catch in British waters for the next more than five years. Other concessions relate, for example, to security. A big change will also take place in education, with the end of cooperation in the Erasmus exchange programme.

Chart 1

The two economies need each other

Goods exports from EU to UK and vice versa in 2019; shares in total exports in %; source: IMF
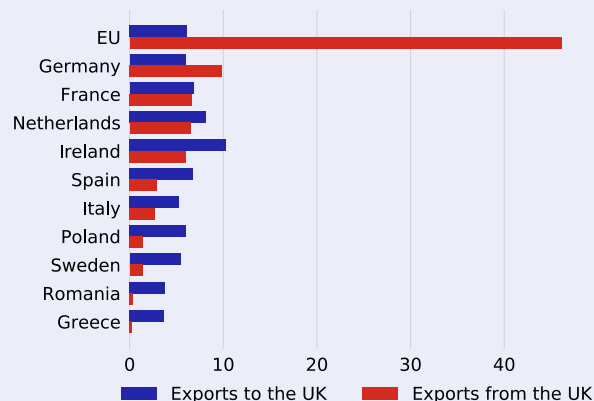
Chart 2

The protracted negotiations increased tensions on financial markets

Source: Bloomberg
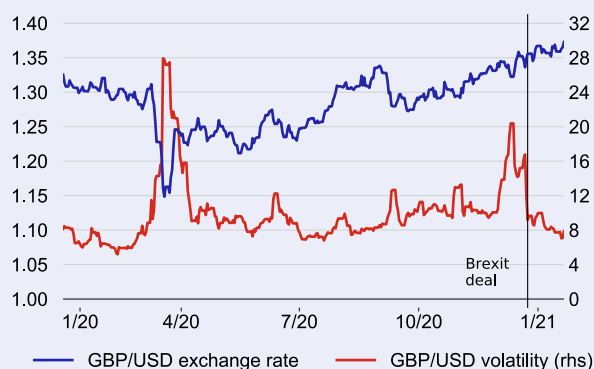
Chart 3

Before each key Brexit deadline, firms stockpiled and Eurotunnel traffic increased

Numbers of trucks transported in given month; source: https://press.getlinkgroup.com/news/
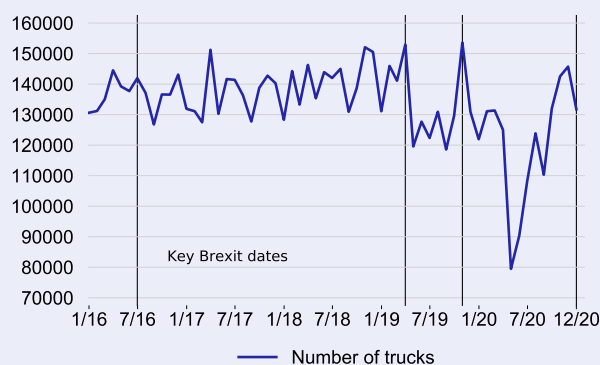
Note: 6/2016: Brexit referendum; 3/2019: original Brexit date based on time limit of two years after activation of Article 50 of Lisbon Treaty; 10/2019: UK meant to leave EU but date postponed again to January 2020; 12/2020: EU and UK sign trade deal.

However, the agreement did not provide any relief for financial firms, which needed to maintain automatic guaranteed access to European financial markets and sale of financial services from London to the single market (after losing the single passport). One-sixth of the UK's financial and insurance services depend directly on demand from the EU single market. Further negotiations will also be required in the area of electricity trading, as the UK is no longer part of the European single energy market.

The initial relief upon signing the agreement is quickly dissipating amid the first difficulties with the transport of goods. The delays are mainly due to increased paperwork and border controls. The UK's customs systems are not operating as smoothly as expected either. This presents difficulties mainly for foods that need to be transported quickly. Some companies (Marks & Spencer, for example) have responded by suspending supplies to the continent. Firms are also struggling with taxation changes and "country of origin" rules, i.e. uncertainty as to whether imported goods are subject to customs duty. These difficulties are being reflected in higher transport costs. Shipping data from the beginning of January meanwhile indicate significantly lower interest in cargo services than is typical of this time of year. It will take some time before trade between the EU and the UK becomes fully operational. This will dampen the UK's economic recovery. However, the EU partners of UK companies are also facing lower orders. At a time of pandemic, this has worsened the outlook for the hitherto resilient European industry. That said, the outlook is still better than it would have been if the UK had left without a deal.

II.   THE REAL ECONOMY AND THE LABOUR MARKET

The worsening epidemic situation in the second wave of the pandemic led to renewed shutdowns in the domestic economy in the autumn and winter. The closures, which will last until the spring, mainly concern wholesale and retail and services. By contrast, export-oriented industry and some related services will be hit to only a small extent, unlike during the first wave. The adverse economic impacts of the pandemic will gradually fade during the year as the epidemic situation improves. The impacts of the pandemic will be mitigated for some time yet by government financial assistance; most support programmes will be discontinued during 2021. The intended stimulus in the form of lower wage taxation will have only a limited effect on economic growth. Economic growth will resume as spring and especially summer arrive and household and corporate sentiment gradually improves. The economy will grow by more than 2% overall this year and pick up further next year, helping to return overall economic activity to the pre-pandemic level. The labour market will cool further in the coming quarters. Signs of an improvement will start to appear at the end of this year, when wage growth and, in turn, employment growth, will pick up noticeably.

The second wave of the pandemic, which brought the promising economic recovery to a halt, will be less devastating thanks to the resilience of industry[2]

The domestic economy temporarily awoke from the spring lockdown in summer 2020, thanks mainly to a recovery in household consumption and net exports. Export-oriented industry recovered quickly as government restrictions were lifted. Investment activity, though, unexpectedly turned very negative. However, we currently attach no fundamental importance to this fall, and we therefore expect its further deepening at the close of last year to be less significant than we predicted last time. This is because the observed decline in corporate investment was due largely to a wobble in investment activity in the automotive industry and we do not expect this to repeat.

The promising restart of the economy was interrupted in the autumn by the onset of the still ongoing second wave of the pandemic and the related reintroduction of shutdowns in wholesale and retail and a large number of services. The closures again led to a sharp fall in private consumption. Unlike in the spring, however, industry and some related services have been resilient to the worsening epidemic situation. These are mainly export-oriented sectors profiting from the previously solidly operating global production chains and fully passable borders for freight transport.

Chart II.1

GDP growth will be driven in the near future by net exports

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

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2 This is confirmed by the CZSO's preliminary estimate of economic activity, according to which GDP grew by 0.3% quarter on quarter in 2020 Q4. These data were published on 29 January 2021. Due to the earlier closing date of the forecast, they are not part of its baseline scenario.
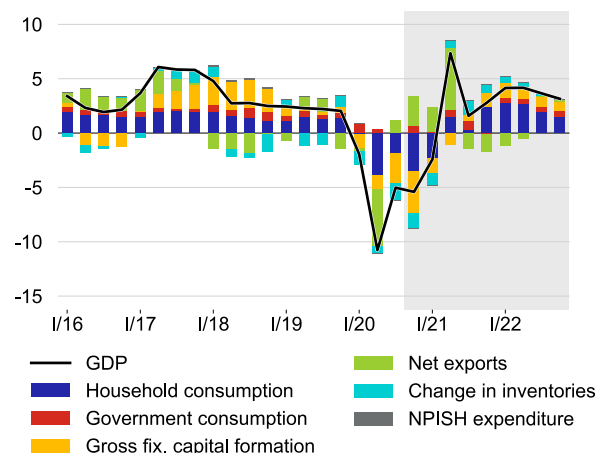
A large positive contribution of net exports thus offset part of the loss of economic performance.

Still expansionary fiscal policy has been strongly affecting the economy at the turn of the year. Its stimulative effect on GDP will fade during this year (see Box 2). A gradual lifting of the anti-epidemic restrictions as warmer weather arrives will be accompanied by improved household and business sentiment, boosting private consumption and investment activity. The recovery will also be helped along by the vaccine, which should become available to the wide public in the summer. Domestic demand will assume the role of engine of economic growth this year. Given its high import intensity, this will reduce the contribution of net exports to GDP growth (see Chart II.1).

The economy fell below its potential in the first half of 2020 due to the closures of industry, shops and services. However, potential output was itself also affected strongly negatively during the spring months by the restrictions on many industrial activities and the cross-border movement of goods and people. Potential output gradually recovered in the rest of 2020.

The current restrictions will gradually lessen over the course of this year, allowing the economy to start growing

The Stringency Index is at similar levels as last spring (see Chart II.2), but we are no longer seeing any major decline in potential due to the renewed closures that came with the onset of the second wave of the epidemic, as they mainly concern the tertiary sector, most notably wholesale and retail, restaurants and other services. These branches have a relatively limited weight in the Czech Republic and, moreover, many businesses in these branches have learned how to operate partially despite the anti-epidemic restrictions (see Chart II.3).

Domestic industry and directly related services such as freight transport will not be directly affected by the shutdowns and other measures (see Chart II.3). This will help potential output to recover gradually. In the second half of this year, however, it will surge as the pandemic gradually recedes and restrictions are lifted, because herd immunity will have a favourable effect. Overall, though, the Czech economy will stay below its capacity utilisation limit this year due to drastically weakened domestic demand and worse household and business sentiment. The negative output gap will thus not close until the end of the forecast horizon (see Chart II.4)

Chart II.2

The Stringency Index in the Czech Republic peaked in late 2020 and early 2021

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

— Stringency Index - forecast   ● Actual
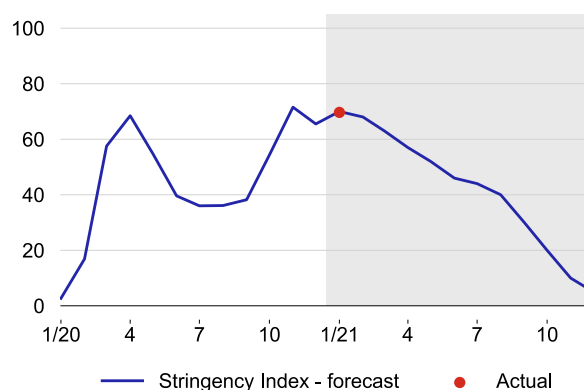
The Stringency Index measures the stringency of epidemiological measures. It consists of a set of 19 indicators reflecting the restrictions on everyday and economic life resulting from government guidelines and regulations.

Chart II.3

Industry has coped well with the second wave of the pandemic, but services remain hard hit

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

— Gross value added   Energy
Manufacturing   Construction
Trade   Non-market services
Market services   Agriculture
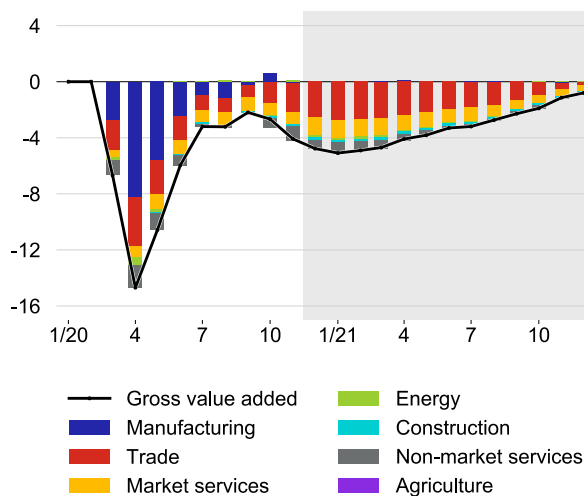
National budget policy, which is implemented through government consumption and the fiscal impulse, has played an important role in the pandemic so far

Real government consumption recorded solid growth last year due to increased extraordinary spending on health care and the emergency services. However, its growth will naturally slow this year due to its unusually high level in 2020.

Chart II.4

The economy will remain well below its potential throughout 2021

Output gap in % of potential output

Small structural model ——— Production function
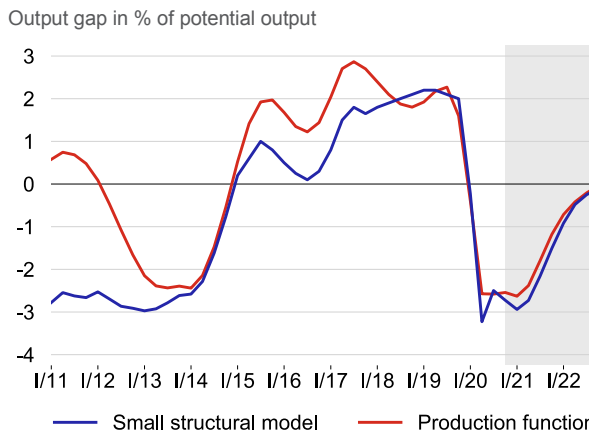
BOX 2   The fiscal impulse in CNB forecasts

The fiscal impulse is an integral part of the Monetary Department's analytical and forecasting work when preparing the CNB's macroeconomic forecast. As shown in section II (*The real economy and the labour market*), fiscal policy can play an important role in shaping economic activity and inflation. Expenditure on government fiscal measures is extremely high in some periods. This was the case both last year and this year. We use the estimated fiscal impulse to quantify the effect of fiscal policy in the given year on economic activity over the business cycle.

The fiscal impulse can be estimated using two methods, described in more detail below. In the CNB forecast, we work primarily with a "bottom-up" method. The overall consistency of the fiscal forecast is then tested using a "top-down" method.

The primary method for calculating the fiscal impulse is the bottom-up approach, which is derived from fiscal discretion (see the definition on the right). Fiscal discretion is expressed in per cent of GDP and represents the sum of the budgetary impacts of discretionary fiscal measures on the revenue and expenditure sides of public budgets (see Table 1). Examples of discretionary fiscal measures include changes in taxes, new social benefits, and anti-crisis programmes to support employers (Antivirus) and the self-employed (one-off benefits).

To assess the effect of discretionary fiscal measures on GDP and its outlook correctly, we first need to decide whether they are permanent or temporary. Permanent measures have a permanent effect on public budgets but only affect year-on-year growth in economic activity in their first year. Their effect on economic growth in the following years is neutral. If permanent measures are adopted in the course of the year and not at its start, they also have a limited impact on economic activity in the following year or part thereof. Following the initial shift in aggregate demand, to which the price level responds in the initial phase, permanent measures do not affect subsequent inflation either. The impacts on inflation are thus only temporary.

By contrast, temporary fiscal policy measures, which affect the revenue and expenditure sides of public budgets only for a time, affect economic growth both when introduced and subsequently when discontinued in the opposite direction. The impact of temporary measures on inflation when they are introduced is thus similar as in the previous case. However, one should bear in mind that the effect they have when they end is opposite to their initial effect.

The fiscal impulse is a variable which reflects the effect of fiscal policy in the given year on economic activity over the business cycle. It is calculated using the volume of fiscal discretion and the fiscal multiplier.

Fiscal discretion refers to year-on-year changes in government revenue and expenditure (made by the government and/or due to legislative amendments) that are derived from specific fiscal measures and affect government finances beyond the impacts of the business cycle (i.e. beyond automatic fiscal stabilisers).

The fiscal multiplier measures the degree to which fiscal discretion affects real GDP.

Table 1

Discretionary fiscal measures entering the bottom-up calculation of the fiscal impulse

% of GDP; impact on change in general government balance

	2018	2019	2020	2021	2022
TOTAL REVENUE MEASURES	0.1	-0.1	-0.6	-1.5	-0.3
Increase in excise duties	0.0	0.0	0.1	0.0	0.0
Changes in VAT	0.0	0.0	-0.1	-0.1	0.0
VAT control statements	0.1				
Electronic sales registration	0.1				
Abolition of property transfer tax			-0.2		
Abolition of social contributions for self-employed			-0.3	0.2	
Abolition of soc.contributions for employers (Antivirus C)			-0.2	0.2	
Abolition of super-gross wage				-1.4	
Increase in the tax deductible bonus for individuals				-0.2	-0.2
Changes in depreciation				-0.2	-0.1
Other changes in taxes and soc.contributions	0.0	-0.1	0.1	-0.1	-0.1
TOTAL EXPENDITURE MEASURES	-1.4	-0.8	-2.6	1.2	0.8
Extra valorisation of pensions	0.0	-0.3	-0.3	0.1	0.1
Changes in social benefits	-0.2	0.0	-0.2	0.0	0.0
Compensation of government employees	-0.4	-0.3	-0.3	0.3	0.2
Government investment, domestic	-0.4	-0.2	0.1	0.0	0.0
Government investment, EU funded	-0.3	0.0	-0.1	-0.1	-0.2
Increase in attendance allowance			-0.2	0.2	0.0
Employment support programme (Antivirus A+B)			-0.5	0.4	0.1
One-off benefits			-0.5	0.4	0.0
Loss carryback			-0.3	0.0	0.3
COVID subsidies to affected industries			-0.3	0.0	0.3
Other changes in expenditure	0.0	0.0	0.0	0.0	0.0
TOTAL MEASURES	-1.3	-0.9	-3.2	-0.3	0.5

Note: A minus sign indicates lower revenue/higher expenditure and a positive sign higher revenue/lower expenditure. Non-wage consumption expenditure does not appear on the expenditure side, as it is taken into account in the model forecast through the direct channel of government consumption.

The bottom-up fiscal impulse method is based on the sum of the budgetary impacts of the government's individual discretionary fiscal measures.

The effect of discretionary fiscal policy measures is incorporated into the CNB forecast through two channels. The first is the path of government consumption itself, which – as a direct component of domestic demand and GDP – is contained in the fiscal block of the g3+ forecasting model. In addition, the contributions of other discretionary fiscal measures are taken into account expertly through an estimate of the size and structure of the fiscal impulse using the bottom-up method. The contributions of individual fiscal measures to real GDP growth i.e. the fiscal impulse, are subsequently calculated as the product of the fiscal discretion identified (entering with the opposite sign by convention) and the fiscal multiplier. In the past, we worked with the single aggregate fiscal multiplier of 0.6. In the current forecast, the fiscal multiplier for changes in labour taxation has been lowered.

For illustration, we calculate the impacts of selected discretionary fiscal measures on real GDP growth. The abolition of property transfer tax last year permanently reduced government revenue by around 0.2% of GDP (see Table 1). After multiplication by the fiscal multiplier (0.6), this implies a positive contribution to real GDP growth of approximately 0.1 pp in 2020. Last year, the payment of one-off benefits amounting to 0.5% of GDP contributed around 0.3 pp to real GDP growth. This support is temporary, so the contribution of one-off benefits to GDP growth this year will be opposite (negative).

For forecasting purposes, the total fiscal impulse calculated using the bottom-up method is divided into the individual components of domestic demand: private consumption, private investment and government investment, which we subdivide into a domestic component and a component stemming from the drawdown of EU funds (see Table 2).

The top-down approach to calculating the fiscal impulse can be used to test the overall consistency of the forecast and to verify the primary bottom-up method ex post. This approach captures the effect of fiscal policy on economic activity through the fiscal stance[1] i.e. the year-on-year change in the ratio of the general government structural balance to GDP in percentage points (see Table 3). A positive fiscal stance means fiscal restriction and a negative one fiscal expansion. By multiplying the fiscal stance (which enters the calculation with the opposite sign by convention) by the aggregate fiscal multiplier (0.6), we get an alternative estimate of the effect of fiscal discretion on real GDP.

The above two methods can be compared using the example of the situation in 2020. The top-down estimate of the fiscal impulse for this year is 2.3–3.1pp to real GDP growth (depending on the method used to cyclically adjust the government balance). In the assessment of the overall effect of fiscal policy on economic activity, this is qualitatively in line with the bottom-up estimate. The slightly higher quantification using the top-down method points to probable additional flexible government expenditure going beyond specific changes to the legislation.

Table 2

The contribution of discretionary fiscal measures to GDP growth is divided into the individual components of domestic demand

Contributions to GDP growth in pp

	2018	2019	2020	2021	2022
FISCAL IMPULSE	0.8	0.5	1.9	-0.3	-0.3
of which impact through:					
private consumption	0.3	0.4	1.7	-0.3	-0.3
private investment	0.0	0.0	0.2	-0.1	-0.1
govt. investment, domestic	0.3	0.1	-0.1	0.0	0.0
govt. investment, EU funded	0.2	0.0	0.1	0.1	0.1

Table 3

The fiscal forecast containing the estimate of the structural balance and the fiscal stance entering the top-down calculation of the fiscal impulse

% of nominal GDP unless otherwise indicated

	2018	2019	2020	2021	2022
Government revenue	41.5	41.6	41.4	40.3	40.0
Government expenditure	40.6	41.3	47.5	46.8	45.6
of which: interest payments	0.7	0.7	0.7	0.7	0.7
GOVERNMENT BUDGET BALANCE	0.9	0.3	-6.1	-6.5	-5.6
of which:					
primary balance[a]	1.7	1.0	-5.4	-5.8	-4.9
one-off measures[b]	0.0	0.2	0.2	0.2	0.1
ADJUSTED BUDGET BALANCE[c]	0.9	0.0	-6.3	-6.7	-5.7
Cyclical component (disaggreg. method)[d]	1.5	1.5	-0.9	-0.9	-0.5
Structural balance (disaggreg. method)[d]	-0.6	-1.5	-5.4	-5.8	-5.2
Fiscal stance in pp (disaggreg. method)[e]	-1.1	-0.9	-3.9	-0.4	0.6
Cyclical component (aggregated method)[d]	0.7	0.6	-0.6	-0.6	-0.1
Structural balance (aggregated method)[d]	0.2	-0.6	-5.7	-6.0	-5.6
Fiscal stance in pp (aggregated method)[e]	-0.4	-0.8	-5.1	-0.3	0.5
GOVERNMENT DEBT	32.1	30.2	38.4	43.3	46.7

Note:

a) government budget balance minus interest payments

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

c) adjusted for one-off measures; CNB estimate

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

e) y-o-y change in structural balance.

The top-down fiscal impulse method uses aggregated data – the structural government budget balance, i.e. the budget balance adjusted for the effects of the business cycle and extraordinary one-off measures.

The government budget balance and government debt are often taken into account when assessing fiscal policy. We should therefore mention their link with the fiscal impulse. The fiscal impulse is reflected in the government deficit and debt through individual discretionary fiscal measures. Expansionary discretionary measures increase the government deficit and debt over their entire duration. As explained above, however, they contribute positively to GDP growth only temporarily and only when introduced (the fiscal impulse they generate is positive only in their first year). By contrast, restrictive discretionary measures reduce the government deficit and debt over their entire duration but contribute negatively to GDP growth only when introduced (the fiscal impulse they generate is negative only in their first year).

Comparing the total fiscal impulse (the contribution of fiscal policy to GDP growth) in individual years with the path of the government deficit and debt expressed as a share of nominal GDP is therefore not in itself very informative. There are other methodological differences between these variables besides the above ones stemming from different definitions[2] and the general government deficit and debt are also affected by a whole range of other factors besides fiscal discretion.[3]

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1 The fiscal stance can be calculated using two methods: an aggregated one (using an estimate of the output gap) and a disaggregated one (based on the evolution of the individual tax bases over the business cycle).

2 Change in drawdown of EU funds is fully reflected in the fiscal impulse. However, it affects public budgets and government debt only up to the amount of the government's co-financing of European projects.

3 The phase of the business cycle, inflation, nominal GDP growth, formation of government financial reserves, and interest paid on government debt.

Following a strongly stabilising contribution of fiscal discretion to GDP growth last year, which slowed the decline of the Czech economy by two percentage points, this year's fiscal impulse is forecasted to be slightly negative (see Chart II.5). This is because most of the support measures are temporary, a factor which, overall, is only partly offset by a reduction in income tax. The fiscal impulse will stay slightly negative in 2022, due mainly to the end of the positive loss carryback effect and the phase-out of support targeted at areas hit by shutdowns during the pandemic (see Box 2 for more details on the fiscal impulse methodology).

The fiscal stabilisation measures have been reflected predominantly in a reduction of the negative impact of the pandemic on households and their consumption
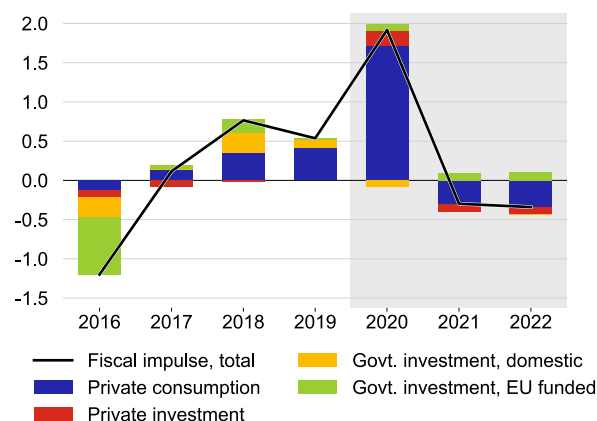
The decline in household consumption at the end of last year due to the renewed shutdowns was partly offset by an extraordinary bonus for pensioners (see Chart II.6).[3] We assume that pensioners will spend most of this bonus immediately, given their high propensity to consume. As the bonus was paid out over the entire course of December, the impact of this measure will not fade out fully until 2021 Q2.

Government support for businesses also remains significant. It continues to be provided largely through subsidies and compensation for closures directly to the areas affected, such as sports, culture and hotels and restaurants. This temporary assistance should be

Chart II.5

The contribution of discretionary fiscal measures to GDP growth will be negative this year, due mainly to household consumption

Fiscal impulse; contributions to GDP growth in pp

- Fiscal impulse, total
- Private consumption
- Private investment
- Govt. investment, domestic
- Govt. investment, EU funded

*For the purposes of the forecast, the estimated **fiscal impulse** – the contribution of budgetary policy to GDP growth – is divided into the individual components of domestic demand: household consumption, private investment and government investment, which we subdivide into a domestic component and a component stemming from the drawdown of EU funds.*

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3   A one-off bonus of CZK 5,000 per person.

phased out in the first half of the year as the epidemic situation steadily improves and the closures are gradually lifted. This will be reflected in a negative contribution of fiscal policy to consumption growth in Q2 and Q3.

Private consumption will also be partially boosted this year by the abolition of the super-gross wage and by the increase in the tax deductible bonus for individuals included in the tax package effective January. Given the scale of these measures, we have decided to stop using a single fiscal multiplier and introduce two specific ones starting with this forecast. The fiscal multiplier of 0.6 which we previously used across the board is now applied to all budgetary discretionary measures except changes in labour taxation, specifically the abolition of the super-gross wage and the increase in the tax deductible bonus for individuals. In their case, we use a lower multiplier of 0.3, consistent with the empirical evidence on income tax cuts.

Moreover, the tax change in this case has a greater effect on persons with above-average income, who have a lower propensity to consume. As a result, we have spread the only slightly pro-growth impulse of the tax reform roughly evenly over the first half of the year. This reflects the fact that although the measures took effect de facto in January, they will not be felt fully until shops and services reopen during the spring months. Legislatively speaking, the tax package is in effect permanently, so quarter-on-quarter household consumption growth will not be affected by this measure in the period ahead. The fiscal impulse also contains numerous other measures, but they affect household consumption only to a small extent overall.

Household consumption will stop falling as the pandemic ends and will become one of the drivers of economic growth

The decline in household consumption deepened at the end of 2020 (see Chart II.7). This was due mainly to the reintroduction of shutdowns, which almost completely paralysed wholesale and retail, restaurants and services. Consumer sentiment had the same effect, worsening on concerns about growth in unemployment and a more pessimistic assessment of the overall situation.

The continued cooling of the labour market was reflected in a temporary halt in nominal gross disposable income growth (see Chart II.8), which was slowed mainly by a decrease in the contribution of wages and salaries and entrepreneurs' income. In 2021 Q1, however, nominal gross disposable income growth will recover on the back of continued government support and a renewed positive effect of wages and salaries, and will continue to significantly outpace household consumption growth. The saving rate will rise temporarily and start to decline later in

Chart II.6

The sharp decline in household consumption at the turn of the year was mitigated by one-off and permanent fiscal measures

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

— Household consumption
■ Household consumption without fiscal impulse
■ One-off bonus to pensioners
■ Abolition of super-gross wage
■ Increase in tax deductible bonus for individuals
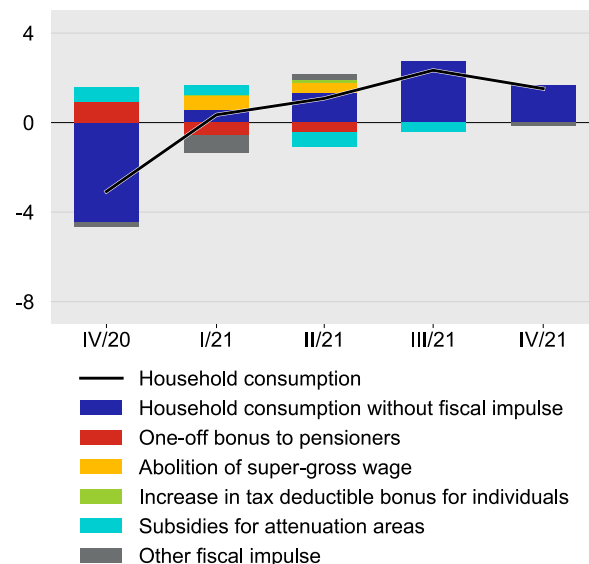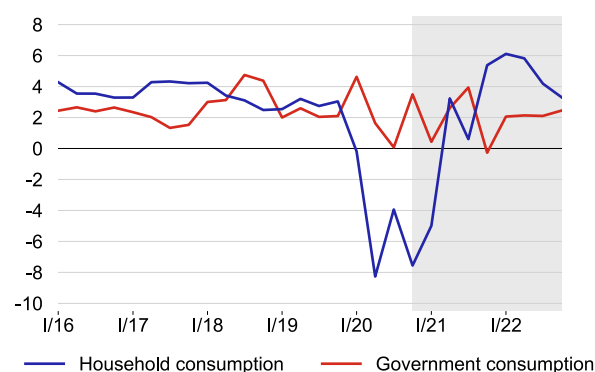■ Subsidies for attenuation areas
■ Other fiscal impulse

Chart II.7

Growth in household consumption will renew this year, while growth in government consumption will be broadly stable

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

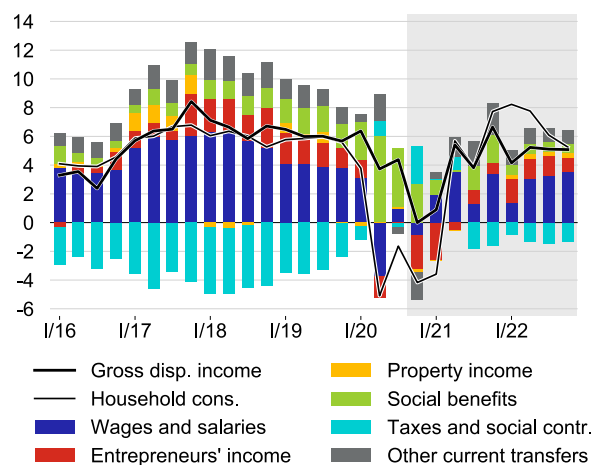— Household consumption   — Government consumption

the year once the shutdowns have been lifted and people are again able to buy goods and services in brick-and-mortar establishments. Amid generally fading pessimism, they will partly make up for the involuntary deferral of consumption during the first and second waves of the pandemic. This will be reflected in the saving rate switching to a decline.

Household consumption will rise slightly less overall this year than we previously expected. Its growth will amount to just 1%, due mainly to the shutdowns in the winter months. As they are gradually lifted and vaccination coverage increases, the adverse economic impacts of the pandemic will start to fade in the second half of the year. This will help private consumption return to sustained, robust growth. Household consumption will thus grow by more than 4% next year, despite an increase in market interest rates. However, consumer demand will not return to the pre-pandemic level even by the end of 2022, as, based on their 2020 and 2021 experience, households will spend more cautiously than in the past. This will also reflect still elevated unemployment.

Chart II.8

Renewed growth in disposable income at the start of the year will be followed by growth in consumption with a lag

Household consumption and gross disposable income; y-o-y changes in %; contributions in pp; current prices; seas. unadjusted

- Gross disp. income
- Household cons.
- Wages and salaries
- Entrepreneurs' income
- Property income
- Social benefits
- Taxes and social contr.
- Other current transfers

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

		2020	2021	2022	
GDP	y-o-y changes in %	**-5.8**	**2.2**	**3.8**	The GDP forecast for this year has been revised upwards due to a better situation in industry and a less restrictive fiscal impulse.
	pp	(1.4)	(0.5)	(-0.4)	
Household consumption	y-o-y changes in %	**-5.0**	**1.0**	**4.8**	Household consumption fell more strongly last year relative to the last forecast due to more extensive shutdowns. Their persistence will be reflected in slower growth this year too.
	pp	(-0.4)	(-0.6)	(1.3)	
Government consumption	y-o-y changes in %	**2.5**	**1.7**	**2.2**	Government consumption reduced last year's GDP contraction less than in the autumn forecast. In 2021 and 2022 it has been revised only slightly.
	pp	(-1.7)	(0.4)	(-0.3)	
Gross fixed capital formation	y-o-y changes in %	**-8.8**	**-0.5**	**4.3**	The decline in investment will be slightly more modest this year than in the previous forecast due to the resilience of investment-intensive industry.
	pp	(-2.4)	(0.9)	(0.8)	
Net exports	contr. to GDP growth	**-0.4**	**1.1**	**-0.3**	The observed data and the higher resilience of export-oriented industry increase the contribution of net exports this year.
	pp	(2.7)	(0.5)	(-1.3)	

		2020	2021	2022	
Employment	y-o-y changes in %	**-1.2**	**-1.0**	**0.5**	The drop in employment will be lower than in the last forecast due to a smaller economic decline in 2020 and greater resilience of industry to the second wave of the pandemic.
	pp	(0.2)	(0.9)	(-0.1)	
Unemployment (ILO)	%	**2.6**	**3.6**	**3.5**	Stronger demand for labour will lead to lower growth in the unemployment rate.
	pp	(-0.1)	(-0.9)	(-0.8)	
Average monthly nominal wages	y-o-y changes in %	**3.2**	**5.2**	**3.3**	Wage growth this year has been revised upwards substantially due to tax optimisation, higher growth in fundamental market wages and stronger non-market wage growth.
	pp	(-0.1)	(2.4)	(-0.6)	

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

The labour market is gradually cooling, causing fundamental wage growth to slow

The Labour Utilisation Composite Index confirms the cooling tendency (see Chart II.9). Overall, the labour market is expected to approach its steady-state level from above in the course of this year. The impacts of the pandemic on the labour market have so far been quite modest. This has been largely due to government programmes to protect employment in sectors hit by shutdowns.

Wage growth in market sectors was affected at the turn of the year 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 bonuses were paid in the health care sector at the end of last year. Owing to a reduction of the effective income tax rate as from January this year, we expect some firms to take advantage of the situation and optimise their taxes by postponing extraordinary bonus payments from the end of Q4 to the start of this year, as they have done in the past when tax rates have changed (see Chart II.10).

One-off factors are meanwhile causing wage growth as recorded in the official statistics to fluctuate

Following a decline last year, wage growth as recorded in the official statistics will surge this year and slow again on average next year. In terms of the economic interpretation of wage growth, it thus makes sense to monitor the estimated fundamental growth (see Chart II.11).

Fundamental wage growth in market sectors will be affected increasingly negatively by the pandemic. It will continue to slow gradually until mid-2021. This trend will not be prevented even by another rise in the minimum wage (the seventh in a row). The CZK 600 increase will take the minimum wage to CZK 15,200 as from January this year. However, the situation will change in the second half of the year, when fundamental market wage growth will start to rise gradually on the back of the resumption of economic life 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 steady-state level (5%) most of the time.

In non-market sectors, the high wage growth observed in previous years will continue to subside this year. In January, pay in education and social

Chart II.9

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

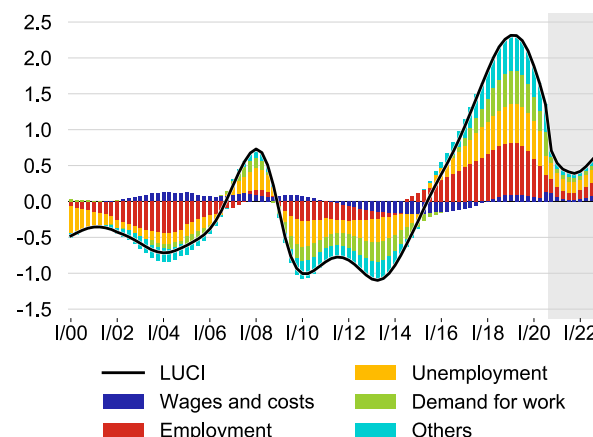LUCI; vertical axis shows standard deviations

Chart II.10

Wage growth in the market sector will continue to fluctuate due to a number of one-off factors

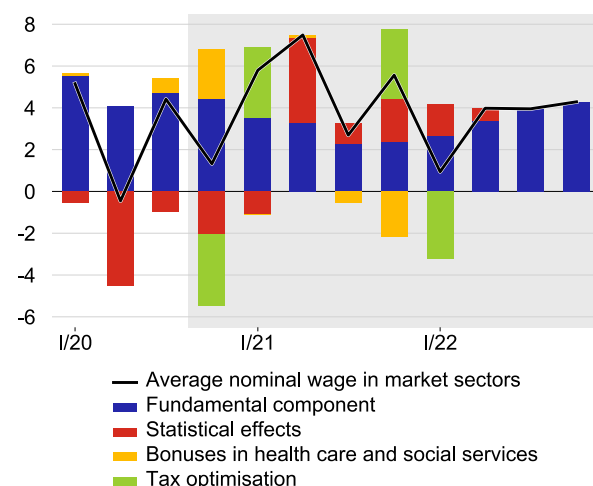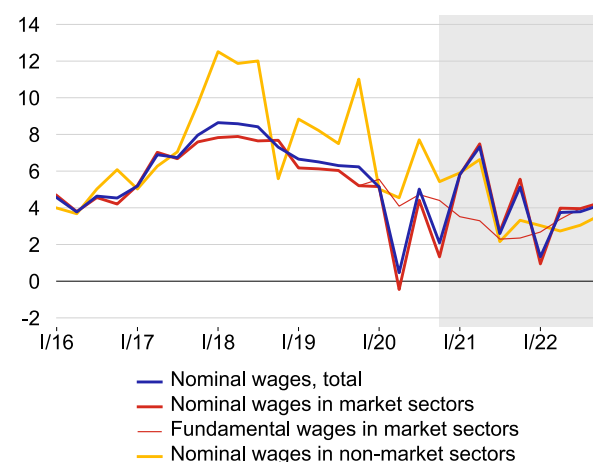Average wage in market sectors; y-o-y changes in %; contributions in pp

Chart II.11

Fundamental wage growth will slow further initially and recover only slightly from mid-2021

Nominal wages; y-o-y changes in %

services was raised significantly, while wages of other employees in the non-market sector were increased only slightly. As in the 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.

These statistical effects, together with the above tax optimisation effect, temporarily pushed growth in wages and salaries down into negative territory at the end of last year. Wages and salaries will increase a little at the start of this year. However, their growth will not be on track to a marked recovery until the start of the second half of 2021. This recovery will be due to a gradually improving labour market as a result of an economic recovery and improved expectations of firms. The decline in employment will subside and growth in the fundamental component of market wages will pick up. In real terms, wages and salaries will start to rise gradually this year following their sharp drop last year. This will contribute to the aforementioned recovery in household consumption (see Chart II.12).

Although employment has so far been protected by government support programmes, it will decline further in 2021

The fall in the converted number of employees will be much larger than that in the physical number, as hours worked per employee will decrease significantly. This is being amplified by the current pandemic-related shutdowns. As demand for labour starts to grow again due to the reopening of the economy, growth in hours worked per employee will pick up earlier than employment growth, as seen several times in the past when the economy has returned to growth.

From the sectoral point of view, the significant decline in employment will be due mainly to services in market sectors such as hotels and restaurants, which are currently being hit hard by government shutdowns and by the second wave of the pandemic in general. In addition, however, the year-on-year drop in the number of agency workers, who are generally among the weakest and hence most at-risk groups of employees on the labour market when the economy contracts, will continue in the services sector. 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 due to the pandemic-related economic downturn, despite government support measures and still solid labour demand in sectors not directly affected by the pandemic (see Chart II.13). This is reflected in a still high number of job vacancies and robust creation of new jobs, and in continued

The fundamental market wage, unlike the officially reported wage, is adjusted for certain one-off pandemic-linked statistical effects (attendance allowance, quarantine, and partial wage compensation), for extraordinary bonuses in health care and social services and for the postponement of bonus payments due to tax optimisation resulting from the decrease in wage taxation as from 2021.

Chart II.12
Growth in wages and salaries will remain volatile and generally subdued
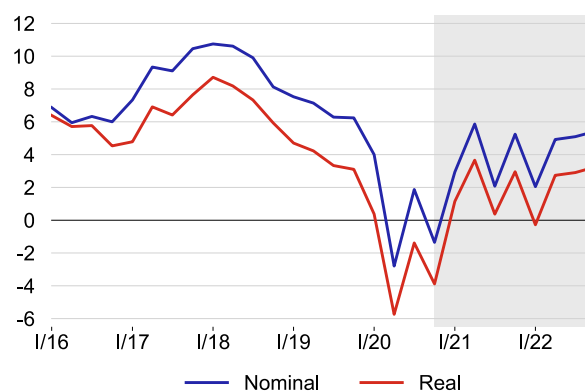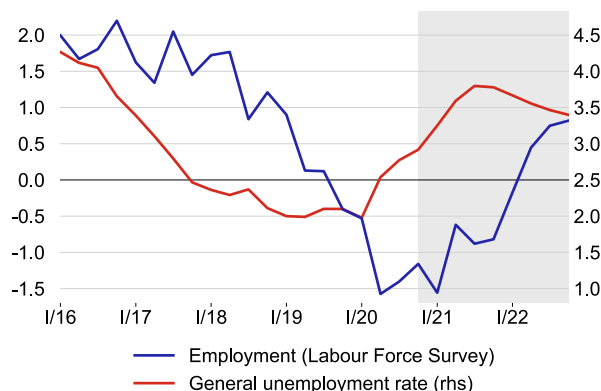
Volume of wages and salaries; y-o-y changes in %

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

placement of job applicants via labour offices. The share of unemployed persons is forecasted to follow a similar trend as the general unemployment rate.

Investment activity fell again at the end of last year due to shutdowns and worsening business sentiment, and will remain subdued in the near future

Growth in gross fixed capital formation was adversely affected last summer by a drop in investment in the automotive industry (see Chart II.14). As the drop was strongly concentrated in one sector and occurred amid continuing solid performance of investment-intensive industry, we do not interpret this as an across-the-board phenomenon. We therefore expect the fall in fixed investment to have increased further in late 2020, but less so than previously predicted, and in both cases due to private investment activity. From the historical perspective, investment in 2020 recorded its largest drop since the 2009 financial crisis, due in part to an absolute decrease in inventories. This will change as the pandemic recedes in the course of this year, which will be reflected in improving sentiment and a recovery abroad. These factors will help investment activity in the corporate sector to rise gradually. However, despite faster growth in government investment and a renewed positive contribution of change in inventories, this will not lead to stronger whole-year growth in total gross capital formation Although investment activity will accelerate further in 2022, it will remain below the pre-pandemic level (see Chart II.15).

Exports will improve over the forecast horizon, as the second wave of the pandemic had only a marginal effect on demand for Czech exports

The downturn in external demand at the end of last year was due chiefly to services, which have a low import intensity, whereas industry was affected only marginally in all of Europe, including the Czech Republic. Industry and goods exports will continue to grow this year. This will be accompanied by an improvement in exports of services. Total exports will thus – despite an appreciating koruna – exceed the pre-pandemic level in the first half of 2021, i.e. much sooner than we expected in the previous forecast.

Imports will return to growth a while after exports, i.e. in 2021 Q2, due to the domestic shutdowns and resulting lacklustre demand for investment and consumer goods.

Import growth will outpace export growth in the second half of this year due to a surge in aggregate domestic demand. This will cause the positive contribution of net exports to fade out. Next year, the growth rates of the two components of foreign trade will converge and the contribution of net exports will be slightly negative (see Chart II.16).

Chart II.14
Corporate investment fell last year

Asset acquisition by non-financial corporations; q-o-q changes in %; contributions in pp; current prices; seasonally adjusted

- Acquisition of property
- Manufacturing
- Mining & Quarrying
- Telecomunication
- Rest of market services
- Construction
- Trade, transport and hospitality
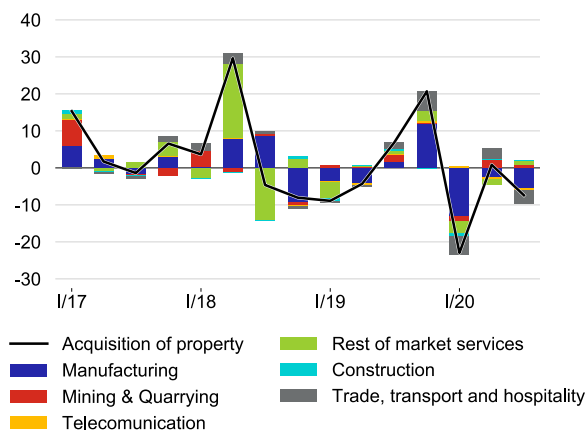
Chart II.15
Private investment will remain subdued in the near future, while government investment will be flat

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

- Gross capital formation
- Private investment
- Public investment
- Change in inventories
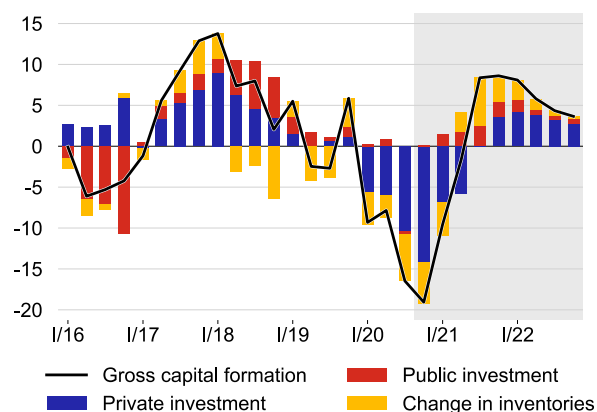
Chart II.16
The foreign trade recovery will lead to a quick return to the pre-pandemic level

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

- Exports
- Imports
- Net exports (change in CZK billions, rhs)

III. INFLATION

Following its recent decrease into the tolerance band, inflation will fall further close to the 2% target in the first quarter of this year. This is linked with a slowdown of the previously strong growth in food prices and administered prices. Core inflation will also decline in the first half of the year, closely following the previous weakening of growth in total costs. Inflation will continue to fluctuate around the target for the rest of this year. The overall inflation pressures will stabilise in the course of the year. 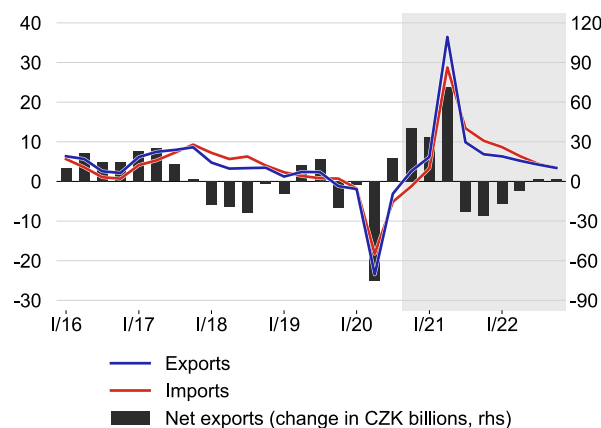The disinflationary effect of the domestic economy will steadily fade as it gradually recovers from the pandemic. This will contrast with continued appreciation of the koruna. Consumer price inflation will rise slightly above the inflation target next year, owing mainly to an increase in excise duties. Monetary policy-relevant inflation will stabilise at the inflation target over the monetary policy horizon. This will be supported by monetary policy gradually becoming less accommodative.

The recent strong growth in market prices will fade out in Q1, owing mainly to slower growth in food prices, and core inflation will also fall markedly during the year

Inflation, which was above the upper boundary of the tolerance band for most of last year, started to drop towards the inflation target in late 2020. It will fall further in 2021 Q1 and fluctuate around the target for the rest of the year (see Chart III.1). The increase in inflation to over 3% last year was due to several factors, mainly growing food prices and a rise in core inflation (see Chart III.2).

Food price inflation shot up at the start of last year due to several factors. Worker mobility and cross-border transport were restricted in the first wave of the pandemic, which led to a sharp increase in fruit and vegetable prices. The previous bad harvest meanwhile resulted in a marked rise in potato prices. This was accompanied by growth in pork prices due to an African swine fever epidemic in South-East Asia. During the second half of last year, however, all these factors gradually subsided and food price inflation started to weaken. It will fall further early this year, due not only to a continued unwinding of these factors, but also to the recent appreciation of the koruna. However, the dip in food price inflation will only be temporary. Food prices will start rising again in mid-2021 on the back of an expected recovery of domestic agricultural prices and a recent surge in global crop commodity prices.

Core inflation was also high last year, but started to decline rather later and more gradually than food price inflation. Although we expect it to slow during the first half of this year (owing, among other factors, to the pandemic), the contribution of the core of the consumer basket to headline inflation remains dominant (see Chart III.3). The increase in core inflation to just above 3.5% last year was due mainly to services prices. This still reflected the previous almost

Chart III.1

Inflation will fluctuate around the target this year and move slightly above it next year, aided by an increase in excise duties, to which monetary policy does not react

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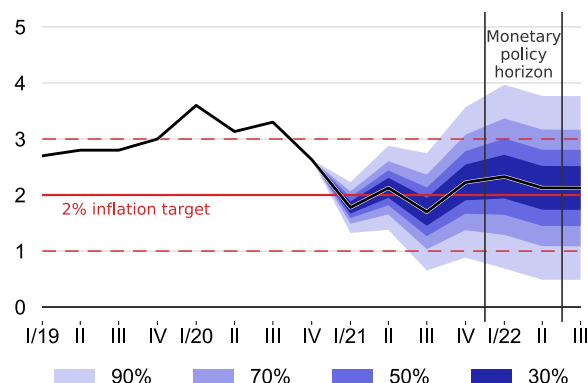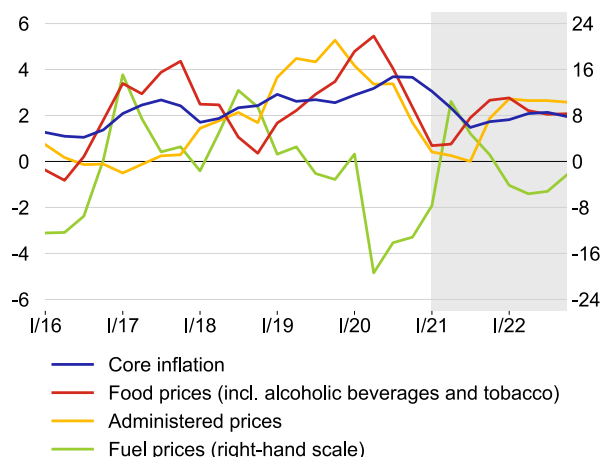

Chart III.2

The brisk growth in food prices and administered prices last year decreased at the turn of the year; core inflation will also slow in the first half of 2021, whereas fuel prices will rise

Components of inflation; y-o-y changes in %

Core inflation
Food prices (incl. alcoholic beverages and tobacco)
Administered prices
Fuel prices (right-hand scale)

COMPARISON WITH THE PREVIOUS FORECAST: Prices

		2020	2021	2022	
Consumer prices	y-o-y changes in %	3.2	2.0	2.2	The forecast for inflation in 2021 is reduced by all its components except fuel prices and the effects of changes to indirect taxes.
	pp	(-0.1)	(-0.3)	(0.1)	
Administered prices	y-o-y changes in %	3.1	0.6	2.7	The decrease in administered price inflation this year reflects lower energy prices.
	pp	(0.0)	(-0.6)	(0.4)	
Core inflation	%	3.4	2.1	2.0	The stronger exchange rate pushes core inflation down via import prices.
	pp	(0.0)	(-0.5)	(0.0)	
Food prices (incl. prices of alc. bev. and tobacco)	y-o-y changes in %	4.2	1.5	2.3	Food price inflation will slow noticeably this year in connection with the evolution of agricultural producer prices.
	pp	(-0.2)	(-0.7)	(0.4)	

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

seven years of solid growth, which had caused the Czech economy to strongly overheat and led to a very tight labour market. Growth in services prices was therefore slow to come down following the start of the first wave of the pandemic, staying close to 4% for most of last year despite gradually easing demand pressures (see Chart III.4).

Housing services continued to get distinctly more expensive, while prices also rose apace in restaurants and cafés, package holidays and hairdressing, the areas also hardest hit by the shutdowns. Businesses attempted to partly compensate for the drop in their income during the pandemic by raising their prices. Tradables prices also rose markedly, buoyed by a weakening koruna at the start of both the first and second wave of the pandemic.

Growth in goods prices, driven mainly by prices of used cars, slowed slightly to 3.3% at the close of last year. The appreciation of the koruna against the euro before the year-end has so far passed through to tradables prices to a limited extent. In the first half of this year, core inflation will drop significantly on the back of continued appreciation of the koruna against the euro and the dollar, a related decline in import prices and a further easing of domestic demand pressures. The unwinding of the positive second-round effects of last year's decrease in VAT (not reflected in prices) will act in the same direction.[4]

During the summer, fundamental factors will temporarily push core inflation down to 1.5%, i.e. deeper than in the previous forecast. Domestic

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4   At the same time, we assume that the annual January repricing of some services was postponed to the months ahead due to the shutdowns. This will lead to a further, albeit only temporary, decline in core inflation.

Chart III.3

Inflation will continue to be dominated by core inflation; the decrease in the contribution of food prices will be only temporary

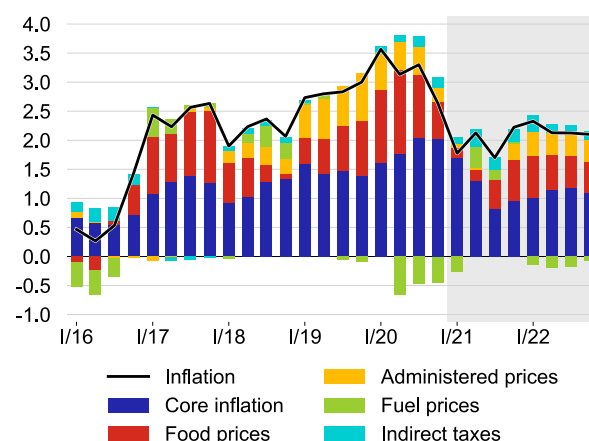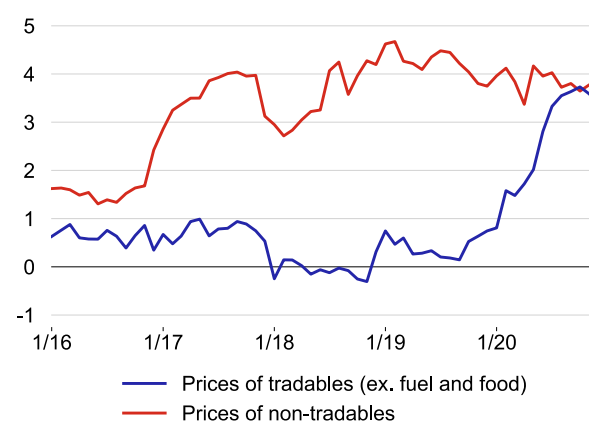Structure of inflation; y-o-y changes in %; contributions in pp

Chart III.4

Prices of both tradables (goods) and non-tradables (services) rose apace last year

Prices of tradables and non-tradables; y-o-y changes in %

inflation pressures will increase gradually as the economy subsequently recovers gradually from the pandemic and households start to partly make up for previously deferred consumption. Those pressures will cause core inflation to rise to 2%. It will stay close to that level next year, when we assume the pandemic will disappear for good.

The muted growth in administered prices will pick up at the close of this year, as the decline in energy prices will be only temporary. Changes to excise duties will continue to foster higher inflation

Last year's decline in wholesale prices of natural gas and electricity is gradually passing through to retail prices of housing-related energy. Prices of gas and electricity for households dropped markedly at the start of the heating season. While retail prices of gas started to fall in year-on-year terms during the autumn, those of electricity began to drop at the beginning of this year in connection with the fade-out of last year's price increase. Swift growth in water supply and sewerage charges, coupled with renewed growth in heat prices and continued growth in transport prices, will contribute in the opposite direction to administered price inflation this year. However, the decrease in energy prices will be stronger, temporarily slowing the growth in administered prices. Energy, though, will be only temporarily cheaper according to current market outlooks. Electricity and gas will thus go up in price again this autumn. Administered price inflation will gradually rise to just above 2.5% (see Chart III.5).

Changes to excise duties will be fully reflected in consumer prices this year and the next. The decrease in excise duty on diesel of CZK 1 per litre contained in the tax package will show up at filling stations during January. Its impact on inflation is estimated at -0.05 pp. However, this will soon be outweighed by a further rise in excise duty on tobacco products and heated tobacco. It will go up by 10% in the first phase and start feeding through gradually to cigarette prices this February. The further price growth caused by the 5% increase in excise duty in the second phase in January 2022 will again be gradual. The overall impact is estimated at 0.3 pp for the first phase and 0.1 pp for the second.

The changes to excise duties will be reflected in a rise in headline inflation this year and the next (see Chart III.6). However, they will not affect monetary policy-relevant inflation, nor will monetary policy react to them, as they are one-off changes in the price level caused by the simple pass-through of changes to indirect taxes, which the central bank ignores. Monetary policy-relevant inflation will stabilise at 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.5
Growth in administered prices will be temporarily muted
Administered prices; y-o-y changes in %; contributions in pp; including taxes

Regulated prices
Electricity
Natural gas
Heat
Water
Transport
Rest
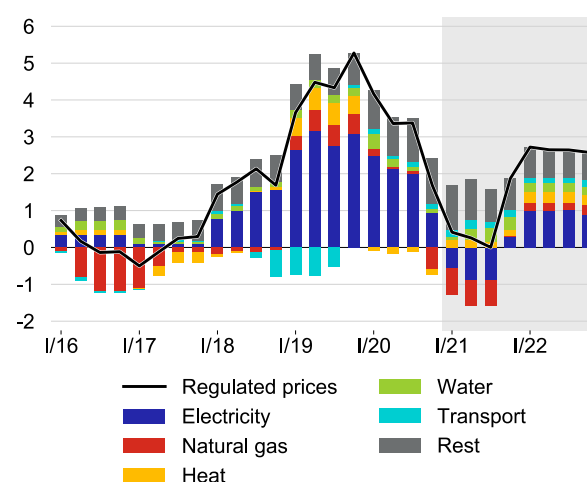
Chart III.6
The second-round effects of indirect tax changes will unwind this year, unlike the first-round ones
First-round and second-round effects of tax changes; y-o-y changes in %; contributions in pp; including taxes

First-round impacts   Second-round impacts
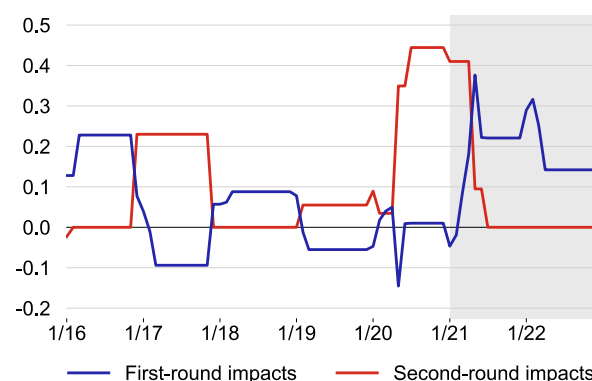
*We distinguish two types of price effects in relation to **changes to indirect taxes** – first-round and second-round. The first-round effects are the calculated price changes due to the indirect tax changes implied by full (accounting) pass-through of the tax changes to prices of the relevant items of the consumer basket. The second-round effects capture the price changes due to indirect tax changes going beyond the first-round effects. The second-round effects may be positive or negative. In the case of a tax increase, they are positive if the relevant prices rise more than implied by mechanistic pass-through of the tax changes. Conversely, they are negative if prices rise less than the tax increase would imply. The CNB applies escape clauses to the first-round effects of indirect tax changes. **Monetary policy-relevant inflation**, which is adjusted for the first-round effects of indirect tax changes (but includes the second-round ones), is therefore relevant when setting interest rates.*

The overall inflation pressures calmed at the end of last year and will start returning to their steady-state level from below during the second half of this year as the impacts of the pandemic gradually subside

Growth in costs, which affects consumer prices together with changes in margins, was highly volatile last year as a result of a decrease in domestic inflation pressures. This was linked chiefly with a gradual cooling of the labour market amid a downturn in the domestic economy caused by the adverse effects of the pandemic. Core import prices and energy prices counteracted this at the end of last year, switching to growth and pushing up producers' costs. This was due to renewed growth in foreign producer prices and rising prices of crude oil, and partly also to a temporary depreciation of the koruna in September and October (see Chart III.8).

Growth in overall inflation pressures will ease this year, owing to a continued disinflationary effect of the domestic economy. This will be accompanied by a gradual fading of the currently positive contribution of core import prices and energy prices, which will reflect an appreciating koruna. In the second half of this year, import prices will start to dampen growth in total costs, which will stabilise around its steady-state level. This will be due mainly to the appreciating exchange rate, which, together with a gradual rise in interest rates, will cause monetary policy to become less accommodative (see section IV). Growth in oil prices will also subside and growth in core foreign industrial prices will slow.

Cost pressures in the domestic economy are currently being strongly affected by a drop in fundamental wage growth. This reflects a cooling of the labour market in reaction to the pandemic. The retightening of anti-epidemic measures in the final quarter of last year has mainly affected services so far, while industry has proved resilient, continuing the recovery that started during the summer easing. The shutdown of part of the economy in the second wave of the pandemic thus had only a slightly negative effect on inflation. This was reflected in a negative contribution of the price of capital. Growth in labour efficiency, which had resumed last summer, halted temporarily with the onset of the second wave (see Chart III.9).

Despite the January increase in the minimum wage, growth in domestic costs will fall further in the first half of 2021 and remain subdued for the rest of the year owing to a further cooling of the labour market. After the expected reopening of the economy, the effect of the price of capital will become slightly inflationary again. This will be offset by an initially gradual but later sharp increase in labour efficiency due to people returning to their workplaces (offices, shops and other premises). The latter will be made possible by an easing of anti-epidemic measures, which will be

Chart III.7
Monetary policy-relevant inflation will stabilise at the 2% target over the monetary policy horizon
Headline and monetary policy-relevant inflation; in %
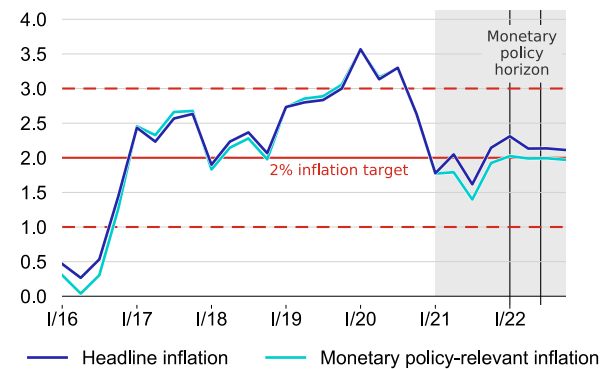
Chart III.8
The overall inflation pressures will ease this year, with growth in costs stabilising near its steady-state level
Costs in consumer sector; q-o-q changes in %; contributions in pp; current prices; annualised
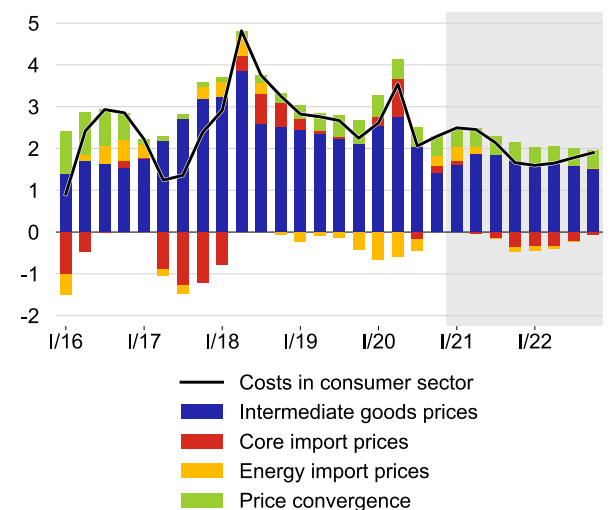
Chart III.9
Growth in domestic costs will be subdued this year and return to its steady-state level next year
Costs in intermediate consumption sector; q-o-q changes in %; contributions in pp; current prices; annualised
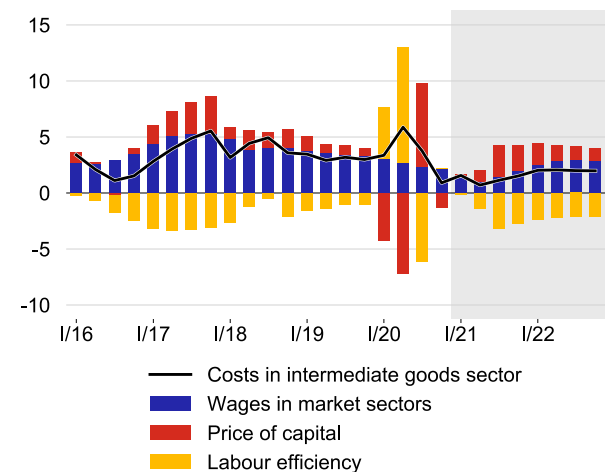
cautious at first but across the board during the summer, amid rising vaccination coverage.

Roughly at the same time, growth in domestic costs will start to pick up significantly as a result of an upswing in fundamental wage growth. A substantial rise in the inflationary effect of the price of capital from mid-2021 onwards will also reflect a recovery of private consumption and the domestic economy as a whole due to the reopening of most services. In an environment of fading pessimism, households will tend to partly make up for previously deferred consumption. In the second half of this year, overall growth in domestic costs will thus start to return to its steady-state level, where it will stay next year.

IV. MONETARY POLICY

At its February 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 forecast as being substantial and tilted to a longer-lasting pandemic than assumed by the forecast. Longer lockdowns at home and abroad and an ensuing deterioration in the financial situation and sentiment of businesses and households are the main risk to the forecast. This could lead to a lengthier cyclical downturn of the Czech economy and hence to a need to keep monetary conditions accommodative for longer than in the forecast. This risk is processed as a separate longer-lasting pandemic-induced downturn scenario.

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

The initial stability of market interest rates reflects the need to keep monetary policy easy in a situation where the pandemic is having negative impacts on the domestic economy and where inflation is projected to be close to the target. Market interest rates will start to rise in the second half of this year (see Chart IV.1). This stems from the expected recovery of the domestic and foreign economy as the negative impacts of the second wave of the coronavirus pandemic gradually fade away. The interest rate component of the monetary conditions will continue to get less easy next year, amid stabilisation of monetary policy-relevant inflation at the target and solid growth in economic activity.

The baseline scenario of the forecast implies a 3M PRIBOR of 0.3% for 2021 Q1. The average market rate level has been only slightly higher so far in January, at 0.4%. Assuming that the spread between the 3M PRIBOR and the 2W repo rate stays at around 0.1 pp, the forecasted 3M PRIBOR level should broadly materialise in Q1 if the 2W repo rate is left at 0.25% at the February meeting.

The koruna has been appreciating strongly since the end of October, erasing its previous depreciation linked with the onset of the second wave of the pandemic, which, as during the spring wave, helped ease monetary conditions

The koruna appreciated from around CZK 27.4 to the euro at the end of October to CZK 26.2 at the close of the year, i.e. by more than 4%. The average rate in Q4 was CZK 26.7 to the euro. It was just above CZK 26 to the euro at the end of January.

This reversal in the exchange rate trend was due mainly to a change in the financial markets' view of Central European currencies, amid a broadly constant

Chart IV.1

Interest rates will initially remain stable and then rise gradually

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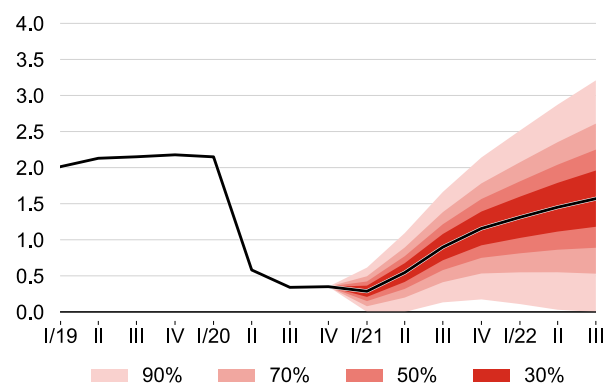
*3M PRIBOR market interest rates are money market rates with a maturity of three months, which are closely linked to the CNB's monetary policy rates. The CNB's key rate is **the two-week (2W) repo rate**, paid on commercial banks' excess liquidity as absorbed by the CNB in two-week repo operations. The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

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

The interest rate path remains similar

Decomposition of changes in 3M PRIBOR forecast in pp

- Difference
- Initial state + GDP + wages
- Foreign environment
- Administered prices
- Government consumption
- Short-term exch. rate forecast
- Short-term inflation forecast
- Fiscal impulse

- More relaxed **fiscal policy** fosters higher rates via higher government consumption and a less restrictive fiscal impulse

- A worse course of the pandemic leads to lower rates this year, while a faster recovery in household consumption and generally easier labour market situation fosters higher rates next year (**initial conditions + GDP + wages**)

- **External developments**, especially slower closure of the negative output gap abroad coupled with a slightly lower shadow interest rate path in the euro area, foster lower rates

- **The short-term outlook for domestic inflation**, reflecting the latest observed data, fosters lower rates in the coming quarters

The exchange rate of the koruna has been revised to stronger levels

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

- New forecast
- Previous forecast
- Differences (rhs)

- The exchange rate forecast has shifted to stronger levels at the shorter horizon due to the previous firming of the koruna
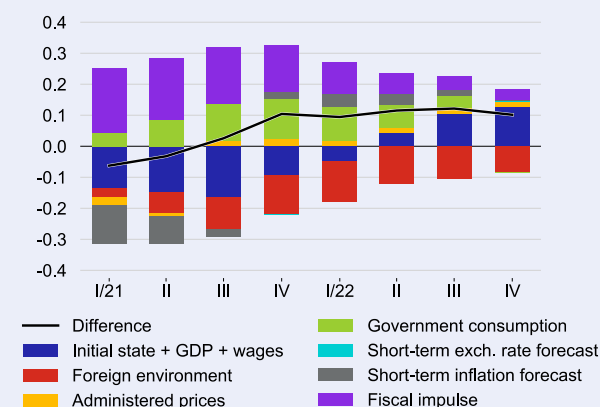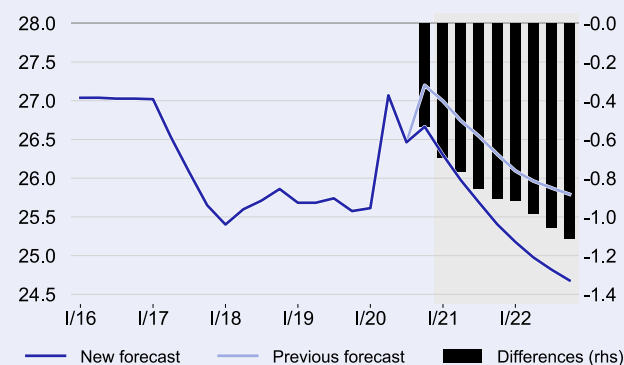
- The stronger koruna in the longer outlook is mainly a consequence of better initial and expected performance of export industries

- The stronger exchange rate also reflects a larger positive interest rate differential vis-à-vis the euro area

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positive koruna-euro interest rate differential. The koruna appreciated more against the Polish zloty and especially the Hungarian forint. Besides the Czech Republic's rather better macroeconomic situation and external balance, the financial markets probably also took into account the possibility of renewed interest rate increases in the Czech Republic this year. Conversely, the Polish central bank (NBP) discussed cutting its rate from 0.1% to zero and intervened against the appreciating zloty at the year-end.

The koruna will appreciate over the entire forecast horizon

We expect the exchange rate to average CZK 26.3 to the euro in Q1. This reflects the resilience of Czech export-oriented industry during the second wave of the pandemic despite the continued adverse epidemic situation. The receding of the second wave together with the reopening of part of the economy and improved financial market sentiment this year will lead to continued appreciation of the koruna (see Chart IV.2). This will occur in an environment of recovering domestic economic activity and rising

Chart IV.2

According to the forecast, the koruna will gradually appreciate, strengthening beyond CZK 25 to the euro by the end of next year

CZK/EUR exchange rate; confidence interval

90% 70% 50% 30%
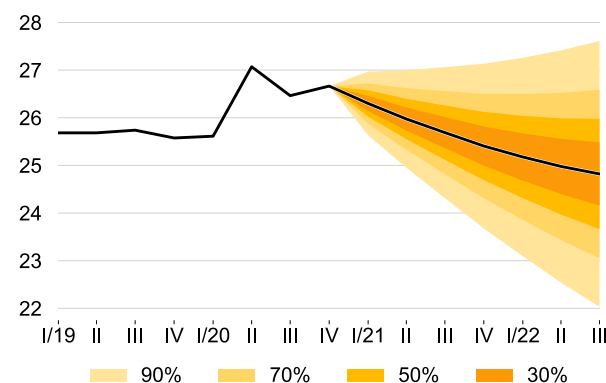
external demand. A strengthening koruna will also be fostered by a gradually widening positive interest rate differential vis-à-vis the euro area due to a rise in domestic interest rates. By the end of next year, the koruna will thus strengthen beyond CZK 25 to the euro and return close to its estimated steady-state level.

The market interest rate outlook is lower than the CNB forecast

The market outlook for short-term FRA rates (see Chart IV.3) shifted up slightly after the Bank Board's monetary policy meeting in November. The market nonetheless expects only a slight rise in the 3M PRIBOR at the one-year horizon. 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 February meeting. According to a narrow majority of them, the CNB's key rate will stay at this level at the one-year horizon (the others expect a rise to 0.5%). The outlooks for a gradual increase in key interest rates are also reflected in the koruna's exchange rate outlook. The analysts expect the koruna to appreciate slightly on average, as in the above new forecast. However, their comments emphasise the high uncertainty linked with the impact of the coronavirus pandemic on future economic developments. This uncertainty is reflected in the spread of the estimates. The difference between the minimum and maximum expected rates against the euro at the one-year horizon exceeds CZK 1.

In the weeks leading up to the monetary policy meeting, the Bank Board members' communications were indicating no change to the CNB's key rates at the February meeting. Some members communicated the possibility of increasing rates this year.

The prolonged period of a low 2W repo rate has passed through to market interest rates and subsequently to client rates

Money market rates remain at their early May 2020 levels. At that time, the CNB lowered its key interest rates by another 0.75 pp, further easing the interest rate component of the monetary conditions in reaction to the expected negative economic impacts of the pandemic. Since then, rates with longer maturities have also remained low, although they rose modestly at the end of 2020, diverging somewhat from rates on foreign markets (see Chart IV.4). The market was probably reacting to the publication of the CNB's previous forecast, which had assumed a gradual rise in market interest rates in 2021. The slope of the IRS

Chart IV.3

The market rate outlook is lower than the CNB forecast

3M PRIBOR; FRA in %
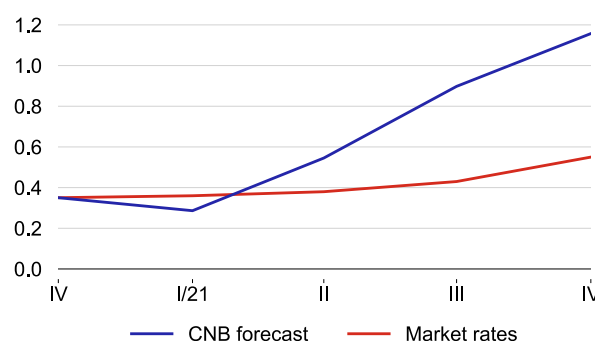
Note: Market rates represent for 2020 Q4 and 2021 Q1 the 3M PRIBOR and for 2021 Q2–2021 Q4 the average values of the FRA 3*6, 6*9 and 9*12 rates for the last 10 trading days as of 29 January 2021.

Chart IV.4

Domestic interest rates with longer maturities have diverged from euro and dollar rates in recent months

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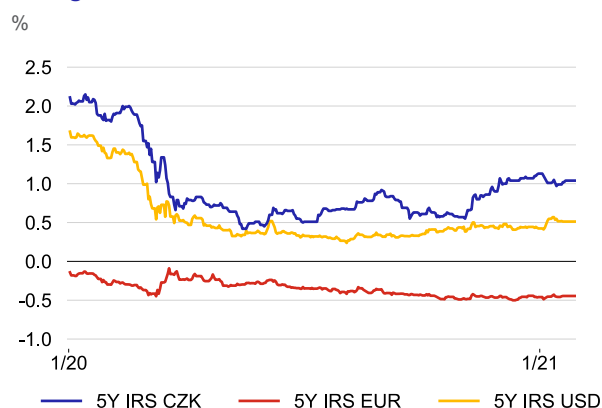
The monetary policy horizon is the future time period which the CNB focuses on when making its monetary policy decisions and which reflects the lag in the transmission of monetary policy. This time period is roughly 12–18 months ahead.

and government bond yield curves is distinctly positive.[5]

Client rates on house purchase loans continued to fall moderately, nearing 2%. By contrast, the rate on loans to corporations rose, also fluctuating around 2%.

The economic contraction is being reflected in growth in loans to corporations and loans to households for consumption

Growth in loans to households for house purchase remains robust. However, the pandemic and the related measures are being strongly reflected in loans to households for consumption, whose growth slowed further, and in loans to corporations, which stopped rising. The tightening of credit standards and bank lending conditions last year, which is fostering lower growth in lending, is also contributing to weaker demand for loans, especially in the case of firms.

According to the forecast, growth in house purchase loans will slow this year. The projected slowdown is in line with the results of the Bank Lending Survey,[6] according to which approximately one-fifth of the banking market is expecting demand in the segment of loans to households to decline in 2021 Q1. In the case of loans to non-financial corporations, by contrast, banks on aggregate are not expecting any change in overall demand. They expect growth in demand for short-term operating loans to be offset by a decline in demand for long-term investment loans. The CNB forecast also assumes that growth in loans to corporations will be flat in the first half of the year and pick up in the second half of the year as economic activity recovers (see Chart IV.5). The new model used to forecast loans is described in Box 3.

In the context of the unprecedented pandemic and economic situation, there continues to be huge uncertainty regarding the external and domestic assumptions of the forecast, including the way they are captured by the model system and expert adjustments.

The main risk to the forecast is a longer-lasting pandemic coupled with longer lockdowns at home and abroad, which could lead to deeper negative sentiment and a lengthier cyclical downturn

The duration and scale of the lockdowns due to the coronavirus pandemic are a major risk to the forecast. Economies could be slower to reopen at home and

Chart IV.5

Growth in loans to corporations will pick up as economic activity recovers

Annual rates of growth in %

- Loans to non-financial corporations
- Loans for house purchase
- Consumer credit

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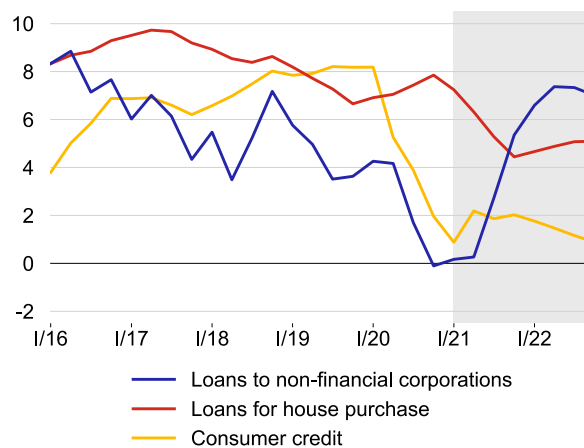
5 The Czech Ministry of Finance issued CZK 615 billion of T-bills and bonds (with various maturities) on the primary market in 2020. This enabled the government to finance its fiscal stabilisation measures.

6 https://www.cnb.cz/en/statistics/bank-lending-survey

abroad owing to a combination of multiple factors, including virus mutations and sluggish vaccination. If this were to happen, it would lead to a greater deterioration in the financial situation and sentiment of firms and households, which would result in a cyclical downturn and a later increase in interest rates relative to the baseline scenario. A longer-lasting pandemic-induced downturn scenario was constructed to describe this eventuality.

An adverse course of the epidemic, increasing virus mutations and sluggish vaccination lend legitimacy to the longer-lasting pandemic-induced downturn scenario

The epidemic situation both at home and abroad is changing from day to day. There are increasing reports of new strains of the coronavirus, and vaccination is proceeding slowly in many European countries. A combination of bad news may lend high relevance to the longer-lasting downturn scenario described below. However, it will probably be possible only after some time to identify that a worse-than-expected course of the pandemic is beginning to be reflected in the onset of a longer-lasting downturn with elements of a classical cyclical recession. The longer-lasting downturn scenario would be consistent with a longer period of low interest rates and the postponement of the start of rate increases until next year.

The longer-lasting pandemic-induced downturn scenario

In the external assumptions of the longer-lasting pandemic-induced downturn scenario, we consider a marked deterioration in industry in addition to a more protracted decline in services. The pandemic will follow a worse course than in the baseline scenario from 2021 Q2 onwards. In this scenario, it will take longer for the positive effects of vaccination to be felt. Worse economic prospects and tangible effects on the financial situation of consumers and firms will be reflected in a decline in private consumption and corporate investment. At the same time, global supply chains will be disrupted and the efficient use of production factors and the intensity of international trade will decrease. This will result in reduced production in the euro area and growth in corporate bankruptcies and unemployment, with fiscal policy support already lower.

The longer-lasting downturn scenario assumes a slower economic recovery in the euro area than in the baseline scenario (see Chart IV.6) and a significantly negative output gap until the end of 2022. This will be reflected in stronger and longer-lasting anti-inflationary demand effects. Producer price inflation will be more subdued than in the baseline scenario and will even drop to zero in 2022. This will be due to slower growth in core prices and a drop in energy prices reflecting a lower oil price outlook owing to subdued global economic activity. We expect the difference for consumer prices to be similar to that for producer prices. This scenario would be consistent with a further easing of monetary conditions by the ECB using unspecified unconventional instruments, which would be reflected in a sharp drop in shadow interest rates relative to the baseline scenario.

Chart IV.6
The ECB responds to slower growth and stagnating prices by easing monetary policy markedly further
Comparison of baseline scenario with longer-lasting pandemic-induced downturn scenario – foreign variables

GDP in the effective euro area
Index; 2000 = 100, constant prices
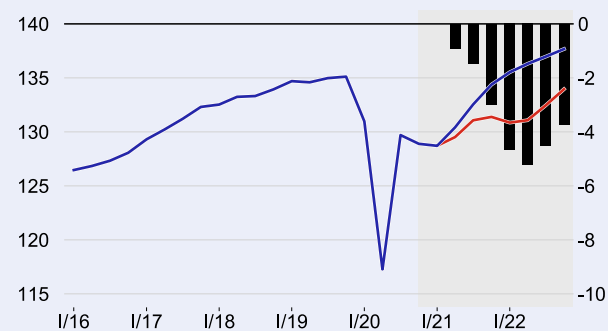
Output gap in the effective euro area
% of GDP
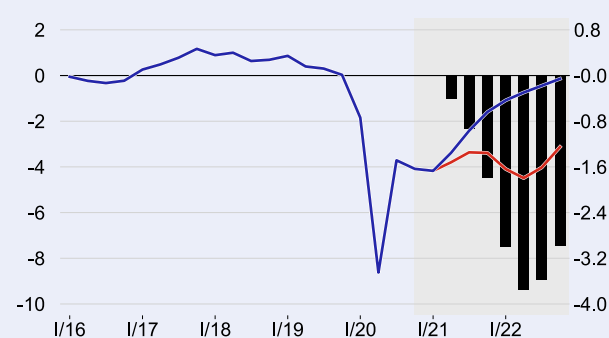
PPI in the effective euro area
Y-o-y changes in %
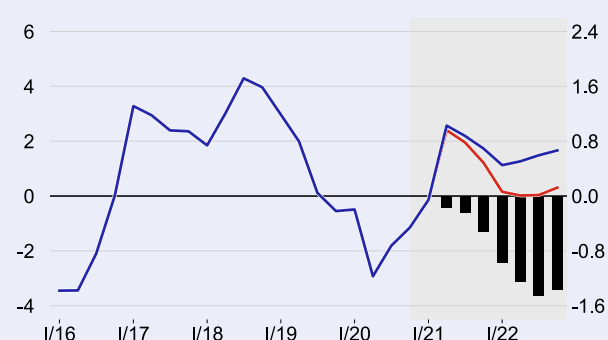
3M EURIBOR
%
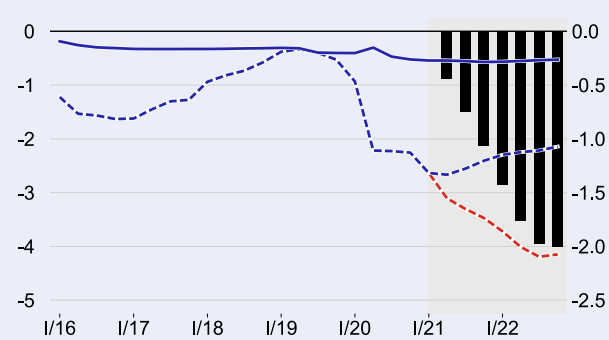
- Baseline
- Longer downturn scenario
- Shadow rate - baseline
- Shadow rate - longer downturn scenario
- Differences (rhs)

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

In the longer-lasting pandemic-induced downturn scenario, we assume that the worse course of the pandemic will be associated with longer-lasting shutdowns in the domestic economy as well. Businesses will thus exhaust their finances even more, and some will close. In contrast to the baseline scenario, industry will face a fall in demand from abroad. The worsening sentiment of firms and households will also manifest itself in industrial production. The domestic economy will therefore shift to a longer cyclical downturn despite the easing of epidemiological measures in the second half of 2021.

Chart IV.7

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

Comparison of baseline scenario with longer-lasting pandemic-induced downturn scenario – domestic variables

3M PRIBOR

%

Nominal exchange rate

CZK/EUR

GDP

CZK billions; constant prices

Inflation

In %

Baseline   Differences (rhs)
Longer downturn scenario
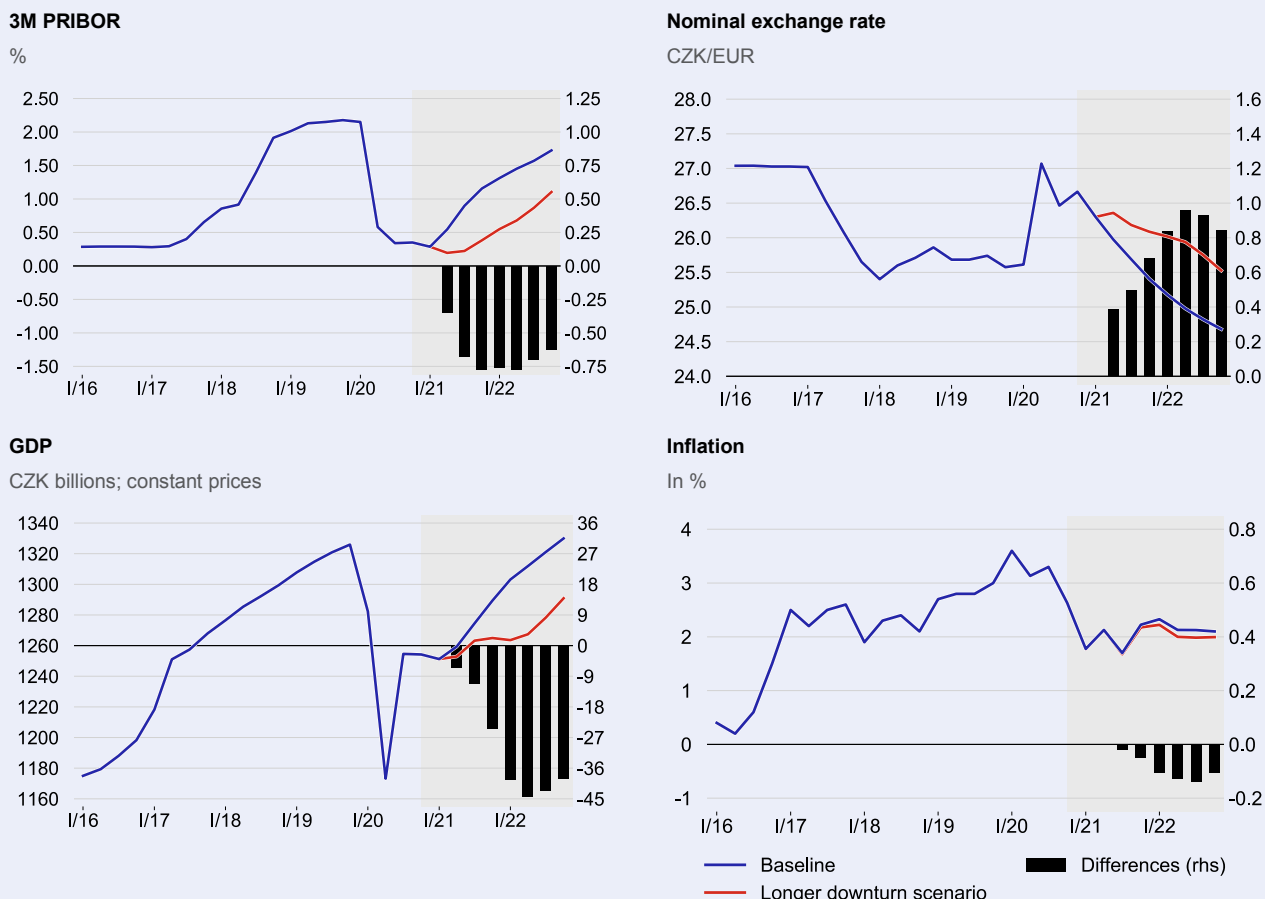
The slower growth of the Czech economy than in the baseline scenario derives from weaker external and domestic demand. The lower external demand will lead to subdued growth in foreign trade, with exports and imports even falling temporarily in late 2021 and early 2022. The muted external demand, along with worse sentiment of firms, will result in a longer-lasting freeze in corporate investment activity. The adverse situation will also affect household consumption, which will pick up only very slowly. This will reflect a worse income situation of households and negative consumer appetite in a situation of an only gradually reopening economy. Economic activity will not recover significantly until mid-2022. GDP growth is therefore lower than in the baseline scenario in both years (see Chart IV.7).

On the whole, the lower demand for domestic production and slower wage growth will foster lower overall inflation pressures relative to the baseline scenario. Conversely, core import prices will have an inflationary effect due to a weaker koruna, as the adverse cyclical developments abroad weaken demand for Czech exports and act against appreciation of the koruna. The growth rate of total costs will not converge to the baseline scenario levels until the end of 2022, when demand picks up. In this scenario, the longer-lasting economic downturn generates a need for a easier interest rate component of the monetary conditions relative to the baseline scenario. This, together with the weaker koruna, will ensure that inflation will be close to the inflation target over the monetary policy horizon. Therefore, interest rates will not be raised until next year in this scenario.

If the baseline scenario materialises, leaving interest rates low until the end of this year would lead to the target being overshot next year

The model framework of the forecast allows us to discuss various hypothetical situations, including alternative behaviour of the central bank itself. With regard to current decision-making and communication, we prepared a monetary policy simulation in which interest rates are kept at their current levels for the whole of 2021. The foreign and domestic economy will (in retrospect) evolve in line with the baseline scenario. However, the central bank has a high degree of ex-ante uncertainty about this scenario. It will therefore hold off raising rates until it has sufficiently conclusive information that the economy has successfully recovered from the pandemic. Leaving rates unchanged until the end of this year is thus used as a safeguard against a longer-lasting economic downturn. This safeguard has its price in the form of an overshooting of the inflation target if the baseline scenario materialises and the feared longer-lasting downturn thus ultimately does not occur. At the same time, the simulation points to a need to tighten monetary policy considerably next year.

The composition of the supply and demand factors underlying domestic and foreign inflation remains an uncertainty of the forecast against the backdrop of the ongoing pandemic

On the one hand, slightly better-than-expected domestic economic data for last year suggest smaller lockdown impacts. On the other hand, the negative impacts of the pandemic are affecting the sentiment of economic agents. The course of the pandemic so far and the related shutdowns of the economy have had stagflationary rather than standard cyclical anti-inflationary impacts. The uncertainty regarding the strength of inflationary/anti-inflationary effects and their lag behind the until recently overheated domestic economy and labour market thus remains high. Analogous uncertainty surrounds the situation in the euro area.

A new uncertainty about the timing and extent of the usual price growth at the start of the year has been identified

This is accompanied by the effect of continuing government shutdowns in services and retail. They are affecting both statistical surveys and reporting of the consumer prices of many items of the consumer basket and economic agents' decision-making on the timing (and extent) of the actual repricing. There is thus the question of how much inflation in January this year will reflect the repricing of some services and products which in normal times occurs at the start

The central bank sets interest rates in the g3+ model taking into account the deviation of the 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%).

of the year. The forecast assumes that this repricing will be postponed from January to the following months due to the shutdowns in services, which will temporarily deepen the fall in core and headline inflation in the first few months of this year. However, any deviation from this trend would have no significant bearing on the fundamental story of inflation and hence on monetary policy decision-making.

The unchanged rates scenario

The unchanged rates scenario examines the hypothetical situation of interest rates staying at their current levels until the end of this year. At the same time, it maintains the assumption of an average exchange rate of CZK 26.3 to the euro in 2021 Q1.

The lower interest rates in 2021 will lead to a stable interest rate differential vis-à-vis the euro, which is lower than in the baseline scenario and results in slower appreciation of the koruna than in the baseline scenario (see Chart IV.8). The easier interest and exchange rate components of the monetary conditions will lead to distinctly higher inflation, which will be around the upper boundary of the tolerance band around the target at the monetary policy horizon in the first half of 2022. For inflation to then return to the target, rates will need to grow quickly above the baseline scenario levels from the start of next year. This notwithstanding, inflation will stay above the CNB's 2% inflation target until the end of next year. The easier monetary policy results in slightly higher economic growth this year.

Chart IV.8

Leaving rates at their current levels is reflected in higher inflation and a weaker koruna

Comparison of baseline scenario with unchanged rates scenario

3M PRIBOR

%

Nominal exchange rate

CZK/EUR

Real GDP growth

Y-o-y changes in %
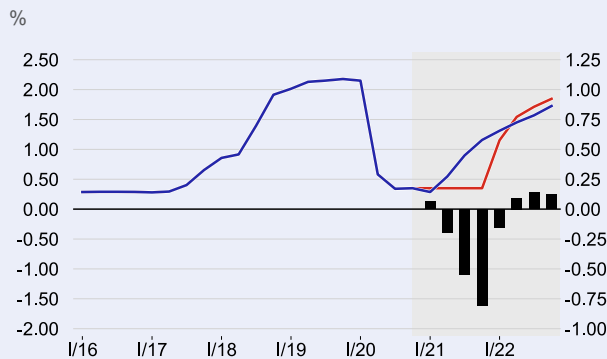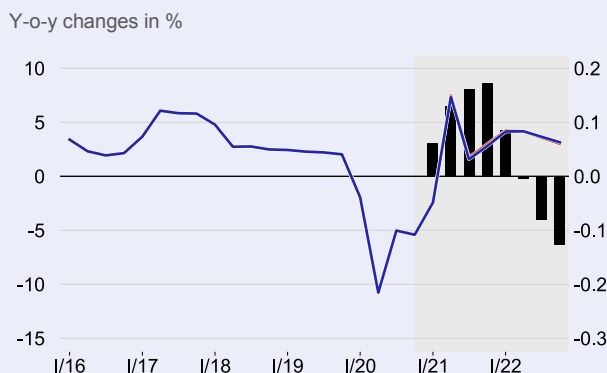
Inflation

In %
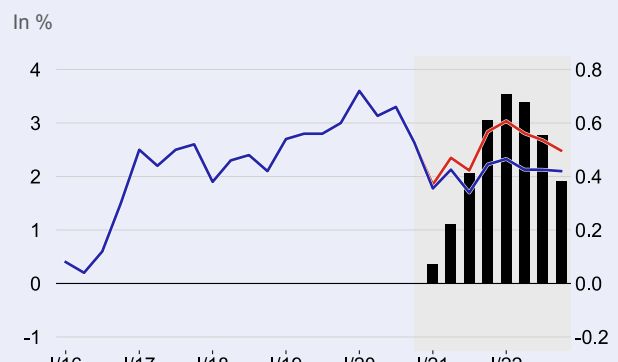
Baseline

MP simulation: unchanged rates

Differences (rhs)

BOX 3   The new model used to forecast loans

Credit did not escape the adverse effects of the pandemic. Loans to households for consumption were hit the hardest, and growth of loans to corporations also dropped, whereas growth in house purchase loans surged. Credit is an important element of monetary policy transmission. From now on, a forecast of loans by sector will be a regular part of the Chartbook, which is a parallel publication to the Monetary Policy Report. The outlook for the debt financing of economic activity can be used not only to better understand the links between the credit cycle and corporate investment activity, but also to quantify risks connected with household debt. This box describes the new model we use to forecast loans.

The main explained variables in the model are loans to the non-financial sector in their basic breakdown, i.e. loans to non-financial corporations and loans to households for house purchase and consumption. Changes in the stocks of these variables can be explained by the output gap (the deviation of GDP from potential output), the deviation of inflation from the target, financial market interest rates and exogenous factors (e.g. drawdown of EU funds). Outlooks for these variables obtained from the CNB's macroeconomic forecast using additional satellite models (e.g. for the ten-year government bond yield) enter the credit forecast.

The forecast methodology was selected with two main objectives in mind: first, to maximise its predictive ability, and second, to ensure that the predicted variables respond to changes in input variables in the economically intuitive direction in the Czech economy. Having regard to these objectives, we decided to use a simple Bayesian VAR model.[1]

The charts illustrate the model's predictive ability using historical data. The simulations of past forecasts use observed data and authentic CNB quarterly macroeconomic forecasts available at the time. All the models show a relatively small mean absolute forecast error, especially by comparison with the other modelling approaches tested (SARIMA, VECM and other specifications of the Bayesian VAR model). The forecast for loans to non-financial corporations has the largest errors (see Chart 1; errors in the note below the chart). This is linked with their high volatility. By contrast, the forecast error for loans for house purchase is very low (see Chart 2). As the chart shows, however, most of the forecasts underestimated growth in house purchase loans in the period under review. This is because demand for house purchase loans in 2015–2020 was affected, besides the macroeconomic situation, by factors not captured by the model.[2]

Chart 1

Loans to non-financial corporations

Forecasts based on observed data and their error at the one-quarter horizon; growth rates in %
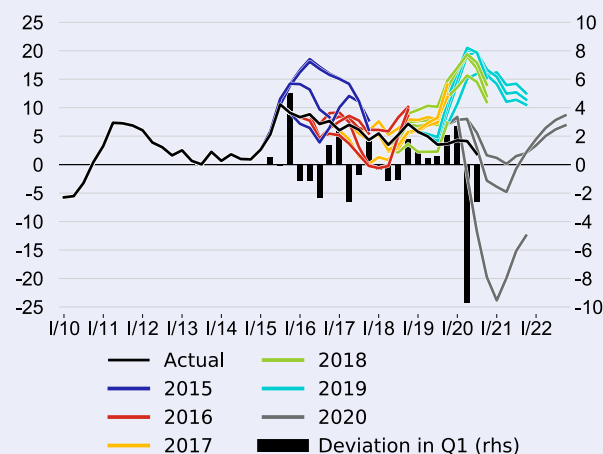
Note: The mean absolute error (MAE) is 1.9 pp for the one-quarter forecast and 3.2 pp for the one-year forecast.

Chart 2

Loans to households for house purchase

Forecasts based on observed data and their error at the one-quarter horizon; growth rates in %
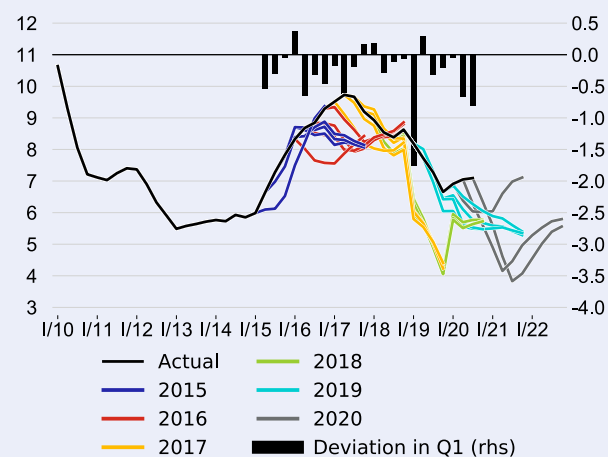
Note: The mean absolute error (MAE) is 0.4 pp for the one-quarter forecast and 1.2 pp for the one-year forecast.

Finally, the model for loans to households for consumption has an excellent predictive ability, especially at the short end (see Chart 3). This is due to its strong link to GDP and above all consumption, which is well captured by the model.

A comparison of the forecasts with the subsequently observed loan volumes during 2020 illustrates the importance of expert adjustment in the preparation of the forecast. An extreme example is the purely model-based forecast of a 25% drop in loans to non-financial corporations in 2020 Q2. This failed to materialise, due partly to a subsequent decrease in the expected fall in GDP. However, corporations' reaction played a big role. They cut their investment activity as expected, but they also increased their demand for operating loans for liquidity reasons (including state-guaranteed loans under the COVID 1, 2, 3, Praha, EGAP etc. programmes). A sharper decline in corporate loans was also prevented by the loan moratorium. Knowledge, or mere expectations, of such structural factors must therefore be taken into account in the credit forecast through additional expert adjustments.

Chart 3
Loans to households for consumption
Forecasts based on observed data and their error at the one-quarter horizon; growth rates in %
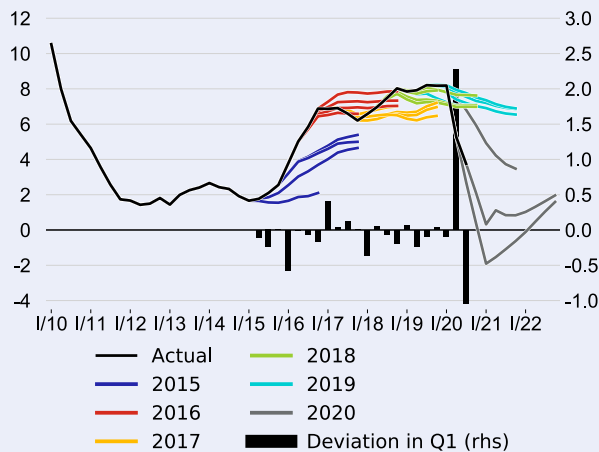
Note: The mean absolute error (MAE) is 0.3 pp for the one-quarter forecast and 1.2 pp for the one-year forecast.

Abbreviations

AEIS	Average Earnings Information System		ICT	information and communications technology
BoE	Bank of England		IEA	International Energy Agency
BoJ	Bank of Japan		Ifo	index of economic confidence in Germany
CF	Consensus Forecasts		ILO	International Labour Organization
CNB	Czech National Bank		IMF	International Monetary Fund
CPI	consumer price index		IR	Inflation Report
CPIH	experimental consumer price index incorporating prices of older properties		IRI	Institute for Regional Information
			IRS	interest rate swap
CZK	Czech koruna		JPY	Japanese yen
CZSO	Czech Statistical Office		LFS	Labour Force Survey
DSTI	debt service-to-income		LIBOR	London Interbank Offered Rate
DTI	debt-to-income		LTV	loan to value
ECB	European Central Bank		LUCI	Labour Utilisation Composite Index
EEA	European Economic Area		M1, M3	monetary aggregates
EIA	US Energy Information Administration		MFI	monetary financial institutions
EIA	Environmental Impact Assessment		MLSA	Ministry of Labour and Social Affairs
EIU	Economist Intelligence Unit		m-o-m	month-on-month
ESA	European System of Accounts		MPR	Monetary Policy Report
ESCB	European System of Central Banks		NAIRU	non-accelerating inflation rate of unemployment
ESI	Economic Sentiment Indicator		NBS	National Bank of Slovakia
ESR	electronic sales registration		OECD	Organisation for Economic Co-operation and Development
EU	European Union			
EUR	euro		OPEC+	The OPEC member countries and another ten oil-exporting countries (the most important being Russia, Mexico and Kazakhstan)
EURIBOR	Euro Interbank Offered Rate			
FDI	foreign direct investment			
FECF	Foreign Exchange Consensus Forecasts			
Fed	US central bank		PMI	Purchasing Managers Index
FMIE	Financial Market Inflation Expectations		pp	percentage points
FOMC	Federal Open Market Committee		PPI	producer price index
FRA	forward rate agreement		PRIBOR	Prague Interbank Offered Rate
GDP	gross domestic product		q-o-q	quarter-on-quarter
GNP	gross national product		repo rate	repurchase agreement rate
GVA	gross value added		rhs	right-hand scale
HICP	Harmonised Index of Consumer Prices		USD	US dollar
HP filter	Hodrick-Prescott filter		VAT	value added tax
HPI	house price index		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	**4964.3**	**5074.5**	**5266.1**
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	**5641.2**	**5886.7**	**6207.7**
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	**-5.8**	**2.2**	**3.8**
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	**-5.0**	**1.0**	**4.8**
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	**2.5**	**1.7**	**2.2**
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**	**1.0**	**5.4**
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	**-8.8**	**-0.5**	**4.3**
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	**-6.5**	**13.6**	**4.8**
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	**-6.6**	**13.3**	**5.7**
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	**317.0**	**372.7**	**351.3**
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	**2.0**	**2.2**
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	**0.6**	**2.7**
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	**1.5**	**2.3**
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	**2.1**	**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	**2.2**	**-4.3**
Monetary policy-relevant inflation (%, y-o-y, average)	1.9	2.1	0.6	0.2	0.5	0.5	2.5	2.1	2.9	3.2	**1.8**	**2.0**
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	**-0.5**	**0.5**
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	**0.5**	**-0.7**
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	**3.2**	**5.2**	**3.3**
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	**2.6**	**5.4**	**3.3**
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	**0.0**	**3.2**	**1.1**
Unit labour costs (%, y-o-y)	0.5	3.6	0.9	1.6	-0.4	3.1	3.9	6.2	4.3	**4.7**	**3.0**	**0.5**
Aggregate labour productivity (%, y-o-y)	2.1	-1.2	-0.4	1.7	3.9	0.9	3.6	1.8	2.1	**-4.4**	**3.3**	**3.3**
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**	**3.6**	**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**	**4.4**	**4.3**
Employment (ILO) (%, y-o-y)	0.3	0.4	1.0	0.8	1.4	1.9	1.6	1.4	0.2	**-1.2**	**-1.0**	**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	**-2.7**	**-1.1**	**1.1**
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	15.3	**-344.4**	**-379.6**	**-347.0**
Government budget balance / GDP** (%, nominal terms)	-2.7	-3.9	-1.3	-2.1	-0.6	0.7	1.5	0.9	0.3	**-6.1**	**-6.5**	**-5.6**
Government debt (ESA2010) (CZK bn, current prices)	1613.7	1805.3	1840.2	1818.9	1836.0	1754.7	1749.7	1734.6	1738.5	**2163.4**	**2548.8**	**2898.3**
Government debt / GDP** (%, nominal terms)	39.7	44.2	44.4	41.9	39.7	36.6	34.2	32.1	30.2	**38.4**	**43.3**	**46.7**
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	236.1	**277.0**	**281.1**	**287.3**
Trade balance / GDP (%, nominal terms)	1.9	3.0	4.0	5.1	4.1	5.4	5.1	3.7	4.1	**4.9**	**4.8**	**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	104.4	**108.4**	**97.4**	**104.4**
Current account (CZK bn, current prices)	-84.8	-63.3	-21.8	7.9	20.7	85.2	79.1	24.1	-17.0	**168.9**	**33.2**	**65.3**
Current account / GDP (%, nominal terms)	-2.1	-1.5	-0.5	0.2	0.4	1.8	1.5	0.4	-0.3	**3.0**	**0.6**	**1.1**
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	-61.0	**-65.0**	**-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**	**20.3**
CZK/EUR (average)	24.6	25.1	26.0	27.5	27.3	27.0	26.3	25.6	25.7	26.5	**25.8**	**24.9**
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	**9.1**	**8.5**	**5.8**
2W repo rate (%, average)	0.75	0.05	0.05	0.05	0.05	0.05	0.50	1.75	2.00	0.25	**0.62**	**1.41**
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**	**1.5**
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	**-6.0**	**3.8**	**3.9**
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	**1.4**	**1.5**
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**	**1.6**	**1.4**
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	**20.8**	**-3.2**
3M EURIBOR (%, average)	1.4	0.6	0.2	0.2	0.0	-0.3	-0.3	-0.3	-0.4	-0.4	**-0.6**	**-0.5**
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)	1282.3	1173.2	1254.6	1254.2	1251.2	1259.4	1274.5	1289.4	1303.2	1311.9	1321.1	1330.0
GDP (CZK bn, current p., seas. adjusted)	1439.8	1331.3	1429.6	1440.5	1443.0	1458.1	1481.1	1504.5	1527.4	1543.0	1559.8	1577.6
GDP (%, y-o-y, real terms, seas. adjusted)	-1.9	-10.8	-5.0	-5.4	-2.4	7.3	1.6	2.8	4.2	4.2	3.7	3.1
GDP (%, q-o-q, real terms, seas. adjusted)	-3.3	-8.5	6.9	0.0	-0.2	0.7	1.2	1.2	1.1	0.7	0.7	0.7
Household consumption (%, y-o-y, real terms, seas. adjusted)	-0.2	-8.3	-3.9	-7.6	-5.0	3.2	0.6	5.4	6.1	5.8	4.2	3.3
Government consumption (%, y-o-y, real terms, seas. adjusted)	4.6	1.6	0.1	3.5	0.4	2.6	3.9	-0.3	2.1	2.1	2.1	2.4
Gross capital formation (%, y-o-y, real terms, seas. adjusted)	-9.3	-7.8	-16.5	-19.1	-9.6	-1.7	8.4	8.6	8.1	5.8	4.4	3.7
Gross fixed capital formation (%, y-o-y, real terms, seas. adjusted)	-5.3	-5.1	-10.8	-14.0	-5.4	-4.0	2.5	5.5	5.7	4.5	3.7	3.4
Exports of goods and services (%, y-o-y, real terms, seas. adjusted)	-1.9	-23.4	-3.1	2.6	6.2	36.5	9.9	6.9	6.3	5.2	4.3	3.4
Imports of goods and services (%, y-o-y, real terms, seas. adjusted)	-1.8	-18.2	-5.1	-1.3	3.3	28.8	13.4	10.2	8.7	6.4	4.5	3.5
Net exports (CZK bn, constant p. of 2015, seas. adjusted)	71.9	22.2	109.2	113.7	105.2	93.7	86.2	87.6	87.9	86.2	87.7	89.5
PRICES												
Main price indicators												
Consumer Price Index (%, y-o-y, average)	3.6	3.1	3.3	2.6	1.8	2.1	1.7	2.2	2.3	2.1	2.1	2.1
Regulated prices (14.58%)* (%, y-o-y, average)	4.2	3.4	3.4	1.7	0.4	0.3	0.0	1.9	2.7	2.7	2.6	2.6
Food prices (incl. alcoholic beverages and tobacco) (26.41%)* (%, y-o-y, average)	4.8	5.5	4.0	2.4	0.7	0.8	1.9	2.7	2.8	2.2	2.1	2.1
Core inflation (55.61%)* (%, y-o-y, average)	2.9	3.2	3.7	3.7	3.1	2.3	1.5	1.7	1.8	2.1	2.1	2.0
Fuel prices (3.40%)* (%, y-o-y, average)	1.3	-19.4	-14.1	-13.2	-7.7	10.4	4.9	1.2	-4.1	-5.6	-5.2	-2.3
Monetary policy-relevant inflation (%, y-o-y, average)	3.6	3.2	3.3	2.6	1.8	1.9	1.5	2.0	2.0	2.0	2.0	2.0
Partial price indicators												
Industrial producer prices (%, y-o-y, average)	1.4	-0.6	-0.3	0.1	-1.0	-0.2	-0.2	-0.5	0.1	0.4	0.6	0.8
Agricultural prices (%, y-o-y, average)	-3.6	-3.2	-3.2	-3.1	-2.6	0.3	2.3	2.6	-0.1	-3.0	-1.1	2.3
LABOUR MARKET												
Average monthly wage (%, y-o-y, nominal terms)	5.1	0.6	5.1	2.2	5.8	7.3	2.6	5.1	1.3	3.7	3.8	4.2
Average monthly wage in market sectors (%, y-o-y, nominal terms)	5.2	-0.3	4.5	1.3	5.8	7.5	2.7	5.6	0.9	4.0	4.0	4.3
Average monthly wage (%, y-o-y, real terms)	1.4	-2.4	1.7	-0.5	4.0	5.2	0.9	2.9	-1.0	1.6	1.7	2.1
Unit labour costs (%, y-o-y)	5.9	4.9	6.9	1.3	5.2	1.4	0.6	4.6	-2.6	1.0	1.4	2.2
Aggregate labour productivity (%, y-o-y)	-1.2	-8.7	-3.6	-4.0	-0.5	8.0	2.4	3.6	4.3	3.7	2.9	2.3
ILO general unemployment rate (%, average, age 15–64, seas. adjusted)	2.0	2.5	2.8	2.9	3.2	3.6	3.8	3.8	3.7	3.6	3.5	3.4
Share of unemployed persons (MLSA) (%, average, seas. adjusted)	2.8	3.7	3.8	4.0	4.1	4.4	4.6	4.6	4.5	4.4	4.2	4.1
Employment (ILO) (%, y-o-y)	-0.5	-1.6	-1.4	-1.2	-1.6	-0.6	-0.9	-0.8	-0.2	0.4	0.7	0.8
Full-time employment (%, y-o-y)	-1.1	-3.4	-3.1	-3.4	-2.7	-1.4	-0.5	0.1	0.7	1.1	1.3	1.2
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)	68.2	29.9	82.1	96.8	92.3	83.3	53.8	51.8	98.8	87.0	52.9	48.5
Trade balance / GDP (%, nominal terms)	5.0	2.2	5.7	6.5	6.8	5.7	3.6	3.3	6.9	5.6	3.3	3.0
Balance of services (CZK bn, current prices)	38.7	27.4	27.3	15.0	25.4	28.2	23.2	20.6	28.0	30.6	24.5	21.3
Current account (CZK bn, current prices)	79.5	8.3	70.5	10.6	25.4	19.6	-11.9	0.1	40.7	32.7	-7.3	-0.8
Current account / GDP (%, nominal terms)	5.9	0.6	4.9	1.8	3.2	2.5	0.4	1.1	4.1	3.2	0.6	1.0
Foreign direct investment												
Direct investment (CZK bn, current prices)	0.2	-34.5	20.3	79.0	-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	21.7	21.4	21.1	20.8	20.6	20.4	20.3	20.2
CZK/EUR (average)	25.6	27.1	26.5	26.7	26.3	26.0	25.7	25.4	25.2	25.0	24.8	24.7
MONEY AND INTEREST RATES												
M3 (%, y-o-y, average)	8.6	8.2	9.6	10.2	9.9	9.6	7.9	6.7	6.0	5.6	5.7	5.9
2W repo rate (%, average)	1.90	0.25	0.25	0.25	0.19	0.45	0.80	1.06	1.21	1.35	1.47	1.63
3M PRIBOR (%, average)	2.1	0.6	0.3	0.4	0.3	0.5	0.9	1.2	1.3	1.5	1.6	1.7
EXTERNAL ASSUMPTIONS												
Foreign GDP (%, y-o-y, seas. adjusted, efective)	-2.8	-12.9	-3.9	-4.6	-1.7	11.2	2.2	4.3	5.3	4.5	3.3	2.5
Foreign GDP (%, q-o-q, seas. adjusted, efective)	-3.1	-10.5	10.6	-0.6	-0.1	1.3	1.6	1.4	0.8	0.6	0.5	0.5
Foreign HICP (%, y-o-y, seas. adjusted, efective)	1.6	0.7	0.2	0.0	0.3	1.2	1.9	2.3	1.9	1.6	1.3	1.2
Foreign PPI (%, y-o-y, seas. adjusted, efective)	-0.5	-2.9	-1.8	-1.1	-0.1	2.6	2.2	1.7	1.1	1.3	1.5	1.7
Brent crude oil (in USD/barrel) (%, y-o-y, average)	-20.4	-51.2	-30.1	-27.5	4.2	57.5	19.9	13.5	-3.8	-3.6	-3.0	-2.4
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

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- data not available/forecasted/released
data in bold = CNB forecast

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