Monetary Policy Report
Spring 2024

CNB CZECH
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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 Bank Board is continuously informed about the forecast under preparation, discusses the outline of the emerging baseline scenario and asks for potential additional forecasting scenarios to be drawn up. 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,

It is my pleasure to present the spring Monetary Policy Report. The Report is one of the main inputs to the Bank Board's decision-making on CNB monetary policy.

At our May meeting, my Bank Board colleagues and I lowered rates by 0.5 percentage point. The two-week repo rate will thus be 5.25%. This was our fourth cautious easing of monetary policy.

Price stability was restored in the Czech Republic at the start of the year. Inflation even fell exactly to the CNB's 2% inflation target in February and March. However, the Bank Board still sees modestly inflationary risks in the outlook. Their materialisation would mean that inflation would diverge from the target towards the upper boundary of the tolerance band in the quarters ahead. The Bank Board therefore considers it necessary to persist with tight monetary policy and approach further rate cuts with great caution.

The Czech economy rebounded at the end of 2023 and continued to grow at the start of this year. Domestic demand is picking up in particular. With inflation falling, real household income growth is recovering. However, the economy is still below its potential.

The signs of a faster recovery have led us to move our forecast towards higher economic growth this year and the next. The interest rate path in the model is also higher. It has moved closer to the levels communicated by the Bank Board in previous months. According to the forecast, inflation will be very close to the 2% inflation target over the entire outlook horizon.

Although the CNB started lowering rates gradually in December 2023, the fight against inflation is not over. Interest rates remain significantly positive in real terms and are dampening inflation. The Bank Board confirms its determination to continue its tight monetary policy in order to stabilise inflation near the 2% target in the long term.

The Bank Board assures the public that the CNB's actions will be sufficient to maintain price stability in accordance with its statutory mandate. In addition, the Bank Board is ready to react appropriately to any materialisation of the risks of the forecast.

On behalf of the Czech National Bank

Aleš Michl

Governor

The decision, the outlook and associated risks

At its May meeting, the Bank Board lowered the two-week repo rate by 0.50 pp to 5.25%, thus continuing the monetary policy easing cycle that started at the end of last year. Consistent with the spring forecast is a further decline in market interest rates. This will help keep inflation close to the central bank's 2% target over the entire outlook. Inflation fell markedly last year and the continued disinflation process culminated in the CNB's target being hit in February and March 2024. The cooling domestic inflation pressures are apparent, among other things, in steadily falling core inflation, reflecting the dampening effect of the previous tight monetary policy stance. The decline in inflation is also being fostered by an only gradual recovery of domestic economic activity. This is a result of still increased caution of Czech households, fiscal consolidation and the economic difficulties of our largest trading partner, Germany. However, the dampening effect of these factors in the Czech economy will dissipate gradually and GDP growth will rise to 3% next year. The main factor that may hinder the decline in domestic interest rates is a potential later and slower reduction in foreign interest rates (by the ECB and above all the Fed) and its effect on the koruna. The slower pace of rate cuts than in the baseline scenario of the spring forecast reflects the Bank Board's view that the risks and uncertainties are modestly inflationary overall and expresses its cautious approach to easing monetary policy. This approach will lead to the target being hit even if the inflationary risks materialise.

Price stability has been restored in the Czech Republic, as inflation fell to the CNB's 2% target during 2024 Q1. This primarily reflected markedly slower growth in housing-related administered energy prices. A fall in food prices, resulting from a decline in agricultural commodity prices amid a muted recovery in the consumption of Czech households, acted in the same direction. Also important is the steady decline in core inflation, which is now into its second year. It reflects slowing growth in prices of foreign inputs and a previous lengthy downturn in domestic demand, due in part to tight CNB monetary policy. The profit mark-ups of producers, retailers and service providers over their costs are thus decreasing. Growth in services prices within core inflation remains elevated but no longer differs much from the historical norm.

According to the forecast, inflation will rise slightly in the spring months, due to higher fuel prices at filling stations and a more moderate decrease in food prices. Even so, it will be safely in the upper half of the tolerance band around the central bank's target. Annual consumer price inflation will also be slightly above the CNB's 2% target for the rest of this year and at the start of next year. This will be because administered prices will rise more rapidly this year, driven mainly by the January increase in electricity prices for households. Its effect will not fade out until next year. By contrast, the ongoing decline in firms' profit margins amid moderating growth in their total production costs will have an anti-inflationary effect. As a result, consumer price inflation will be close to the CNB's 2% target over the monetary policy horizon, i.e. in 2025 Q2 and Q3.

The Czech economy is beginning to recover from last year's downturn. Growth in economic output will be driven by a recovery in private consumption growth due to renewed growth in households' purchasing power. This will be supported by a gradual decrease in the saving rate and an increase in consumers' buying appetite, which was generally cautious until recently. In addition, change in inventories will stabilise. However, the recovery of the Czech economy will be dampened this year by the consolidation package, which will cause fiscal policy to be restrictive in 2024. Fixed investment growth will remain solid this year despite a slow recovery in external demand, with Germany having a noticeable adverse effect. At the same time, growth in private investment activity will be dampened by restrictive foreign and domestic monetary policy. The latter, among other things, will slow the emerging housing market recovery. The positive contribution of net exports of goods and services to GDP growth will dissipate gradually this year despite a gradual recovery in external demand and hence in Czech exports. The domestic growth surge to 3% in 2025 will be based mainly on domestic demand, above all consumption expenditure by households and gross capital formation.

The tightness in the domestic labour market is decreasing only gradually. However, the unemployment rate, which has long been one of the lowest in the EU, is gradually starting to creep up. In early 2024, the number of job applicants exceeded the number of vacancies for the first time in a long time. The labour market will continue to cool gradually,

Inflation will be close to the CNB's 2% target over the entire outlook, including the monetary policy horizon

headline inflation; y-o-y in %; confidence intervals in colours
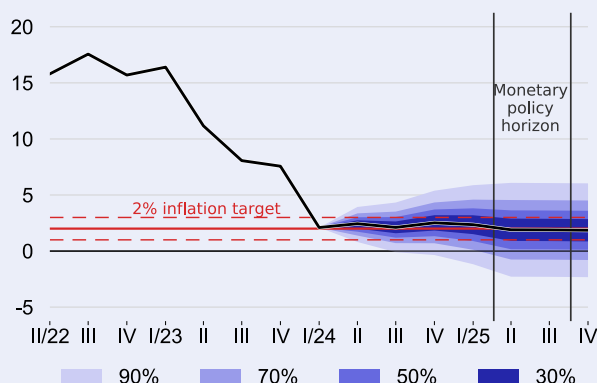
The Czech economy will start to grow again in 2024 and accelerate further to almost 3% in 2025

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

	2023	2024	2025
Headline inflation (%)	**10.7**	**2.3**	**2.0**
	(0.0)	(-0.3)	(0.0)
GDP	**-0.2**	**1.4**	**2.7**
	(0.3)	(0.8)	(0.3)
Average nominal wage	**7.5**	**7.2**	**6.1**
	(0.1)	(1.4)	(0.3)
3M PRIBOR (%)	**7.1**	**5.0**	**3.6**
	(0.0)	(1.1)	(1.0)
Exchange rate (CZK/EUR)	**24.0**	**25.1**	**24.8**
	(0.0)	(0.5)	(0.5)

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.

owing to the lagged effect of the previous downturn in the domestic economy. However, given its resilience so far, this will imply a gradual rather than rapid rise in the number of unemployed persons. Wage growth in market sectors will remain solid this year, reflecting, among other factors, broad growth in wages, especially base pay rates. Coupled with base effects, this will lead to an upswing in year-on-year wage growth in the corporate sector in the course of this year. By contrast, pay growth in the public sector will be subdued owing to budgetary savings.

After depreciating at the turn of the year, the exchange rate stabilised around CZK 25.3 to the euro in March and April. Its further evolution will reflect, on the one hand, ongoing cuts in domestic interest rates and related market expectations of a continued narrowing of the interest rate differential vis-à-vis euro area rates. This will be counteracted by a rising goods and services surplus, against a backdrop of renewed real convergence of the domestic economy. As a result, the koruna will be very close to CZK 25 to the euro until the start of 2025 and appreciate slightly below this level over the rest of the year.

Consistent with the forecast is a further decline in market interest rates. Nonetheless, monetary policy will remain restrictive for most of 2024 via its interest rate component. This will lead to an anchoring of the renewed price stability in the Czech Republic amid declining cost growth and subdued demand-pull inflation pressures.

The Bank Board assessed the risks and uncertainties of the outlook as being modestly inflationary. A slower decline in the elevated inflation expectations is a risk in this direction. Given the tight labour market, this could be reflected in stronger wage demands. Higher-than-expected inertia in services inflation and a halt in tradables disinflation, which has so far been due mainly to fading supply-side problems, are additional upside risks. Movements in the koruna exchange rate, which could cause prices of imported goods to go up, are an upside risk to tradables prices. An inflationary risk in the longer term is a potential acceleration of money creation in the economy stemming from a significant recovery in lending activity, especially on the property market. By contrast, a stronger-than-expected downturn in global economic activity and weaker German economic output are a downside risk to inflation. The future monetary policy stance abroad remains an uncertainty of the outlook.

The updated g3+ core forecasting model

Starting with *Monetary Policy Report – Spring 2024*, the CNB's macroeconomic forecast is prepared using an updated version of the g3+ core forecasting model. The g3+ model – the key analytical and forecasting tool of the economists of the CNB's Monetary Department – ensures, among other things, that the forecasted macroeconomic variables are mutually consistent. The refinements made to the core model represent another step forward in forecasting practice at the CNB. The updates take into account the extreme economic events seen in recent years and the long experience of the department's economists with the use of the g3+ core forecasting model in that period. The updates and the motivation for them were described in detail in the Appendix to Monetary Policy Report – Winter 2024, in which a shadow forecast prepared using the updated model was also presented.

The extraordinary economic phenomena of recent years were characterised by short, sharp swings on the supply side of economies and in energy prices. The expanded linkages in the foreign and domestic blocks help the model provide a truer description of the economic environment and enable it to capture such events in a structural – i.e. internally consistent, objective and replicable – way. The richer model structure allows for more detailed analysis of economic developments, such as a consistent estimate of the position of the foreign economy in the business cycle and a truer representation of the role of energy prices in the production process. The changes to the model's steady-state parameters in the area of foreign trade fit the past long-run economic trends and also the expected future evolution of the Czech economy. Overall, the updated model is able to better describe and interpret observed economic developments not only for the period before the pandemic and the energy crisis, but also for the turbulent times of 2020–2023.

I.   ECONOMIC DEVELOPMENTS ABROAD

Economic growth in the euro area will recover this year and strengthen further next year. A fading of the cost pressures caused by high energy prices is fostering a slowdown in inflation in the effective euro area and thus growth in households' real income. However, the intensity of growth in services prices within the consumer price index remains elevated for now. The decline in headline inflation will nonetheless enable the ECB to start lowering interest rates. According to market expectations and ECB communications, this will happen in June. The market does not expect the first cut in US policy rates to happen until the second half of the year. As a result of the easier monetary conditions, corporate investment will recover and the effective euro area economy will pick up pace significantly in late 2024. The current decline in industrial producer prices in the effective euro area will gradually moderate this year and producer prices will increase next year.

Global economic growth is being driven mainly by emerging economies (China and India), but euro area growth will also recover gradually, while the more dynamic US economy will slow slightly

According to leading indicators, growth in emerging economies accelerated further in 2024 Q1 in both manufacturing and services. The inflation pressures in these countries are nonetheless weakening and the favourable trend is expected to continue in the months ahead. Growth in the euro area will recover gradually, whereas the US economy will slow slightly (see Table I.1).

Concerns about a recession in advanced countries have eased compared with the end of last year. Inflation pressures persist in services. By contrast, growth in prices of industrial goods is weakening due to spare production capacity in China. Cost pressures are no longer being intensified by the supply chain disruption caused by the rise in geopolitical tensions in the Red Sea region at the start of this year. The supply chain situation is now back near the historical average. However, renewed global growth in demand for consumer goods represents a risk to the future inflation path. Central banks in advanced countries therefore remain cautious and expectations of an early start to the reduction of their monetary policy rates are weakening, especially in the USA. So far, however, this is not adversely affecting business confidence from the global perspective. It has been rising for several months now, reaching a two-year high in March.

Global trade almost stabilised in March following two years of decrease. The decline in manufacturing slowed, although so far thanks mainly to emerging economies (see Chart I.1), and services trade picked up pace.

The consumer price trends differ across regions. Following several months of deflation, China returned to modest inflation in January 2024. Annual inflation in the euro area is weakening gradually, while price

Table I.1

Economic growth in the euro area will gather pace gradually, whereas a slight slowdown is expected in the USA

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

	2022	2023 Q3	2023 Q4	2023	2024	2025
Euro area	3.5	0.5	0.1	0.1	0.5	1.4
USA	1.9	2.5	2.9	3.1	2.3	1.7
United Kingdom	4.3	0.1	0.2	-0.2	0.3	1.2
China	3.0	5.2	4.9	5.2	4.7	4.4
India	6.5	7.7	8.8	9.0	6.6	6.7

Saudi Aramco's official selling prices (OSPs) of crude oil are an important indicator on the oil market. The company announces OSPs separately for its customers in Asia, Europe and the USA. OSPs are published for the month ahead as a premium or discount to local benchmarks. Customers then decide how much oil they will take that month in a predefined contractual range (minimum and maximum delivery) under long-term contracts. Other traders assume that Aramco has better and timelier information. They therefore use OSPs to estimate current demand and supply in the physical oil market. OSPs for delivery in May were raised the most for Asian customers and for heavier grades, of which there is a market shortage due to OPEC+ production cuts. This only confirms the increasing tightness in the physical oil market and the potential for further upward pressure on oil prices in the summer months.

pressures in the USA are strengthening again,[1] owing mainly to persisting labour market tightness and related strong wage growth. The current rise in prices of crude oil and fuels is also a factor.

The price of Brent crude oil breached the USD 90 a barrel threshold in April. The growth that had started early this year in response to tighter sanctions on Russian oil exports and persisting OPEC+ production cuts thus continued. An improved outlook for the Chinese economy also fostered higher oil prices. In early April, heightened geopolitical tensions in the Middle East and curbs on oil exports from Mexico added to the upward pressure on oil prices. The market outlook for the Brent price returns from the currently elevated levels to USD 77 a barrel at the end of the forecast horizon. However, strong global demand may contribute to tightness in the oil market until the summer. This represents an upside risk to the outlook (depending on the reaction of OPEC+). The current growth in oil prices has also increased the market outlook for wholesale petrol prices. The food commodities and industrial metals indices also returned to growth in 2024 Q1 (see Chart I.2).

GDP growth will resume in the effective euro area, since household consumption will recover as inflation pressures decline and monetary easing will also support growth

Economic activity in the effective euro area was flat[2] at the close of last year due to weak global demand, a still relatively muted buying appetite of households in euro area countries and, last but not least, a decline in inventories. Tight ECB monetary policy also had a restrictive effect, discouraging firms from investing. GDP growth is expected to remain subdued in Q1, but the euro area economy will recover in the rest of this year (see Chart I.3). The recovery will be driven by rising growth in households' real income and global demand. In the medium term, the economy will be supported by a gradual easing of ECB monetary policy.

The previously sluggish recovery of the German economy started to pick up pace due to surprisingly rapid and broad-based growth in German industrial production in February, which reduces the likelihood of a technical recession in Germany. According to data from the German statistical office, the automotive and chemical industries fared particularly well. Production in energy-intensive industries is recovering visibly. Germany is thus gradually rebounding from the impacts of the energy crisis. Construction also recorded growth thanks to favourable weather. In

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1   Annual consumer price inflation in the USA went up from 3.2% in February to 3.5% in March. This was a slightly higher figure than analysts had expected.

2   The economic output of the effective euro area fell slightly by 0.1% quarter on quarter in 2023 Q4. In year-on-year terms, the effective euro area grew by 0.2%.

Chart I.1

Industrial production in advanced countries is lagging behind that in emerging economies

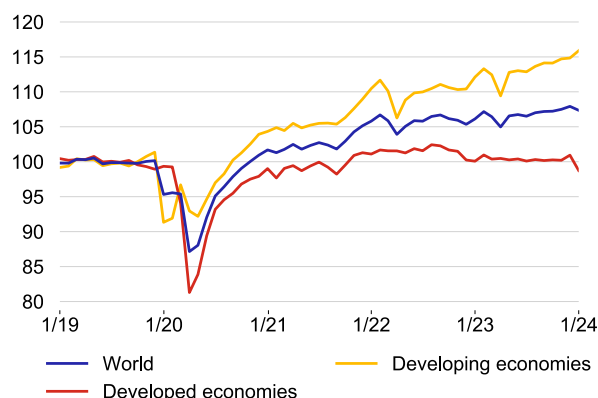global industrial production; 2019 = 100; source: World Trade Monitor (January 2024)

Chart I.2

The Brent crude oil price has risen since the start of this year, but its outlook remains falling

prices of selected commodities; index: February 2022 = 100; source: Bloomberg, CNB calculations
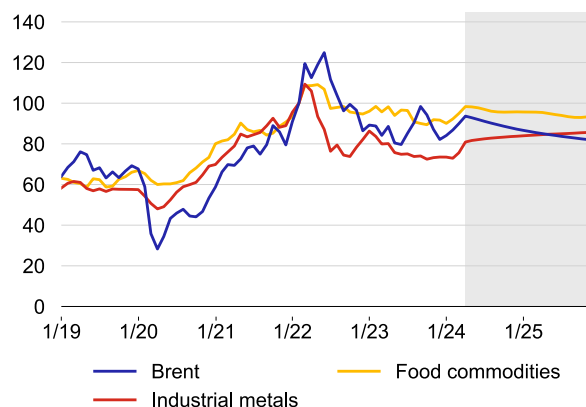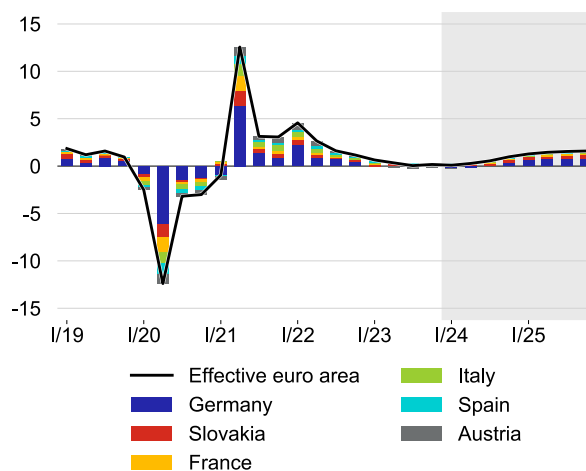

Chart I.3

The German economy will contribute to GDP growth in the effective euro area again in the outlook

annual GDP growth in %; contributions in pp; seasonally adjusted

addition, the previously elevated sickness rate decreased. The positive situation is clouded only by a persisting lack of consumer confidence, reflected in a further drop in retail sales. Germany is now probably bottoming out, but structural problems persist and will remain a source of uncertainty for the medium-term outlook for the German economy.

Inflation in Slovakia is also receding rapidly, owing to a decline in prices on commodity markets and tight monetary conditions in the euro area as a whole. The financial situation of Slovak households will improve this year, aided by a continued freeze on energy prices. However, risks to Slovakia's medium-term outlook stem from the need for fiscal consolidation,[3] which may depress the economy and cause inflation to rise again.

Economic growth in France and Italy will be driven this year by household consumption and growth in investment. This year, a recovery also awaits the Austrian economy, which last year recorded one of the deepest GDP declines in the euro area (-0.7%). Moreover, the slump was visible across all sectors of the economy. By contrast, the Spanish economy, which is dependent mainly on the services sector, grew at a solid pace (2.5%) last year and will conversely cool slightly this year. The better situation in the services sector than in industry in the euro area is indicated by the leading indicator (confidence indicator) of the European Commission (see Chart I.4). The euro area labour market remains resilient, as reflected in higher expected growth in nominal wages over the next two years.

Overall, the effective euro area economy will grow modestly quarter on quarter in 2024 Q1.[4] GDP will grow by just 0.5% in 2024 as a whole but will recover more markedly next year (1.5%). This will foster a gradual closing of the effective euro area's negative output gap, which, however, will remain negative until the end of the forecast horizon.

Industrial producer prices will continue to fall this year, mainly because of their energy component, and will not return to growth until 2025

A continued year-on-year decrease in energy prices, especially exchange prices of natural gas and electricity in Europe, will drive a decline in industrial producer prices in the effective euro area this year (see Chart I.5). In addition, the fall in core producer prices observed to date reflects a worse economic situation in European industry. However, core producer prices will start to rise in mid-2024, in parallel with a recovery in

For the purposes of the model, economic developments abroad are proxied by developments in the effective euro area. *The weights of the individual euro area countries equal their shares in Czech exports. With the switch to the updated core forecasting model, the aggregate for euro area countries for GDP, HICP and PPI is changing as of the spring 2024 forecast. The previously used aggregate for 17 euro area countries used to describe past developments, accompanied by an outlook for the Czech Republic's five most important trading partners (Germany, Slovakia, France, Italy and Spain), is replaced by an aggregate for six countries both in the past and in the outlook. Austria has been added to the above-mentioned five countries. Germany (59%) and Slovakia (14%) still have the largest weights. None of the other countries exceeds 8%. The original and new paths of the variables are very similar. There is also a methodological change in the decomposition of the total euro area PPI into its core and energy components. The energy component in the previous decomposition only included industrial sectors whose prices were strongly correlated with oil prices. Prices in the other sectors were represented by core producer prices. Starting with this forecast, the energy component of producer prices corresponds to the entire energy category under the MIG (Main Industrial Grouping, as published by Eurostat). Producer prices excluding this expanded set of energy prices are now the core component of producer prices.*

Chart I.4

The cyclical situation in services in the euro area is more favourable than that in other sectors

confidence indicator; seasonally adjusted; source: European Commission

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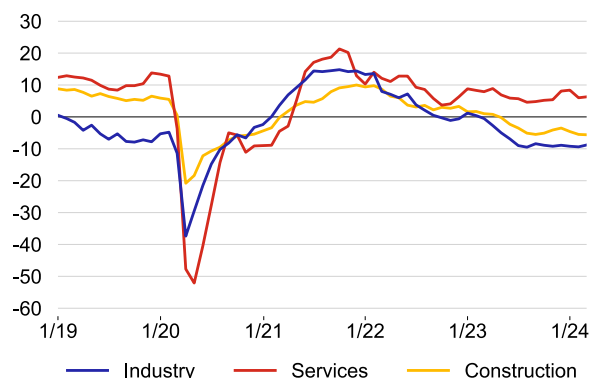
3   The budget deficit will peak at over 6% of GDP in 2024, the highest figure in 14 years.

4   According to Eurostat's flash estimate, GDP in the effective euro area rose by 0.3% quarter on quarter and by 0.4% year on year in 2024 Q1. This figure was published on 30 April 2024, i.e. after the closing date of the forecast.

economic activity and an expected year-on-year increase in prices of industrial metals and food commodities. Growth in core producer prices will strengthen next year. Overall, industrial producer prices will fall by 5.4% this year and rise by 0.8% in 2025. Slovakia will record the largest decrease this year, whereas Germany will see the smallest fall.

The gradual dissipation of cost shocks and tight monetary conditions fostered a decrease in consumer price inflation in the euro area. This is particularly apparent for industrial goods, while growth in services prices remains elevated (see Chart I.6). This confirms that the adaptation of the services sector to the reopening after the Covid restrictions and above all its recovery from the subsequent impact of the energy and inflation shock is a lengthy process. However, the disinflation will continue this year, when the ECB's previous interest rate increases will be felt in full. Inflation in the effective euro area will fall to 2.6% for 2024 as a whole. It will be close to the ECB's 2% target on average next year.

The first ECB rate cut is in sight, while the Fed is holding off until the second half of the year; despite this, the euro will appreciate against the dollar

The more favourable disinflationary trend in the euro area than in the USA is leading markets to expect the ECB to cut rates earlier than the Fed. In addition, the Fed is expected to cut rates less forcefully this year. At its April meeting, the ECB kept its rates unchanged but indicated in its communications (in line with market expectations) that it was ready to lower rates in June. The 3M EURIBOR outlook is therefore falling (see Chart I.7), whereas long-term yields have risen slightly since the start of the year. The intensity of ECB rate cuts in the rest of this year is also uncertain with regard to future inflation. A more cautious approach, i.e. three standard rate cuts overall in 2024, is currently seen as likely. In addition, the ECB is continuing to gradually reduce its balance sheet. This is reflected in the estimated shadow rate, which simultaneously captures both conventional and unconventional monetary policy. As regards the Fed, current market expectations suggest just one rate cut in the USA this year (in September).

The euro weakened against the dollar during March. The publication of a higher-than-expected US inflation figure for March prompted a more pronounced weakening of the euro in April. However, the euro is expected to appreciate to USD 1.13 at the forecast horizon. This is due to confidence in a gradual improvement in the condition of the European economy and conversely a likely slowdown of the US economy. Last but not least, the reasons include the fading of the cost shock caused by high natural gas and electricity prices, which was much stronger in Europe than in the USA.

Chart I.5

The year-on-year decline in industrial producer prices in the effective euro area will be driven by the energy component this year

y-o-y changes in %; contributions in pp; seasonally adjusted

Chart I.6

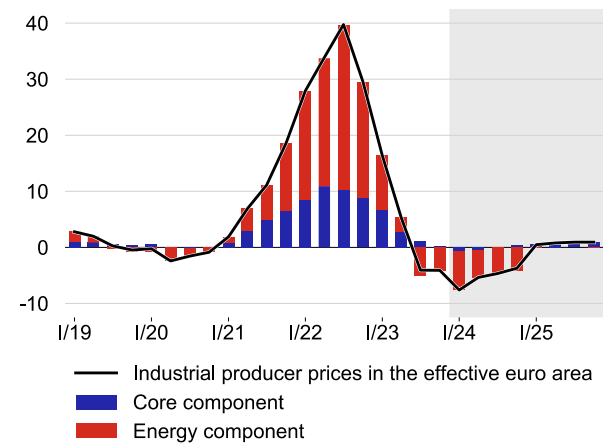**Services inflation in the euro area remains relatively high, unlike goods inflation**

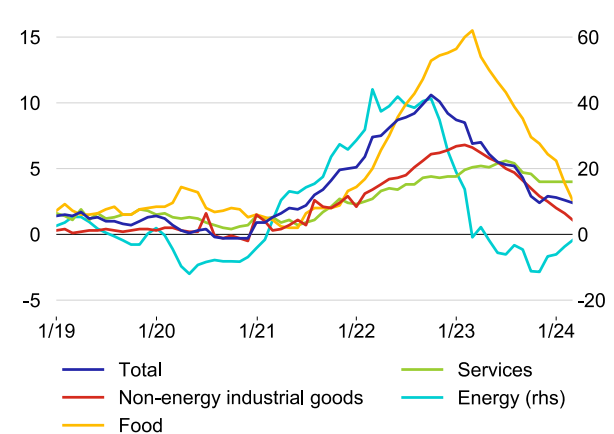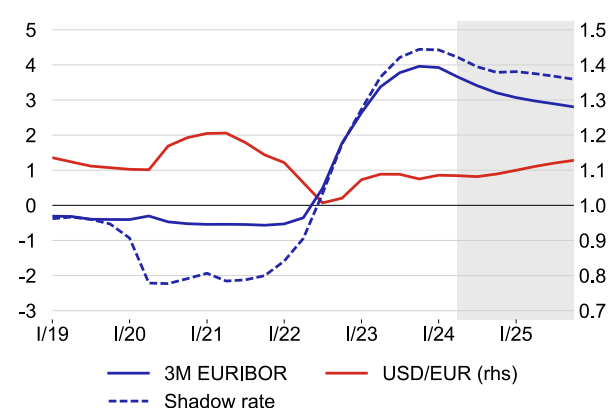components of euro area HICP inflation; y-o-y changes in %

Chart I.7

According to financial markets, euro area interest rates will go down this year; the decline in the shadow rate will be dampened by an expected decrease in the rate of reinvestment by the ECB

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

COMPARISON WITH THE PREVIOUS FORECAST: Economic developments abroad

		2023	2024	2025	
GDP (in the effective EA)	y-o-y changes in % pp	**0.3** (0.1)	**0.5** (0.0)	**1.5** (0.0)	The previous forecast's expectation of gradually recovering economic growth in the effective euro area is unchanged.
Consumer prices (in the effective EA)	y-o-y changes in % pp	**6.7** (0.3)	**2.6** (0.8)	**2.2** (0.4)	The consumer price inflation forecast is higher, mainly due to a stronger impact of the end of energy support on growth in the energy component and a higher wage growth outlook.
Producer prices (in the effective EA)	y-o-y changes in % pp	**2.8** (2.4)	**-5.4** (-1.8)	**0.8** (0.4)	The lower forecast for industrial producer prices this year primarily reflects a deeper fall in the energy component, due above all to its marked decrease in Slovakia in early 2024.
Brent crude oil price	USD/barrel	**82.2** (0.0)	**84.2** (8.1)	**79.1** (6.0)	The Brent crude oil price outlook has shifted markedly higher owing to mounting tensions in the Middle East and stricter sanctions on Russian oil exports.
3M EURIBOR	% pp	**3.4** (0.0)	**3.5** (0.4)	**2.9** (0.5)	The higher market rate outlook reflects more slowly receding inflation in the euro area and the ECB's caution before commencing rate cuts.
Exchange rate	USD/EUR	**1.08** (0.00)	**1.09** (-0.01)	**1.11** (-0.01)	The expected slight appreciation of the euro against the dollar is almost unchanged compared with the previous forecast.

Note: Changes compared to the previous forecast in brackets (a green label indicates an increase in value or a shift to a weaker dollar, while a red label indicates a decrease in value or a shift to a stronger dollar).

II.   THE REAL ECONOMY AND THE LABOUR MARKET

Following a downturn last year, the Czech economy will grow this year. The recovery will be driven by household consumption, supported by renewed growth in real wages, improving sentiment and a decreasing saving rate as a result of falling interest rates. By contrast, consumer appetite will be dampened by the fiscal consolidation package. The contribution of net exports to GDP growth will decline substantially this year owing to subdued external demand, stemming mainly from Germany's economic difficulties. Gross fixed capital formation will rise steadily as a result of continued investment by the private corporate sector. By contrast, additions to inventories will stabilise at low pre-crisis levels. In whole-year terms, Czech GDP will grow by 1.4% this year and the economy will still operate below its potential. Growth in economic activity will accelerate towards 3% next year. This will be aided above all by a strengthening recovery in household consumption, supported by higher real wage growth and a further decline in the saving rate. To a lesser extent, the upswing in growth will also be driven next year by private and government investment activity and a recovery in external demand. The labour market tightness will gradually ease further. Nominal wages in the market sector will rise at a still swift pace.

Economic growth will resume this year and pick up further next year

Domestic demand will recover this year. It will be driven by renewed growth in household consumption, supported above all by rapid growth in real income. Consumer appetite will also strengthen due to improving sentiment and falling interest rates. By contrast, the consolidation package will reduce the ability to spend. Fixed investment will also rise at a solid pace, albeit somewhat more slowly than last year. As external demand recovers gradually and interest rates fall, growth in private investment will pick up pace, while government investment will drop slightly. The problems in global value chains caused by the pandemic and the energy crisis have largely disappeared, as indicated by an absolute decline in inventories at the end of last year. Material shortages are no longer such a significant problem for firms as they were in the previous two years (see Chart II.1), so there is no need to stockpile massively. Additions to inventories will stabilise at low pre-crisis levels. By contrast, export-oriented industrial firms are beginning to perceive insufficient demand (especially from abroad) as the main factor limiting production (see Chart II.1). The contribution of net exports to GDP growth will thus decline substantially but remain slightly positive. As a result, domestic economic activity will rise at an increasingly swift pace year on year (see Chart II.2).[5] In whole-year terms, GDP will grow by 1.4%. In 2025, the growth will pick up to 2.7%.

Chart II.1

The fall in the share of firms reporting shortages of materials as a factor limiting production has halted and the share of firms reporting a decline in demand is rising

share of domestic industrial firms in % reporting shortages of materials or equipment and insufficient demand as factor limiting production; series smoothed by HP filter (lambda = 1); source: CZSO business survey

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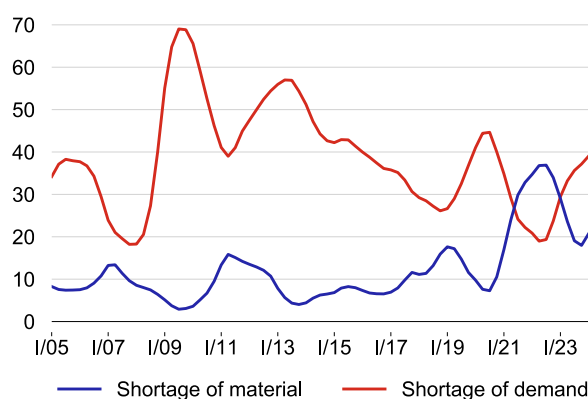
5   According to a preliminary CZSO estimate, Czech GDP increased by 0.5% quarter on quarter and by 0.4% year on year in 2024 Q1. This is slightly above the CNB forecast. This figure was published on 30 April 2024, i.e. after the closing date of the forecast.

Growth in household consumption will recover rapidly on the back of swiftly rising real wages

Overall confidence in the economy[6] remains below the long-term average, but consumer sentiment has been rising steadily since the end of last year. Signals from the labour market indicate buoyant wage growth. Coupled with a gradual decrease in interest rates, they suggest promising household consumption in the first half of this year. This is not contradicted by the data on sales in retail and services at the start of the year. Households are thus resilient to the negative effects of the fiscal consolidation package and their consumption increased quarter on quarter. Thanks to renewed price stability, household consumption will also grow in year-on-year terms for the first time in almost two years (see Chart II.3). Moreover, steady growth in real wages will support consumption throughout the year, causing it to accelerate gradually. Overall, household consumption will grow by around 2.5% in 2024 as a whole.

The renewed growth in real household income will continue into next year. Its year-on-year pace will rise slightly further due to an additional slight decrease in whole-year inflation. Together with better sentiment and a further decline in interest rates, this will result in brisker growth in consumer demand. Household consumption will thus go up by around 4% overall next year. However, it will remain below the pre-pandemic level.

Growth in households' nominal gross disposable income will slow from the elevated rates seen in previous years and will be muted this year and the next. It will be driven above all by the contribution of wages and salaries (see Chart II.4), which will initially increase slightly in 2024 and then decline in 2025, reflecting a continued gradual cooling of the labour market. The slowdown in nominal disposable income growth will also be due to a drop in property income, below-average growth in entrepreneurs' income and a negative effect of taxes due to the government's consolidation package. The contributions of social benefits will weaken gradually.

The saving rate will decrease gradually over the next two years

The saving rate edged up in 2023 Q4 and thus remained elevated (see Chart II.5). The deterioration in consumer sentiment persisted at the close of last year, driven by the receding inflation, with concerns prevailing about the impacts of the consolidation package and pessimistic economic prospects. Households therefore created higher-than-usual precautionary savings. The high nominal interest rates

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6 According to the April business cycle survey data, overall economic sentiment improved amid an increase in business and especially consumer confidence.

Chart II.2

Growth in economic activity will accelerate
y-o-y changes in %; seasonally adjusted; confidence interval
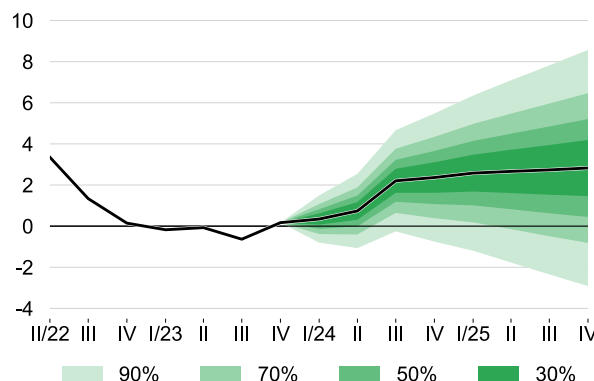
Chart II.3

Growth in household consumption resumed; general government consumption will grow at a subdued pace
household and general government consumption; y-o-y changes in %; constant prices; seasonally adjusted
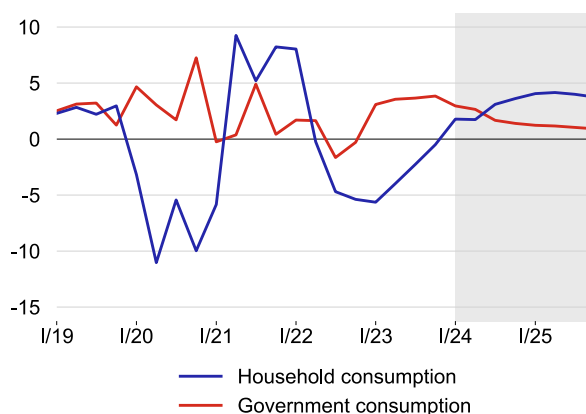
Chart II.4

Growth in nominal disposable income will slow this year, due mainly to lower contributions of wages and salaries, property income and social benefits
household consumption and gross disposable income; y-o-y changes in %; contributions in pp; current prices; seasonally unadjusted

provided another motive for additional saving. This motive started to fade gradually after rate cuts were commenced in late 2023. In addition, consumer sentiment improved and price stability was renewed. All these factors will contribute to a gradual decline in the saving rate from its current high level. The saving rate will return close to its long-term average in 2025.[7]
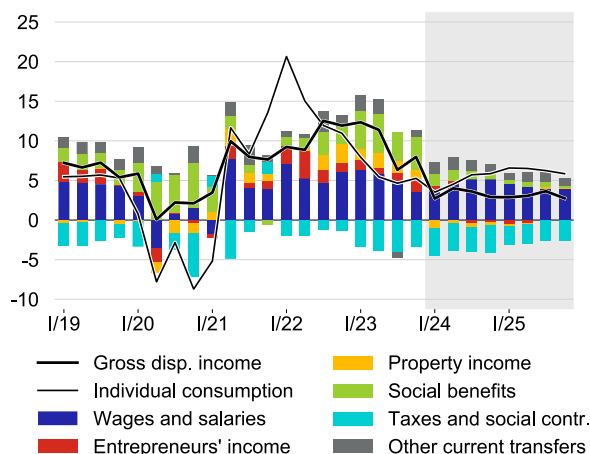
Export growth will accelerate over the next two years as external demand recovers

Export activity rose markedly quarter on quarter at the end of last year, despite a marginal decline in external demand. This was due mainly to exports of forced stocks of unfinished products, accompanied by a fall in inventories in absolute terms. In early 2024, this effect faded out according to the forecast and exports recorded a one-off quarter-on-quarter decrease owing to base effects and still lacklustre performance of other economies, especially Germany. However, external demand growth will start to recover in the course of the year, fostering faster growth in Czech exports (see Chart II.6). Export growth will return to its steady-state level in early 2025.

Despite solid growth in domestic demand and rising exports, imports recorded a sizeable quarter-on-quarter decline at the close of last year. Firms used built-up stocks (especially of materials and unfinished products), which they did not have to import. Imports will rise significantly quarter on quarter in early 2024, due to base effects and faster growth in domestic demand. Import growth will also recover in year-on-year terms in the rest of 2024 (see Chart II.6) as a result of accelerating growth in exports and, in addition, household consumption. Import growth will stabilise at its steady-state level in 2025. The contribution of net exports will be highly volatile and broadly neutral overall this year and the next.

Growth in fixed investment will be supported mainly by the private sector this year

Overall corporate profitability remains good. Firms will therefore continue to invest in the expansion of production and in renewable energy sources and energy savings. Investment activity will later be supported by slowly recovering external demand and decreasing domestic interest rates. Investment in dwellings, whose negative contribution has long been dampening total capital expenditure, will also start growing again. Private fixed investment will thus increase by almost 5% overall this year. General government investment will be broadly flat this year, following strong growth in 2023 (see Chart II.7). In

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7   Since the previous (winter) forecast, we have been assuming that the long-term usual saving rate is roughly 1.5 pp higher than the previously considered 12%, due, among other things, to the abolition of the super-gross wage and other changes in taxation.

Chart II.5
The saving rate will decline gradually from its current elevated level to close to its usual long-term level
households' saving rate in %; seasonally adjusted
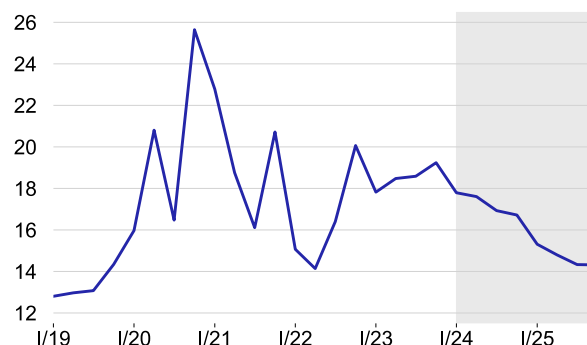
Chart II.6
Export and import growth will resume this year and growth in foreign trade turnover will accelerate gradually as external and domestic demand recovers
real exports and imports of goods and services; y-o-y changes in % for exports and imports and in CZK billions for net exports; seasonally adjusted

Exports
Imports
Net exports (in CZK billions, rhs)
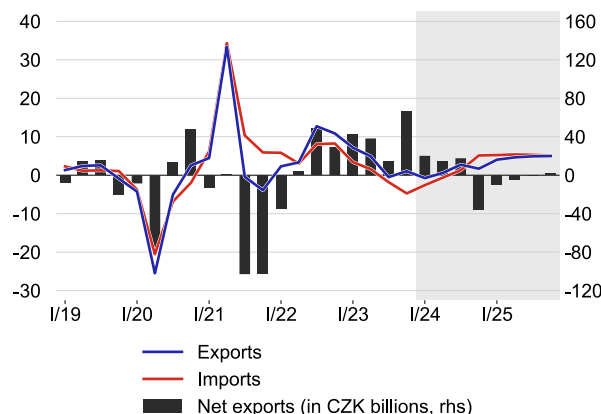
Chart II.7
Growth in total gross capital formation will still be negatively affected by inventories for most of 2024, while private fixed investment will grow
investment activity; y-o-y changes in %; contributions in pp; constant prices; seasonally adjusted

Gross capital formation   Public investment
Private investment   Change in inventories

addition to a slow start to the absorption of European funds at the beginning of the new programme period, this will be due to base effects, as the base was increased last year by a one-off purchase of military helicopters.[8] Fixed investment will grow by around 4% overall in 2024.

General government investment will start to grow again in 2025. This will be aided mainly by expected faster absorption of European funds. Conversely, private investment growth will slow to its long-term average and fixed investment will grow at a pace of around 3% overall.
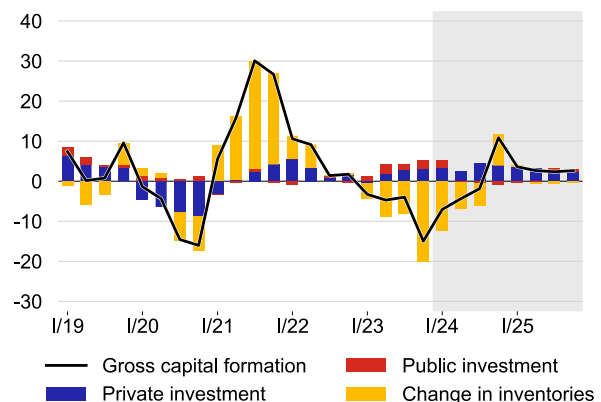
Additions to inventories will be broadly stable for the rest of 2024 and in 2025. As outlined above, inventories fell in absolute terms at the end of last year, as stocks of materials and unfinished products were used to export goods. To some extent, firms are going back to just-in-time planning. This is consistent with a return to only low additions to inventories (see Chart II.8). However, year-on-year growth in gross capital formation will still be adversely affected by change in inventories for most of this year. Inventories will make a positive contribution only in Q4, due to base effects (see Chart II.7). Expenditure on gross capital formation will thus fall by 1% overall. In 2025, total investment will grow by almost 3%.

Fiscal policy is significantly dampening GDP growth this year and will have a roughly neutral effect next year

Real government consumption growth will slow significantly this year and the next (see Chart II.3). This will be due mainly to a reduction in operating expenditure under the consolidation package and the partial fade-out of last year's effect of increased expenditure linked with the arrival of Ukrainian nationals. Growth in nominal government consumption will slow, due in part to the wage savings also included in the consolidation package.

Fiscal policy is significantly dampening GDP growth this year (see Chart II.9), owing to the consolidation package,[9] the definitive termination of energy support

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8   The investment will amount to CZK 14 billion, distributed predominantly across the second half of 2023, with a small part falling in the first quarter of 2024.

9   The overall fiscal effect of the consolidation package is equal to -1.4% of GDP in 2024 (including further measures not included in the package, the fiscal impulse will be approximately -0.9 pp to GDP growth). In 2025, the fiscal effect of the package will be an additional -0.2% of GDP (although increased government investment will have the opposite effect on the fiscal impulse). On the revenue side, the consolidation package includes the following measures: an increase in excise duties, changes to VAT rates, an increase in real property tax, an increase in contributions for the self-employed, adjustments to personal and corporate income tax, the abolition of tax exemptions, the introduction of sickness insurance for employees, and contributions arising from agreements to complete a job. On the expenditure side, it includes cuts in subsidies for entrepreneurs, a reduction in

Chart II.8

Change in inventories will be close to pre-crisis levels this year

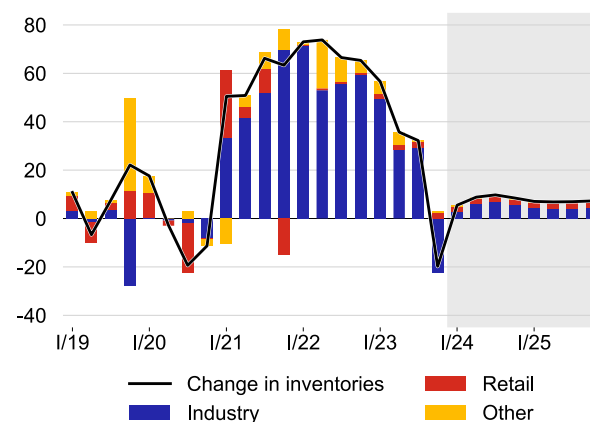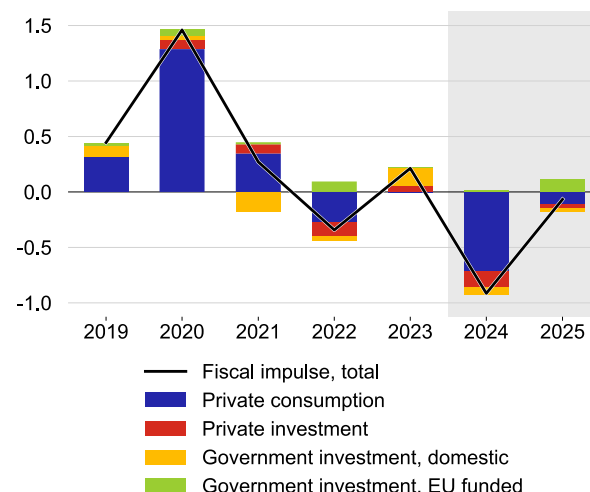change in inventories in CZK billions; constant prices; seasonally adjusted

Chart II.9

Fiscal policy will significantly dampen GDP growth this year, due mainly to the consolidation package

fiscal impulse; contributions to GDP growth in pp

measures and a decrease in pension expenditure stemming from the fading effect of the reduction of the extraordinary increase in pensions last year. In 2025, the overall effect of fiscal policy will be broadly neutral, as the additional (residual) slightly dampening effect of the consolidation package will be offset by expected faster absorption of EU funds.

The Czech economy will remain below potential over the next two years

The output gap has turned distinctly negative after two years of economic downturn. It started closing at the end of last year and will continue to do so as domestic and external demand recover gradually. The consolidation package and the previous tight monetary policy are slowing the pace of closure this year, so the negative output gap will not narrow noticeably until the end of 2025 (see Chart II.10). Growth in potential output itself will pick up slightly towards its medium-term rate due to gradually recovering growth in labour productivity.

Chart II.10

The economy will be below potential over the next two years, but the output gap will close gradually

output gap in % of potential output

| | Small structural model | Production function |
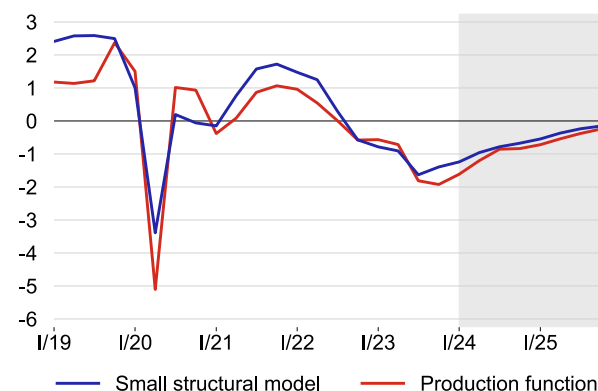
COMPARISON WITH THE PREVIOUS FORECAST: The real economy and the labour market

		2023	2024	2025	
GDP	y-o-y changes in % pp	-0.2 (0.3)	1.4 (0.8)	2.7 (0.3)	The GDP outlook is higher over the entire forecast horizon due to stronger domestic demand than in the previous forecast.
Household consumption	y-o-y changes in % pp	-3.1 (0.1)	2.6 (1.2)	4.0 (0.9)	The household consumption forecast for this year and the next has been revised up due to faster growth in real wages and higher growth in consumption at the end of 2023.
Government consumption	y-o-y changes in % pp	3.5 (0.0)	2.2 (0.5)	1.1 (-0.1)	The government consumption forecast has been revised slightly upwards this year.
Gross fixed capital formation	y-o-y changes in % pp	4.2 (1.5)	3.8 (0.4)	3.2 (0.0)	Growth in fixed investment has been revised upwards slightly due to a higher observation at the end of last year. The outlook for next year is unchanged.
Net exports	contr. to GDP growth pp	2.7 (0.9)	0.2 (-0.5)	-0.1 (-0.4)	The contribution of net exports is slightly lower due to stronger domestic demand and related faster growth in imports.
Employment	y-o-y changes in % pp	1.5 (0.0)	0.3 (0.3)	0.2 (0.1)	The faster employment growth this year mainly reflects a better economic outlook than in the previous forecast.
Unemployment (ILO)	% pp	2.6 (0.0)	2.9 (0.0)	3.1 (0.0)	The expected outlook for the general unemployment rate is unchanged compared to the previous forecast.
Average monthly nominal wage	y-o-y changes in % pp	7.5 (0.1)	7.2 (1.4)	6.1 (0.3)	The higher expected wage growth reflects faster expected wage growth at the start of this year and higher economic activity than in the previous forecast.

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

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the volume of public sector pay and cuts in operating and other expenditure.

The labour market will continue to cool gradually

The cooling of the labour market – linked with the economic downturn over the past year – is continuing (see Chart II.11). Total employment was still rising at high year-on-year rates in 2023, due mainly to the participation of Ukrainian nationals and people of pre-retirement age. However, employment will be flat from mid-2024 on, due to more cautious recruitment by employers in an only gradually growing economy. The seasonally adjusted unemployment rate crept up from 2.5% to 2.8% during 2023 and will rise only slowly going forward. It will thus stay very low by both historical and international standards. Wage growth has been slowing markedly since 2023 Q2 but will remain elevated in year-on-year terms this year due to a temporary increase in quarter-on-quarter growth in 2024 Q1, with the economy stabilising and inflation being close to the inflation target. This applies to the overall indicator and above all to the market sector.

Real household income started to grow again in year-on-year terms at the start of this year; its previous falls will be offset only partially

Year-on-year growth in the average nominal wage will remain high from a historical perspective this year (see Chart II.12). Wage growth will accelerate in year-on-year terms throughout the year, due mainly to temporarily higher quarter-on-quarter wage growth at the start of the year. This growth is due to an increase in the minimum wage and guaranteed wages in some categories and a rise in doctors' pay. In addition, it has been boosted by a slightly above-average increase in basic pay scales in firms based on the results of collective bargaining. Employees will thus be at least partly compensated for the past loss in the real purchasing power of their wages and salaries. The forecast also assumes a gradual increase in the minimum wage to 47% of the average wage over the next five years (MLSA projection).

Wages and salaries will also grow in non-market sectors, albeit at a more modest pace than in the market sector. This year, the forecast takes into account the rise in teachers' pay, which takes the form of additional bonuses. It also assumes a freeze on pay scales and the announced reduction in the wage bill (which will manifest predominantly as a drop in the number of employees and systemised job positions).[10]

The real wage has started to grow again (in year-on-year terms) this year after more than two years of decline and will continue to rise throughout the year, due mainly to a significant slowdown in inflation to

Chart II.11

From the perspective of the LUCI, the tightness in the labour market will decrease further

LUCI; vertical axis shows standard deviations
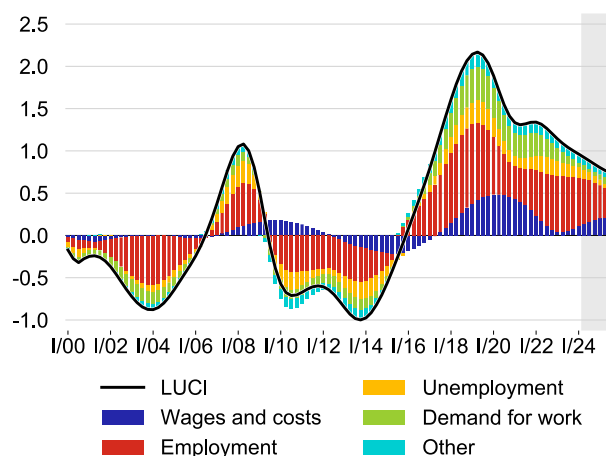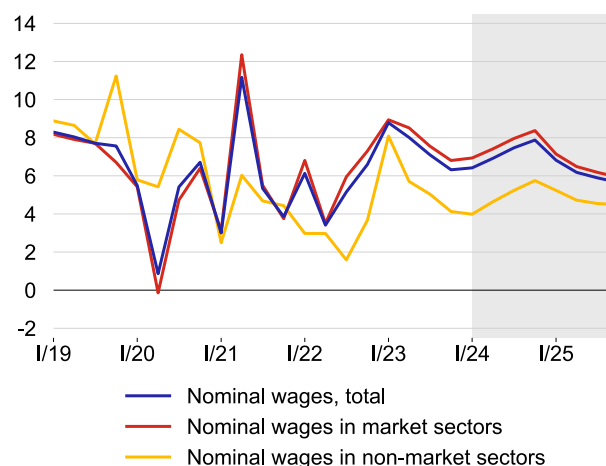

Chart II.12

Nominal wage growth will remain elevated from the long-term perspective

nominal wages; y-o-y changes in %; seasonally adjusted

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10 The government has started to negotiate a public sector pay increase for next year.

close to the 2% target amid continued, solid nominal wage growth.

Growth in the nominal wage bill this year and the next is affected predominantly by average wage growth. In real terms, the wage bill will start to grow again year on year this year after more than two years of decline (see Chart II.13). The growth will rise slightly this year. Next year, by contrast, it will slow slightly, due initially to a decline in inflation and later to slowing growth in the nominal wage bill. Growth in the real wage bill will contribute to the recovery in household consumption.

Employment will be broadly flat due to prevailing caution in corporate recruitment, while unemployment will grow only very slightly

Owing to the previous economic downturn, employment growth will halt in the first half of 2024 and the number of employed persons will remain flat for the rest of the year (see Chart II.14). The number of employees will still grow slightly year on year at the start of the year but will later slow and will also flatten out at the end of 2024. The European Commission survey even expects the number of employees to decline over the next three months. By contrast, the index of expected employment and some other high-frequency and leading indicators[11] suggest continued corporate recruitment.

The general unemployment rate increased very slightly in 2023. It will rise only slowly in the period ahead owing to the previous economic downturn. The forecast expects a similar trend in the share of unemployed persons.

Chart II.13

Growth in the real wage bill will turn positive again and thus help household consumption to recover

wage bill; y-o-y changes in %
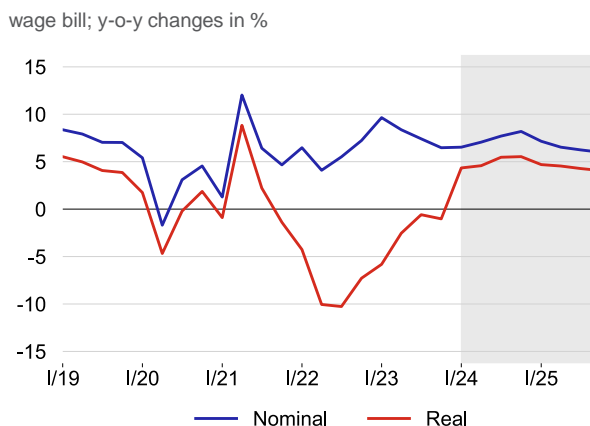
Chart II.14

Employment will be flat this year on average and unemployment will increase only slowly

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

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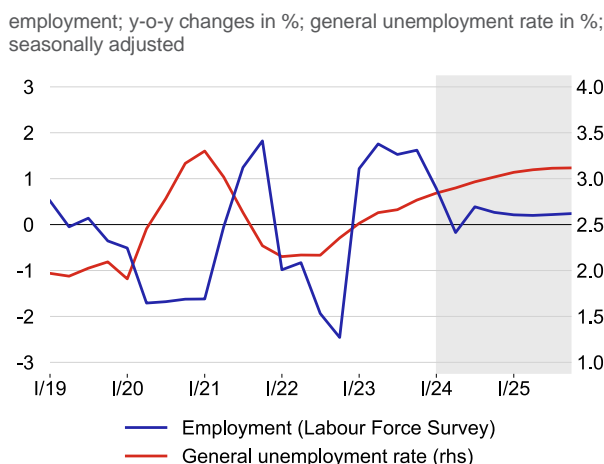
11 For 2024 Q2, the Manpower Group index of expected employment is signalling continued but weakening growth in the number of employees. The Google Trends scores for "unemployment" and "unemployment benefit" have remained low in recent weeks. In 2024 Q1, the total number of vacancies was virtually unchanged compared to the previous quarter.

BOX 1 Effects of general government investment on inflation

Investment activity in the Czech economy is gradually picking up following a sharp decline in 2020 caused by Covid. In real terms, however, it was still almost 3% below the end-2019 level (and, in the case of private investment, even 5.5% below that level) in 2023 Q4. Moreover, growth in private investment slowed last year due to tight domestic and foreign monetary conditions and problems in the German economy, the Czech Republic's largest trading partner. As a result, the year-on-year increase in total gross fixed capital formation growth was driven by the investment efforts of general government. Although this sector's share of total gross fixed investment has long been below 20% (18.9% in 2023), its contributions to growth in overall investment activity have been relatively significant in individual years (see Chart 1). The increased volatility of government investment in the past was due in part to the financing of projects from EU funds. Owing to the official end of the 2007–2013 programme period (and the n+2/3 rule with a slight time lag), domestic entities made great efforts to draw down as much as possible of the allocation (i.e. the funds earmarked for public and private investment projects in the Czech Republic in the said period). This led to a surge in government (and private) fixed investment growth in 2014 and especially 2015 and related sizeable drawdown of capital subsidies and subsequent receipt of cross-border payments from the European Commission. Due to better project administration, there was no similar peak in the drawdown of EU funds around the end of the 2014–2020 programme period. EU funds were thus drawn down more evenly in this period.

The impact of general government investment on inflation is not one-sided and direct, as it depends on a range of factors: the time horizon, the position of the economy in the cycle, the manner of financing, the type and duration of the investment and potentially other effects. For illustration, the main effects of investment are described in the text as *ceteris paribus*, that is, in isolation, with all other things being equal. In the real world, however, the factors often interact.

Chart 1

The contributions of general government to growth in real fixed investment are significant

y-o-y growth in %; contributions in pp; source: CZSO

Chart 2

General government has made a minimal contribution to cumulative growth in the capital stock in the Czech Republic

constant 2015 prices; CZK billions; right-hand scale in %; source: CZSO

As regards the time horizon, the effects of general government investment can be divided into short- and long-term ones. In the short term, the income effect of investment activity dominates, as additional government investment expenditure increases aggregate demand and income, which can then be spent. The lower the marginal propensity to save, tax and import in the related revenue and expenditure stream of a domestic small open economy, the higher the overall stimulating effect. Growth in domestic demand, *ceteris paribus*, pushes the economy towards greater capacity utilisation and higher profit margins. Government investment thus has an upward effect on inflation in the short run. Unlike current (consumption) expenditure, however, government investment also usually has a capacity-building effect, stimulating growth in potential output. It thus expands the economy's production capacity, allowing it to produce more goods and services. By contrast, an increase in the production capacity of the supply side of the economy at a given level of aggregate demand, *ceteris paribus*, reduces the price level. Chart 2 shows that capital stock formation by general government was almost negligible in the Czech Republic from the mid-1990s until 2022 relative to the private sector. This was due in roughly equal measure to wear and tear of existing capital and to new fixed investment formation. The share of general government in the fixed capital stock thus fell steadily in this period
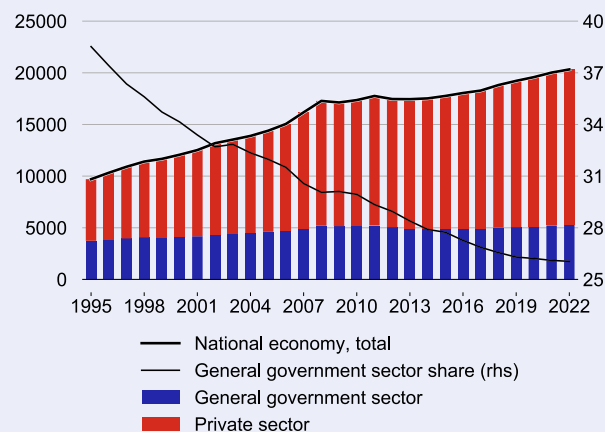
from an initial 39% to 26% in 2022. But even this does not rule out government investment having a long-term capacity-building, productive and hence latent anti-inflationary effect. The replacement of old capital with more modern, more efficient capital usually fosters growth in factor productivity, whether through the general technical and technological level or through the creation of a higher-quality institutional framework for the development of the private economy. In both cases, this usually results in better services and public goods. Chart 3 shows the positive relationship between the government investment ratio and economic growth on a cross-sectional sample of European economies. However, the causality can run in both directions, as a higher government investment ratio can boost growth, and a faster-growing economy will in turn make it possible to finance a higher government investment ratio.

Chart 3
A higher government investment ratio is associated with high GDP growth
x-axis: government investment-to-GDP ratio in %; y-axis: real GDP growth in %; averages for 2011–2022; source: Eurostat

The overall context – above all the cyclical position of the economy – also plays an important role in assessing the impacts of government investment. Its effect on inflation may theoretically be different if the economy is above its potential and different if it is below it. If an economy is below its potential, government investment can foster growth without increasing inflation significantly, as firms (capital goods producers and other firms along the chain) will not be forced to increase their prices and margins as long as they have spare production capacity, sufficient labour and half-empty order books. In an overheating economy, by contrast, additional general government investment demand will make the labour market tighter and put upward pressure on wages; it may also increase the profit margins of producers of capital (and other) goods. The central bank will thus be forced to respond to the rising inflation pressure by tightening monetary conditions, which usually crowds out private spending to some extent. That fiscal policy is more effective in economic downturns is an empirical finding; government investment is no exception in this respect.[1] The same applies at the zero lower bound on interest rates.[2] The multiplier effect of government investment is estimated at close to 0.7 for the Czech Republic.[3]

Overall capitalisation is also important. In highly under-invested countries and regions, every additional government investment has greater long-term supply effects than when investment needs are saturated and the capital stock is sufficient. To assess the benefits of government investment, the decreasing marginal productivity of capital can be proxied by the traditional concept of the incremental capital output ratio (ICOR). The ICOR characterises the amount of investment needed to produce an additional unit of output. Lower ICORs imply a higher marginal return on investment and hence an ability to produce a unit increment of output at less cost. ICORs were often used in the past to make international comparisons,[4] whereas now their use is limited mostly to assessing investment plans at the micro level. One reason for this is that the ICOR favours developing countries, which can increase their infrastructure capacity to a greater extent than developed countries, which tend to have established infrastructure. However, the logic of the ICOR is still relevant – given the limited resources of governments and the costs associated with financing, it is appropriate to select investment projects that are more effective.

In Europe, the manner of investment financing also needs to be taken into account. Using data for the Czech Republic, Pikhart (2019, see footnote 3) analysed the different impacts of European funds on private and government investment. Private investment activity tends to be driven by economic fundamentals (profitability, capacity utilisation, developments abroad and monetary conditions), while the availability of EU funding itself changes the structure of funding rather than increasing total investment. By contrast, capital sources from EU funds used in the general government sector are almost fully reflected in an increase in total domestic investment (see also the additionality principle[5]). However, growth in government investment financed from domestic sources can crowd out other private investment expenditure, again depending on the position of the economy in the cycle. According to the above study, the average crowding out effect of domestic government investment in the Czech Republic ranges between 20% and 30% of the initial amount invested. This weakens both the inflationary effect on the demand side and the long-term latent disinflationary effect on the supply side, because part of the private investment (and the related growth in the capital stock) will be missing as a result of crowding out.

The type of government investment can also be an important factor. Investment focused on promoting growth of the supply side of the economy has the greatest inflationary potential. However, this depends on the type of investment that would serve this purpose most effectively in the country concerned. There is no universal answer. A country with desperately under-invested transport infrastructure, for example, may benefit the most from investing in a motorway
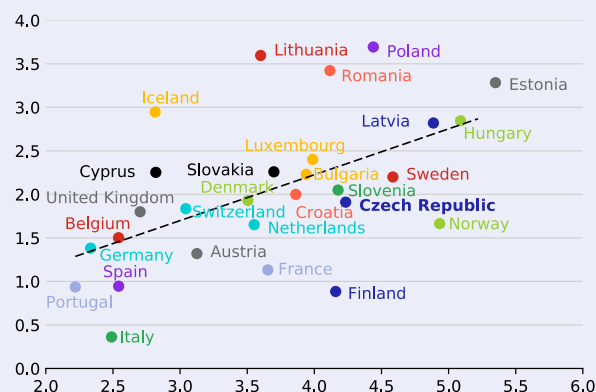
network connecting large cities and accelerating their development. Likewise, investment in weapon systems may yield by far the highest rate of return and be the most useful for a country facing a substantial security threat. By contrast, an advanced economy in which those areas are sufficiently developed may benefit from investing in knowledge and R&D. Chart 4 illustrates the material structure of general government investment in the Czech Republic, the largest component of which is infrastructure construction. There are many other aspects which play a role in assessing the effectiveness and impact of government investment activity in practice. These include the level of corruption, regulation, the length and red tape of authorisation procedures, social and environmental aspects and the temporary nature of measures.

For the purposes of this box, a temporary increase in general government investment spending of 1% of GDP spread over one year was simulated using the g3+ core prediction model. This increase affects the real economy and inflation through two channels. The first, immediate channel raises aggregate demand through the standard (new-)Keynesian income-expenditure mechanism, hence increasing economic growth and inflation pressures. The second channel fosters growth in the capital stock and represents a positive supply shock, increasing growth and having an anti-inflationary effect. This second channel operates with a lag and is modelled in the simulation using an increase in investment productivity. It was calibrated to correspond to an increase in the capital stock of 70% of the government investment impulse. This reflects the crowding out of private investment by government investment. We could consider a smaller level of crowding out, and hence a greater effect on capital productivity, if we conducted the simulation during a recession, when a significant part of production capacity is unused, or at the effective lower bound on interest rates.

The real economy is initially favourably affected by the demand effect, which is later bolstered by the supply effect (see Chart 5). The effects on inflation go in opposite directions: the investment impulse is initially inflationary at the two-year horizon, but an anti-inflationary supply effect then starts to prevail (see Chart 6). This profile is consistent with the findings of research conducted at other central banks. For example, de Jong et al. (2017)[6] conclude that an increase in general government investment has an inflationary effect in the short term. The exception is the situation where growth in government investment is financed by reducing government consumption. In such case, the short-term inflationary effect of increased aggregate demand would be suppressed and the overall effect of government investment growth would be anti-inflationary.

To sum up, general government investment – especially investment focused on promoting economic

Chart 4

Economic affairs, especially transport infrastructure, dominate the material structure of general government investment in the Czech Republic

shares in 2022; source: CZSO
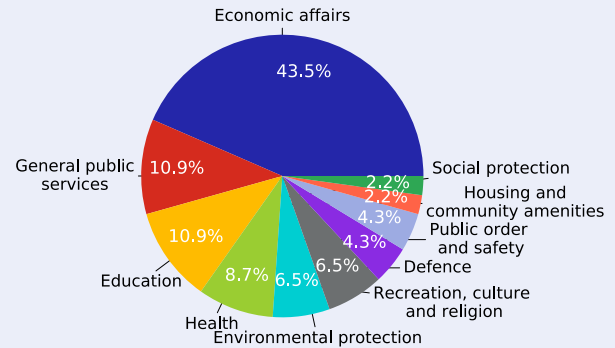
Chart 5

General government investment initially has a demand effect on GDP growth, with a supply effect prevailing only later

x-axis: number of quarters; y-axis: impact of general government investment on GDP growth in pp; CNB calculations
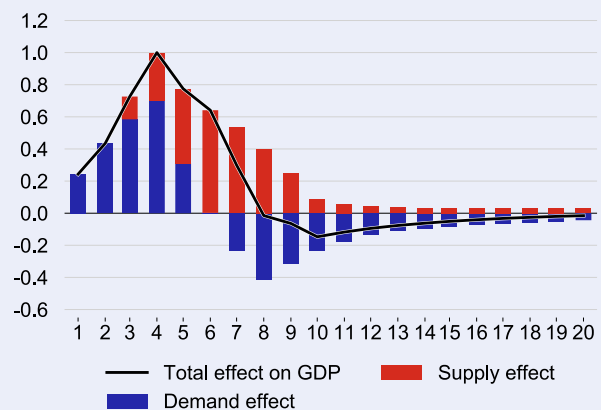
Chart 6

The demand effects of general government investment are inflationary, while the supply effects are anti-inflationary with a lag

x-axis: number of quarters; y-axis: impact of general government investment on inflation in pp; CNB calculations
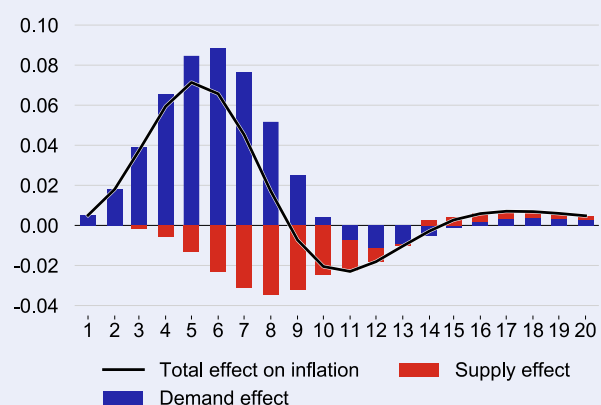
growth – has the potential to strengthen the supply side of the economy and generate long-term macroeconomic benefits and growth in living standards (wealth). Effectively targeted investment affects not only demand, but also supply. It can thus have a favourable effect in the long term, as it supports growth by raising productivity and hence stimulates growth in aggregate demand, which will start to exert implicit (latent) downward pressure on inflation. Whether demand in the economy is managed in such a way as to make the above price (anti-inflationary) effect of government investment growth consistent with maintaining price stability will then depend on the central bank's response and on other macroeconomic stabilisation policies.

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1 See Gechert, S., Rannenberg, A. (2018): Which fiscal multipliers are regime-dependent? A meta-regression analysis.

2 As shown in Bouakez, H., Guillard, M., Roulleau-Pasdeloup, J. (2017): Public investment, time to build, and the zero lower bound.

3 See, for example, *OECD Economic Outlook*, Interim Report March 2009: The effectiveness and scope of fiscal stimulus, Ambriško, R. (2017): Growth-friendly fiscal strategies for the Czech economy and Pikhart, Z. (2019): Metodika predikce tvorby hrubého fixního kapitálu v ČR.

4 See, for example. Walter, A. A. (1966): Incremental capital-output ratios, Leibenstein, H. (1966): Incremental capital-output ratios and growth rates in the short run, Vanek, J., Studenmund, A. H. (1968): Towards a better understanding of the incremental capital-output ratio, Gianaris, N. V. (1970): International differences in capital-output ratios and Sato, K. (1971): International variations in the incremental capital-output ratio.

5 The additionality principle states that EU structural and investment funds' contributions must not replace public or equivalent structural expenditure by a Member State in the regions concerned.

6 De Jong, J., Ferdinandusse, M., Funda, J., Vetlov, I. (2017): The effect of public investment in Europe: A model-based assessment.

III. INFLATION

Inflation slowed sharply at the start of this year and was exactly at the CNB's 2% target in February and March. This was due to most inflation components. The main reason was a sharp slowdown in annual administered price inflation. At the start of 2024, food prices began to fall year on year and the long-running downward trend in core inflation continued, supported by tight CNB monetary policy. Headline inflation will rise slightly in 2024 Q2, due to a marked pick-up in year-on-year growth in fuel prices. By contrast, the contribution of administered prices will fall slightly, although their growth will remain elevated from a longer-term perspective. The contributions of food and especially core inflation will be broadly stable this year. This will be linked to subdued cost pressures from abroad and a continued correction of the previous increase in the profit margins of domestic producers, retailers and service providers. Headline and monetary policy-relevant inflation will stay close to the CNB's 2% target over the monetary policy horizon, aided by monetary policy.

Inflation will edge up in 2024 Q2 but will stay close to the inflation target

In January 2024, headline inflation slowed sharply to close to the inflation target (see Chart III.1), due to a sharp slowdown in administered price inflation. At the start of 2024, food prices began to fall year on year and the long-running downward trend in core inflation continued. Owing to the above factors, headline inflation was exactly at the CNB's 2% target in February and March. Inflation will rise slightly in Q2 on the back of a marked pick-up in year-on-year growth in fuel prices due to the recent increase in oil prices and weakening of the koruna against the dollar. By contrast, the contribution of administered prices will fall slightly, although their growth will remain above-average from a historical perspective for the whole of this year. The positive contribution of core inflation and the slightly negative contribution of food prices will remain broadly stable in Q2 (see Chart III.2).

Administered price inflation will be above-average from a historical perspective this year

Annual administered price inflation slowed sharply at the start of 2024. From a historical perspective, however, administered price inflation remained elevated at close to 6% (see Chart III.3). The commodity component of energy prices decreased. However, this was outweighed by a surge in the administered component of energy prices linked with the abolition of government energy distribution subsidies and the reintroduction of the fee for renewable sources.[12] Higher water supply and sewerage collection charges, a significant increase in the price of the road toll vignette[13] and an increase in the VAT rate on selected

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12 The waiver of the fee for renewable energy sources approved by the Czech government was in effect from October 2022 until December 2023.

13 The price of an annual road toll vignette rose by CZK 800 (from CZK 1,500 to CZK 2,300, i.e. by more than 50%) in

Chart III.1

Inflation will remain close to the 2% inflation target during the course of this year and stay there over the monetary policy horizon

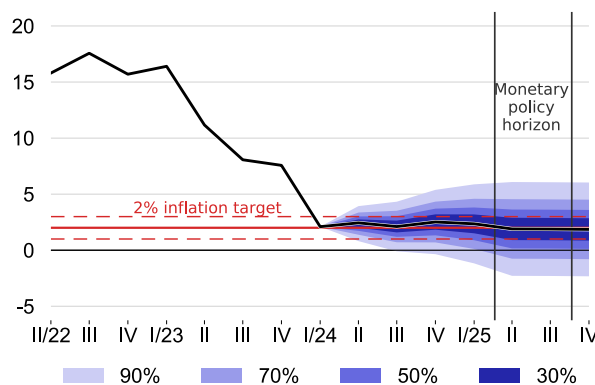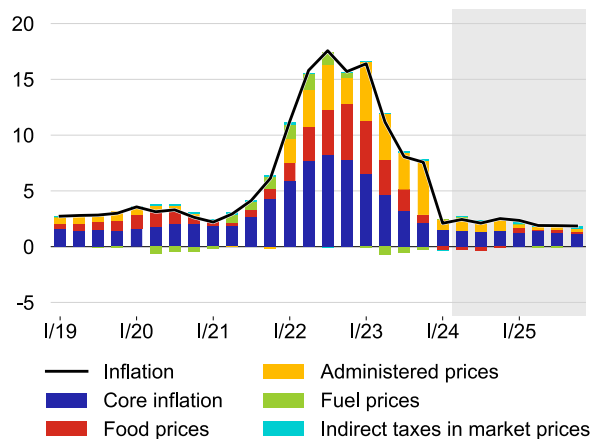headline inflation; y-o-y in %; confidence interval

Chart III.2

An increase in the contribution of fuel prices will contribute to a rise in consumer price inflation in 2024 Q2

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

administered price items (in particular heat, water supply, sewerage collection and transport) also contributed to keeping administered price inflation elevated. The commodity component of energy prices will continue to fall gradually during 2024 due to favourable developments on wholesale markets. On average, however, the year-on-year growth in administered prices will remain elevated at close to 6% this year and will not return to its long-term average until 2025.

The current sharp decline in core inflation will slow markedly this year and core inflation will not return to 2% until the end of 2025

Core inflation decreased further in 2024 Q1, aided by the CNB's tight monetary policy. This was due mainly to declining growth in prices of tradables, while services inflation is falling more slowly.[14] Core inflation will be broadly stable in 2024 Q2. It will be affected on the one hand by still subdued industrial producer price inflation abroad and its spillover into domestic price categories and on the other hand by relatively brisk growth in wages and a slight increase in the contribution of imputed rent (see Chart III.4). Core inflation will not decline substantially in the subsequent quarters of this year either and will stay in the upper half of the tolerance band around the CNB's inflation target. It will not fall to 2% until the end of 2025.

Food prices will decline year on year

Food, beverage and tobacco prices started to decline year on year at the start of 2024 (see Chart III.2). This was due to falling global agricultural commodity prices and domestic agricultural producer prices and to the significant pass-through of the reduction of the VAT rate on food by 3 pp to retail prices. Food prices will continue to fall year on year in the course of 2024 due to a continuing year-on-year decline in domestic agricultural producer prices.

Growth in fuel prices will surge temporarily

Year-on-year growth in prices at filling stations turned positive again in 2024 Q1. Growth in fuel prices will surge in Q2. This will be due mostly to the recent increase in oil prices and weakening of the koruna against the dollar. Conversely, growth in fuel prices will slow in the following quarters thanks to a gradual correction of oil prices and modest appreciation of the koruna.

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March 2024. A regular indexation scheme will also be introduced for these vignettes to reflect inflation.

14 The difference in the evolution of prices of tradables and non-tradables is discussed in Box 2 at the end of this section.

Chart III.3

Administered price inflation will be above-average from a historical perspective this year

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

Legend: Admin. prices — Heat — Transport — Electricity — Water — Other — Natural gas
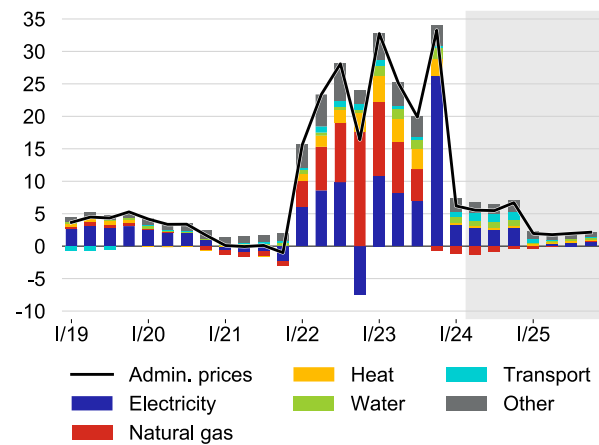
Chart III.4

The current long-running sharp decline in core inflation will virtually halt this year and core inflation will remain slightly elevated amid a still low contribution of imputed rent

y-o-y changes in %; contributions in pp

Legend: Core inflation — Other services and goods — Imputed rent
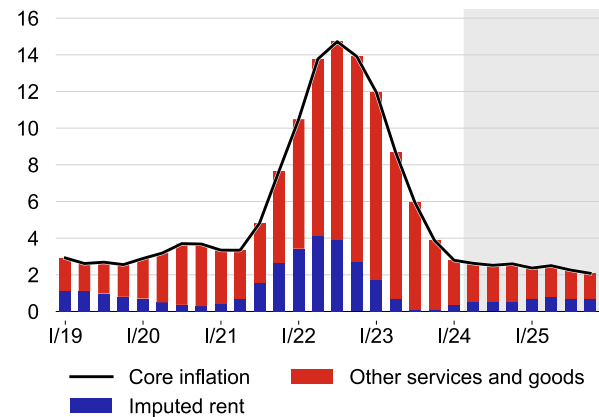
Chart III.5

The first-round and second-round effects of changes to indirect taxes reflect the numerous changes to VAT and excise duties in the government's consolidation package

first-round and second-round effects of tax changes; contributions to annual inflation in pp

Legend: First-round (accounting) impacts — Second-round (beyond accounting) impacts
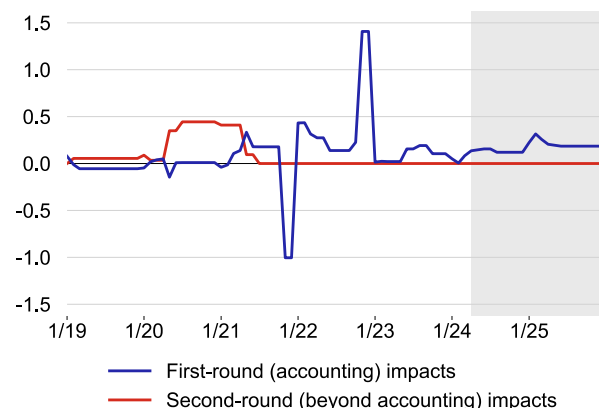
Headline inflation will be slightly above monetary policy-relevant inflation

At the start of 2024, the changes to indirect taxes in the government's consolidation package had a mixed effect on consumer prices and were slightly inflationary overall. The inflationary measures included a 10% increase in excise duty on tobacco and alcohol. Conversely, a reduction in the number of VAT rates and the transfer of selected groups of goods and services between these rates had an anti-inflationary effect. Overall, these changes had slightly positive first-round (accounting) effects (see Chart III.5). At the same time, the changes to VAT on some items did not pass fully through to prices. These immediate (second-round) effects ran in both directions and were negligible overall. Excise duty on tobacco and alcohol will be raised again at the start of next year, when it will go up by 5% and 10% respectively. For the above reasons, headline inflation will be slightly above monetary policy-relevant inflation over the entire outlook (see Chart III.6).

Monetary policy-relevant inflation will stay close to the central bank's 2% target over the monetary policy horizon, i.e. in 2025 Q2 and Q3 (see Chart III.6) amid a continued decrease in interest rates.

*We distinguish two types of direct effects on prices in relation to **changes to indirect taxes** – first-round effects (or accounting effects in the items concerned) and second-round effects (going beyond accounting effects in the items concerned). 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 immediate price changes going beyond the first-round effects and may be positive or negative. The second-round effects affect both monetary policy-relevant inflation and headline inflation. The CNB applies escape clauses to the first-round effects of indirect tax changes and in its forecast sets interest rates with regard to the outlook for monetary policy-relevant inflation.*

Chart III.6

Headline and monetary policy-relevant inflation will both be close to the 2% target at the monetary policy horizon

headline and monetary policy-relevant inflation; in %
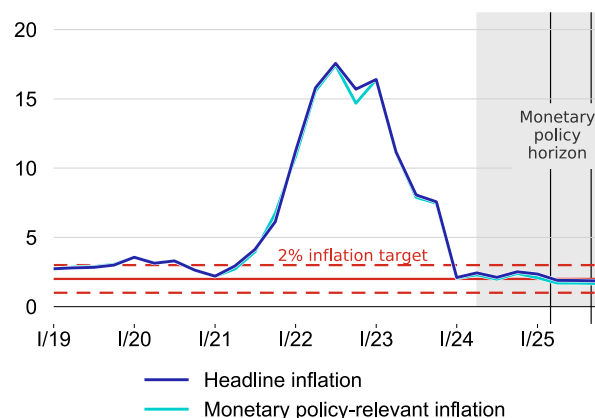
Pricing from the perspective of the g3+ core forecasting model

The following part of this section describes the cost pressures and the gap in mark-ups from the perspective of the g3+ core forecasting model. Unlike the statistical data and variables described in the first part of this section, these are unobserved variables that do not have a direct data counterpart. Their estimated paths are thus based on the one hand on the structural relationships between the directly observed macroeconomic variables captured directly in the g3+ core forecasting model, and on the other hand on additional information based on data obtained and processed during the forecast and then inserted into the model using expert judgement:[15]

- the contribution of import prices to total costs reflects industrial producer price inflation in the effective euro area and the koruna exchange rate;
- the contribution of price convergence is captured mainly by the Balassa-Samuelson effect, which is identified as the difference between non-tradables and tradables inflation;
- prices of domestic intermediate goods reflect domestic costs and the gap in mark-ups in the relevant sector of the economy (for more on the gap in mark-ups in the consumer sector see the information panel below);
- the contribution of wages to domestic costs is linked to wage growth in market sectors;
- the contribution of the price of capital reflects demand for this production factor, which reacts to capacity utilisation and the overall performance of the economy in the business cycle;
- the contribution of labour efficiency reflects the evolution of a unit of production (value added) per hour worked/per person employed;
- in addition to costs, the estimate of the gap in mark-ups in the final consumer goods and intermediate goods sectors takes into account observed inflation, i.e. consumer price inflation and changes in deflators.

The temporarily slightly elevated overall cost pressures will decline in mid-2024, aided by renewed appreciation of the koruna

Growth in total costs temporarily accelerated slightly in early 2024, as the koruna depreciated and import prices thus increased (see Chart III.7). The surge in costs was also supported by an increase in the administered component of energy prices for firms, which is expertly reflected in a positive contribution of energy import prices. Costs will continue to rise at a somewhat elevated pace during the spring, as they will be affected – partially with a lag – by increased core import prices and domestic cost pressures stemming from continued brisk nominal wage growth. Growth in costs will then ease from mid-2024 onwards, aided by renewed appreciation of the koruna, which will cushion the impact of continued quarter-on-quarter growth in core foreign industrial producer prices within the contribution of import prices. Growth in costs will be additionally dampened by a decline in import prices of energy, reflecting not only renewed appreciation of the koruna, but also a continued decrease in energy prices on global markets. At the same time, the contribution of prices of domestic intermediate goods will start to decline gradually, mainly due to a slowdown in quarter-on-quarter market wage growth. Despite a slight upswing in core import price inflation next year, growth in total costs will thus approach 2% in 2025. Growth in costs will be continuously supported by ongoing price convergence, reflecting the traditionally higher

Chart III.7

The currently slightly elevated overall cost pressures will decline in mid-2024

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

— Costs in consumer sector
■ Intermediate goods prices
■ Core import prices
■ Energy import prices
■ Price convergence

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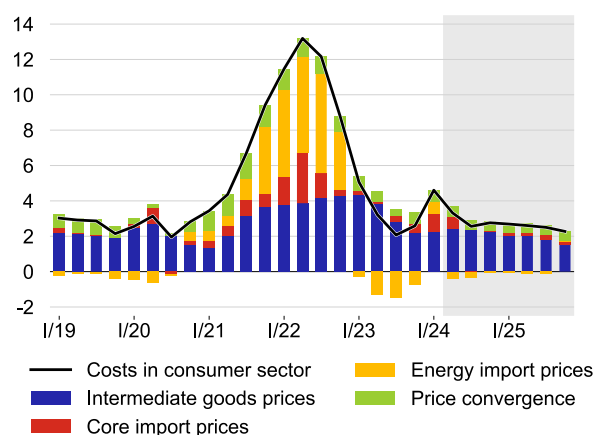
15 The price vertical of the g3+ core forecasting model is described in detail in the box *Pricing and its importance for monetary policy from the perspective of the g3+ model* in MPR – Summer 2021.

services inflation than goods inflation in the Czech economy.

The initially stronger domestic cost pressures will decrease, due mainly to wage developments in market sectors

Growth in domestic costs rose at the start of 2024 (see Chart III.8). This was due predominantly to a temporary increase in quarter-on-quarter market wage growth, reflecting not only a higher-than-usual increase in wage scales in firms, but also government measures.[16] However, the contribution of wage costs to domestic inflation pressures will begin to decrease again in Q2. The positive contribution of the price of capital to growth in domestic costs over the entire outlook reflects a steady slight increase in the economic output of the domestic economy. This will occur amid an only marginal increase in employment, which will lead to continued growth in labour efficiency. This will offset the growth in domestic costs. The anti-inflationary effect of improving labour efficiency, along with a persisting slowdown in quarter-on-quarter wage growth, will lead to a gradual decline in growth in domestic cost pressures to close to their steady-state level next year.

The positive gap in mark-ups narrowed markedly in early 2024 due to subdued domestic demand, a continued decline in market inflation and temporarily elevated growth in costs

The gap in mark-ups turned highly positive in previous years because producers, retailers and providers of goods and services to households increased their prices at a rate far outpacing growth in their costs. However, this changed in late 2023 and early 2024. Following the previous steady decline in sales, companies decided to pass on the temporarily increased growth in their costs at the beginning of this year to prices to only a limited extent, which led to a significant decline in their margins (see Chart III.9). This resulted in a decline in the market components of inflation. The gap in mark-ups will gradually close further. Recovering consumer demand fostered by renewed growth in real income will continue to be dampened by the current tight monetary policy. Retailers will thus not pass on the growth in their costs to end prices fully and will reduce their profit margins further towards the long-term average.

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16 An agreement on higher pay for healthcare workers entered into force at the start of 2024 (healthcare is predominantly part of the market sector). The minimum wage was also increased and the related cascade of guaranteed wages adjusted. Both these legislative changes increased quarter-on-quarter average wage growth.

Chart III.8

The domestic cost pressures will ease gradually over the outlook as quarter-on-quarter growth in market wages decreases

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

— Costs in intermediate goods sector
■ Wages in market sectors
■ Price of capital
■ Labour efficiency
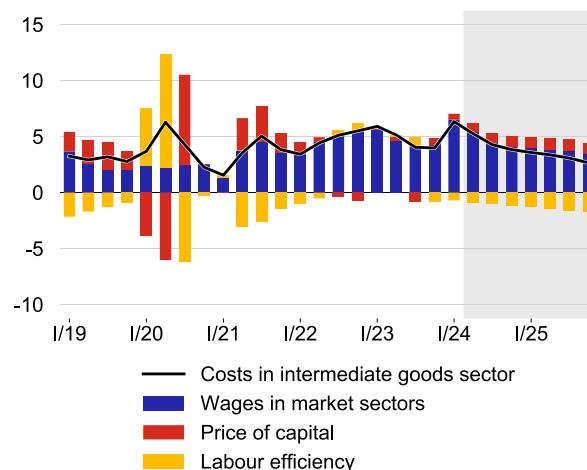
Chart III.9

The positive gap in mark-ups narrowed visibly in early 2024 due to temporarily stronger cost pressures and a continued decline in market inflation

gap in mark-ups on consumer goods in pp
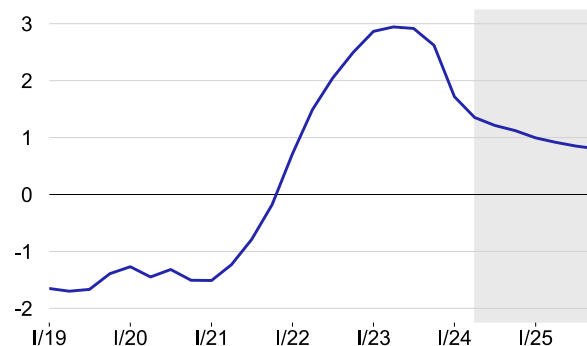
Mark-ups in the consumer sector represent the difference between the prices and marginal unit costs of producers of final consumer goods. The gap in mark-ups shows the deviation of current mark-ups from their steady-state level. A positive gap in mark-ups thus implies a higher-than-usual "profit margin", while a negative gap represents a lower-than-usual one. If the gap increases (decreases) over time, it gives rise to an additional inflationary (anti-inflationary) effect, i.e. upward (downward) pressure on consumer prices going beyond the increase (decrease) in costs.

COMPARISON WITH THE PREVIOUS FORECAST: Price developments

		2023	2024	2025	
Consumer prices	y-o-y changes in % pp	**10.7** (0.0)	**2.3** (-0.3)	**2.0** (0.0)	The inflation forecast for this year has shifted downwards owing to a lower outlook for administered prices and core inflation. It is unchanged for 2025.
Administered prices	y-o-y changes in % pp	**27.8** (0.0)	**6.0** (-3.3)	**2.0** (-0.4)	The outlook for administered prices for this year is noticeably lower due to a less pronounced increase in housing-related energy prices observed at the start of 2024.
Core inflation	% pp	**7.6** (0.0)	**2.6** (-0.3)	**2.3** (0.1)	The downward revision of the core inflation forecast this year is due mainly to less significant repricing at the start of the year compared to the previous forecast.
Food prices (incl. alc. bev. and tobacco)	y-o-y changes in % pp	**10.0** (0.0)	**-0.9** (0.9)	**1.0** (0.4)	The decline in food prices will be more moderate this year due to somewhat higher agricultural producer prices.
Fuel prices	y-o-y changes in % pp	**-12.1** (0.0)	**4.4** (7.6)	**-1.3** (-0.8)	The fuel price forecast for this year has shifted significantly upwards due to a higher outlook for crude oil prices and a weaker koruna.

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

BOX 2 Several perspectives on the different development of goods and services prices

After the period of high inflation that gripped the Czech economy for around two years starting in mid-2021, the situation started to calm during 2023, with inflation returning to the CNB's 2% target in 2024 Q1. This box examines inflation in two important categories of consumer basket items – prices of services and prices of goods within core inflation – in terms of the pace, breadth and persistence of the price changes in these categories.

From the long-term perspective, services inflation was higher than goods inflation until 2019. A significant change occurred during the Covid period, when a lot of services became unavailable due to shutdowns of many businesses for epidemiological reasons, forcing a partial shift in demand from services to goods. This, along with value chain disruption, resulted in long-unseen convergence of services inflation and goods inflation, which remained at comparable levels until autumn 2021. The situation was exacerbated by a further shock, this time a surge in energy prices at the end of 2021, which escalated after Russia's invasion of Ukraine in February 2022. Growth in energy prices traditionally affects goods prices more strongly, so the previously observed only modest gap between services and goods inflation swung significantly in the opposite direction. In recent months, the gap has turned positive again and returned close to its long-term average as these factors have faded (see Chart 1).

A comparison of the Czech economy with other countries[1] (see Chart 2) reveals that in the past the gap between services and goods inflation in the Czech Republic was similar to that in Poland and Slovakia and markedly higher than in Germany and the euro area.[2] It was visibly positive on average in 2006–2019, at around 3 pp. However, during the Covid period and at the start of the high-inflation episode, the domestic trend diverged from the rest of the converging economies and was more in line with the situation in Germany and the euro area, where the gap turned negative – like it did in the Czech Republic after the energy crisis (see above). In mid-2022,[3] however, the gap in the Czech Republic turned positive again, rising briskly until mid-2023. Since then, it has stayed broadly stable at an elevated level. An upward trend has also been evident in all the other economies under review except Slovakia in recent months, while in Poland and the euro area – like the Czech Republic – the gap is currently above the average for 2006–2019.

It is evident from the data for 2024 Q1, too, that domestic prices of services are rising faster than prices of goods[4] (see Chart 3). The increase in services prices was quite broad-based. For most services items (around 80%), prices went up more than the overall average for this category of the consumer basket, as higher-weight items slightly dampened the overall growth in services prices. This was particularly true for imputed rent (the largest light-blue dot in Chart 3), whose growth lagged behind its long-term average in 2024 Q1. Its contribution to inflation can be expected to increase again due to the current recovery in the property market. The growth of the individual items in the goods category is more dispersed. As regards inflation persistence,[5] the higher-weight services items (such as prices in restaurants) tend to show greater persistence of price changes. Some high-weight items in the goods category (such as prices of garments) also show relatively strong persistence.

Chart 1

The current gap between goods and services inflation is in line with the long-term average

year-on-year growth in prices in %; gap in percentage points; CPI; adjusted for tax effects; source: CZSO, CNB calculations
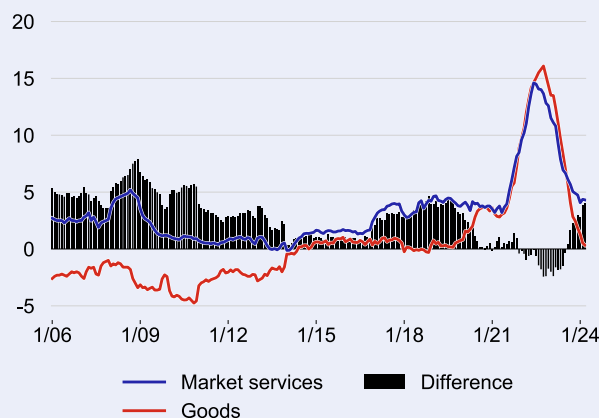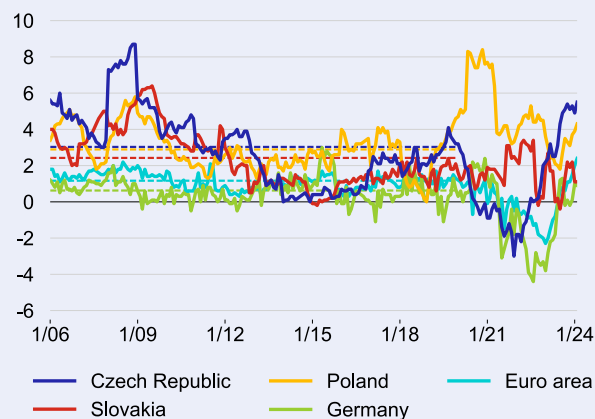

Chart 2

The gap between services and goods inflation has long been markedly wider in converging economies

gap between services and goods inflation in percentage points; dotted lines indicate averages in given countries for 2006–2019; HICP; source: Eurostat

To sum up, after the pandemic period, when prices of services increased more slowly than prices of goods, the gap between their growth rates in CPI terms is returning to its long-term (positive) average. The gap is in line with the historical norm and is not anomalous in the international context either (in HICP terms). However, the uncertainty regarding the further slowdown in services inflation is associated mainly with the fading of the currently low contribution of imputed rent in a recovering property market.

Chart 3

The current services inflation is being driven by most items and dampened mainly by imputed rent; the growth in prices of goods items is more dispersed

x-axis: inflation persistence of items; y-axis: average month-on-month growth in 2024 Q1 in %; seasonally adjusted; size of bubble corresponds to weight of item in consumer basket; blue: services items, red: goods items; horizontal lines: average month-on-month growth in 2024 Q1 for services (blue) and goods (red); dark (light) shade of bubble: current pace of growth is above (below) historical average for 2010–2019; source: CZSO, CNB calculations

Legend:
- Services (above historical average)
- Goods (above historical average)
- Services (below historical average)
- Goods (below historical average)

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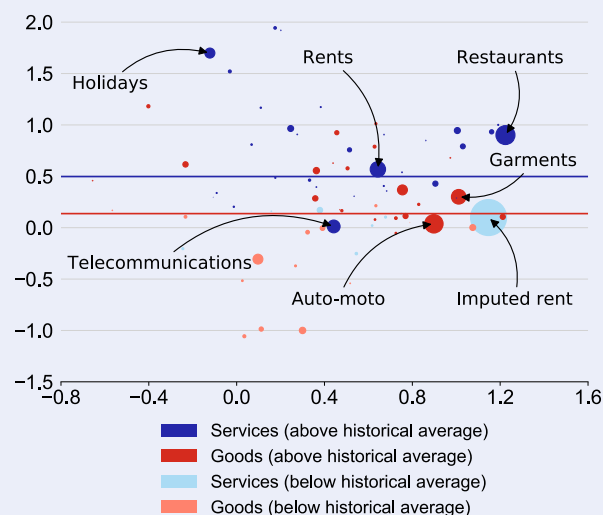
1   For the international comparison, data from the Harmonised Index of Consumer Prices (HICP) were used, for which the definition of goods and services differs slightly from the CPI. The main difference is that imputed rent is not included in services in the HICP.

2   A strongly positive growth differential between prices of services and goods is typical of converging economies and is referred to in the literature as the Balassa-Samuelson effect. This phenomenon is reflected in the forecast by the contribution of price convergence to marginal costs in the consumer sector. In addition to the long-term Balassa-Samuelson effect, the reason for the higher growth in prices of services than goods may be the greater weight of the still rapidly growing labour costs in the production of non-tradables. Greater pricing power of companies – due to the fact that in local markets service providers are often pseudo monopolies and there are often strong personal ties between providers and customers (especially in smaller towns) – may have the same effect. Consumers are therefore willing to accept higher prices (stronger price growth), as they are de facto putting money into the pockets of their "neighbours" (not international firms), which thus increases profit margins. Last but not least, the redirection of part of households' consumption expenditure from goods back to services in the period of the post-Covid reopening of the economy, services, entertainment and travel and the resulting general euphoria, also had some effect.

3   By then, growth in imputed rent had started to slow significantly, so the negative gap between services and goods inflation in national CPI terms conversely began to widen even more.

4   The analysis focuses on around 80 goods and services items in the consumer basket which together make up core inflation. These items combined account for more than 50% of the consumer basket.

5   Persistence is defined as the sum of the first three coefficients of the partial autocorrelation function on the seasonally adjusted month-on-month price changes. Persistence indicates the extent to which an observed movement in prices remains at the level attained.

IV. MONETARY POLICY

At its May monetary policy meeting, the Bank Board lowered the two-week repo rate by 0.50 pp to 5.25%, the discount rate by the same amount to 4.25% and the Lombard rate to 6.25%. The Bank Board assessed the risks and uncertainties of the outlook as being modestly inflationary. A slower decline in the elevated inflation expectations is a risk in this direction. Given the tight labour market, this could be reflected in stronger wage demands. Higher-than-expected inertia in services inflation and a halt in tradables disinflation, which has so far been due mainly to fading supply-side problems, are additional upside risks. Movements in the koruna exchange rate, which could cause prices of imported goods to go up, are an upside risk to tradables prices. An inflationary risk in the longer term is a potential acceleration of money creation in the economy stemming from a significant recovery in lending activity, especially on the property market. By contrast, a stronger-than-expected downturn in global economic activity and weaker German economic output are a downside risk to inflation. The future monetary policy stance abroad remains an uncertainty of the outlook. Consistent with the baseline scenario of the Monetary Department's forecast is a further decline in market interest rates. This is in line with the expected persistence of inflation close to the 2% target for the rest of this year and over the monetary policy horizon.

Consistent with the baseline scenario of the forecast is a further decline in market interest rates

The spring forecast implies a decline in market interest rates over the entire outlook (see Chart IV.1). The pace of this decline is still elevated at first but then slows somewhat. Interest rates are thus close to the policy-neutral level at the end of 2025. This is due to the fade-out of the extraordinary inflation pressures from the foreign environment and to subdued domestic demand-pull inflation. Although growth in costs will still be elevated in the first half of 2024, this will not reverse the need to ease monetary policy, as the inflationary effect of the growth in costs will be offset by a decline in firms' profit margins, which will dampen growth in prices.

The koruna continued to weaken at the start of the year

Last year's depreciation trend of the koruna continued in January and especially in February this year. The exchange rate later stabilised close to CZK 25.3 to the euro, where it also traded during April. The depreciation of the koruna this February was due mainly to the CNB's monetary policy meeting, which surprised the markets with the dovish tone of the new macroeconomic forecast and the broad consensus of the Bank Board on lowering interest rates, even in unconventional steps. The koruna then weakened further in response to the inflation figure for January, which was below market expectations and the central bank's forecast.

In Q1, new data on foreign variables indicated a slower-than-expected retreat of inflation in key foreign economies and thus rather later foreign rate cuts. The differences in domestic and foreign monetary

Chart IV.1

Consistent with the baseline scenario of the forecast is a further decline in market interest rates

3M PRIBOR in %; confidence interval

| 90% | 70% | 50% | 30% |
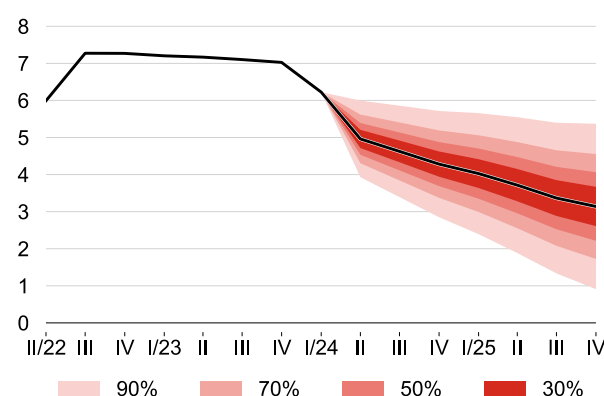
The confidence intervals of the forecasts for key macroeconomic variables reflect the predictive power of past forecasts. They are symmetric and linearly widening. In the case of headline inflation, they widen only for the first five quarters and then stay constant. This is consistent with both the past predictive power and the stabilising role of monetary policy.

The monetary policy horizon (normally 12–18 months ahead) is the future time period which the CNB focuses on when making its monetary policy decisions and which reflects the length of the transmission of monetary policy. By targeting inflation at this horizon, the central bank also abstracts from short-term inflation shocks, whose impact monetary policy can control to only a minimal extent.

policy expectations were reflected in a further marked outflow of short-term foreign debt capital from domestic banks in January and February, which also fostered a weaker koruna.

The koruna will appreciate modestly over the outlook horizon

The spring forecast expects the koruna to average CZK 25.2 to the euro in 2024 Q2. The Czech currency will then appreciate slightly (see Chart IV.2), due mainly to favourable net exports of goods and services. However, the appreciation of the koruna will be dampened by a gradually narrowing interest rate differential vis-à-vis the euro area[17] (see Chart IV.3), which will close at the end of next year.

The market interest rate outlook and analysts' exchange rate expectations are broadly in line with the CNB forecast

The market outlook for short-term FRA rates has moved higher in recent weeks, correcting expectations regarding the size of the reduction in the CNB's key interest rates. The market expects the 3M PRIBOR to decline gradually at the one-year horizon (see Chart IV.4). This outlook is broadly in line with the interest rate path in the baseline scenario of the CNB forecast. Almost all the respondents in the FMIE survey were expecting the 2W repo rate to be reduced by 0.50 pp at the May monetary policy meeting. The analysts expect the CNB's key interest rate to be in the range of 3%–4% (median 3.75%) one year ahead.

On average, the analysts in the FMIE and FECF surveys expect the koruna to be just below CZK 25 to the euro one year ahead (see Table IV.1). The exchange rate path they expect is at a similar level to the central bank's outlook. The difference between the minimum and maximum expected exchange rate one year ahead in the two surveys is more than CZK 2. In the longer term, the analysts expect the koruna to gradually return to a path of sustained slow appreciation as the economy recovers and financial market sentiment improves. A geopolitical deterioration is a factor that could temporarily increase the volatility of the koruna.

The Bank Board's communications have been signalling a gradual reduction in interest rates

The Bank Board members have said that a further reduction in interest rates is likely at the May meeting. However, the reduction will be cautious and will depend on the data. According some of the members, there are no strong signals in the economy for slowing the current pace. However, elevated services inflation and the outlook for more gradual rate cuts abroad (by the Fed and the ECB) meanwhile argue against faster interest rate cuts. The emerging housing market recovery was also mentioned as a potential inflation pressure from the domestic economy.

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17 This effect is partly reduced by expert adjustments.

Chart IV.2

Following a slight initial weakening, the koruna will appreciate gradually again from mid-2024

CZK/EUR exchange rate; confidence interval
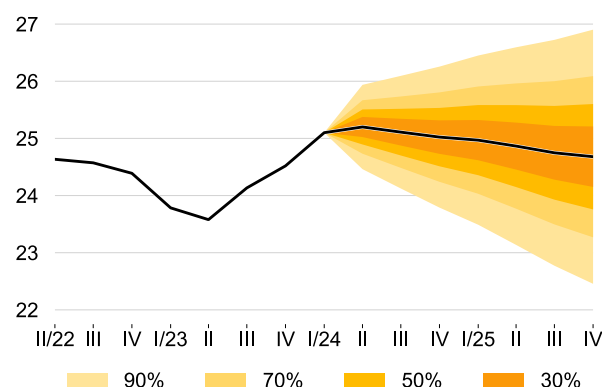
Chart IV.3

The interest rate differential vis-à-vis euro and dollar rates is gradually narrowing

pp; differential of Czech money market rates vis-à-vis EUR and USD rates
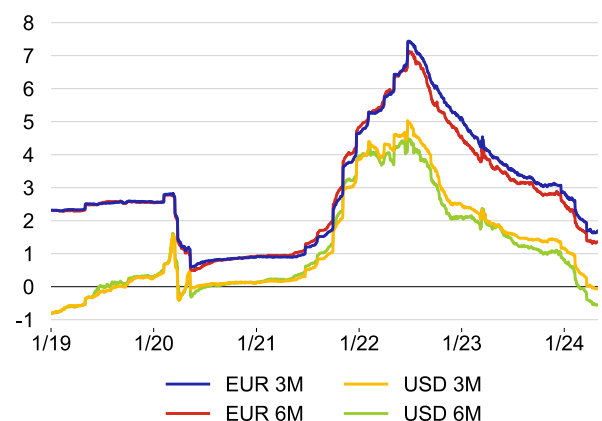
Chart IV.4

The market was expecting rates to be lowered at the May meeting; the market outlook is almost in line with the CNB forecast

3M PRIBOR; FRA in %
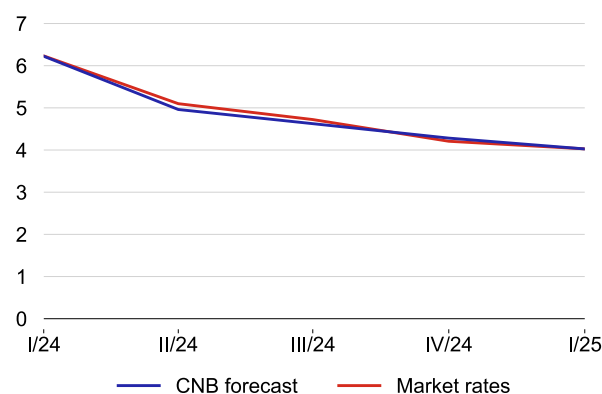
Note: Market rates represent for 2024 Q1 the 3M PRIBOR and for 2024 Q2–2025 Q1 the average values of the FRA 1*4, 3*6, 6*9 and 9*12 rates for the last 10 trading days as of 30 April 2024.

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

Chart IV.5

The interest rate path is higher than in the winter forecast

decomposition of changes in 3M PRIBOR forecast in pp

— Difference
■ Initial state
■ Foreign environment
■ Administered prices
■ Govt. consumption
■ Short-term exch. rate forecast
■ Short-term inflation forecast
■ Fiscal impulse
■ Expert adjustments
■ Model change

Chart IV.6

The exchange rate forecast has shifted to weaker levels

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

— New forecast   ■ Differences (rhs)
— Previous forecast

Comparison of the interest rate path with the previous forecast (Chart IV.5)

▪ The **initial state** fosters distinctly higher rates due to higher expected quarterly wage growth and faster GDP growth at the start of 2024. The weaker observed koruna exchange rate has the same effect.

▪ The positive contribution of the **foreign environment** mainly reflects an increased market outlook for ECB interest rates compared with the assumptions of the winter forecast.[18]

▪ The **short-term exchange rate forecast** for 2024 Q2 is set at a slightly weaker level than implied by the core model's interpretation of macroeconomic developments and thus has an upward effect on rates.

▪ The **short-term inflation forecast** also fosters slightly higher interest rates.

▪ The negative contributions of **administered prices** in the next few quarters mainly reflect cheaper gas for households and customers switching to more favourable fixed contracts.

▪ The impacts of the revised outlook for **general government consumption** and the **fiscal impulse** are broadly neutral.

▪ **Expert adjustments** foster slightly higher rates. This is due mainly to adjustments that accelerate the growth of household consumption owing to a relatively rapid improvement in sentiment and

a downscaling of the previous expert adjustments to the koruna exchange rate.

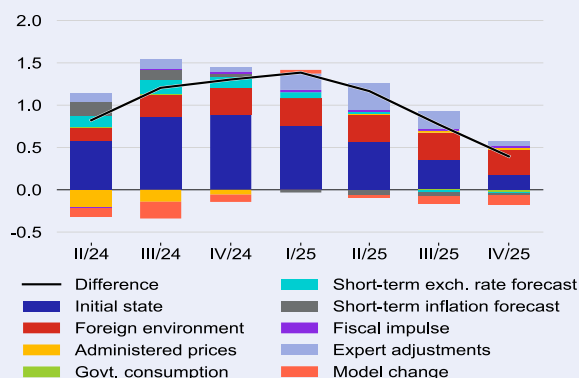▪ The **model change** reflects the switch to the updated g3+ core forecasting model. The contribution of the model change expresses the difference in the interest rate path between the winter shadow forecast prepared using the updated model and the baseline scenario at that time.[19]

Comparison of the koruna exchange rate with the previous forecast (Chart IV.6)

▪ The short-term exchange rate forecast mainly reflects the **observed levels**, which shift it to a weaker initial level than in the previous forecast. This in turn reflects a change in financial market expectations regarding the prudent approach of global central banks to reducing interest rates. This relates mostly to the ECB, but the Federal Reserve's very cautious approach to starting policy rate cuts may also have a depreciation effect on the koruna against world currencies.

▪ The koruna will appreciate over the outlook horizon at a broadly similar pace as in the previous forecast. The pace of appreciation of the koruna is dampened by a downscaling of the previous expert adjustments to the exchange rate.

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18 The Federal Reserve is even more cautious about starting to lower monetary policy interest rates than the ECB.

19 The winter shadow forecast implied a need for a slightly faster reduction in interest rates relative to the baseline scenario at the time. The shadow forecast was presented along with the updated g3+ core forecasting model in the Appendix to Monetary Policy Report – Winter 2024.

Money market rates are declining, while rates with longer maturities have risen since the start of this year

PRIBOR interest rates are falling gradually in response to the lowering of the CNB's key interest rates. The slope of the money market yield curve is markedly negative, due to expectations that monetary conditions will continue to ease in this way. Conversely, domestic rates with longer maturities (over 2Y) started to rise in around March (see Chart IV.7). They thus followed rates on foreign markets (particularly in the USA), which responded to the communications of major central banks (the ECB and the Fed) regarding the start of the policy rate reduction phase; the banks want to be convinced of a sustainable return of inflation to 2%. Overall, domestic IRS rates have risen by up to 0.7 pp at individual maturities since the start of this year. Government bond yields have gone up by roughly the same amount.[20] This has resulted in a moderate autonomous tightening of domestic monetary conditions in the more broadly defined interest rate component. This may slow the speed of recovery of domestic demand (and the mortgage and housing markets) via higher rates on some loan and deposit products of banks. The convex slope of the domestic IRS and government bond yield curves – with a minimum at around 5Y maturity – remained approximately unchanged (see Chart IV.8).

Client interest rates declined in response to the reduction of the CNB's key interest rates

Interest rates are at their lowest levels since around mid-2022 in all segments of the credit market. The rate on genuinely new koruna loans to non-financial corporations has dropped by 1.4 pp overall to 7.3% in March since the CNB's key rates were lowered last December. The monetary policy rate cuts are thus transmitting quickly in this segment. The rate on koruna loans to corporations is approximately 1 pp higher than that on euro-denominated loans. The rate on new loans for house purchase dropped by 0.3 pp to 5.2% between mid-2023 and March 2024 (see Chart IV.9). This reflected the previous decline in market rates with longer maturities. However, the recent increase in these rates will slow the decline in mortgage rates in the period ahead (see above).

Interest rates on deposits are continuing to respond to the reduction of monetary policy rates – the rate on new deposits with agreed maturity has fallen by 0.9 pp since last November to 5.3%. Real interest rates remain positive due to lower inflation expected one year ahead. Ex post real rates are also positive.

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20 The Ministry of Finance issued CZK 104 billion of government bonds on the primary market between the start of this year and the end of April. The Funding and Debt Management Strategy for 2024 as a whole assumes issues amounting to CZK 300–400 billion.

*The **3M PRIBOR market interest rate** is a money market reference rate with a maturity of three months which is 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 reflects, among other things, expectations regarding the future path of monetary policy interest rates. This difference currently (before the CNB Bank Board's May monetary policy meeting) stands at -0.2 pp.*

Chart IV.7

Domestic interest rates with longer maturities have mostly increased in recent weeks
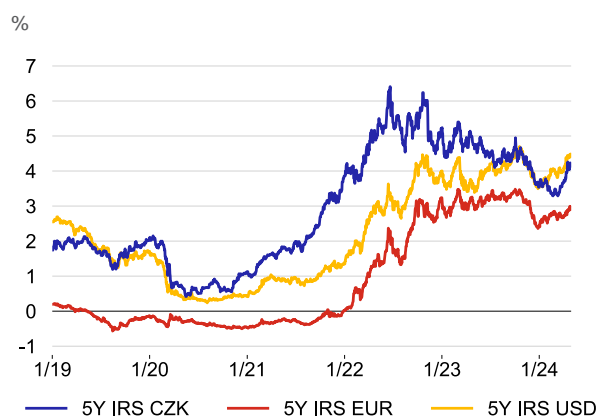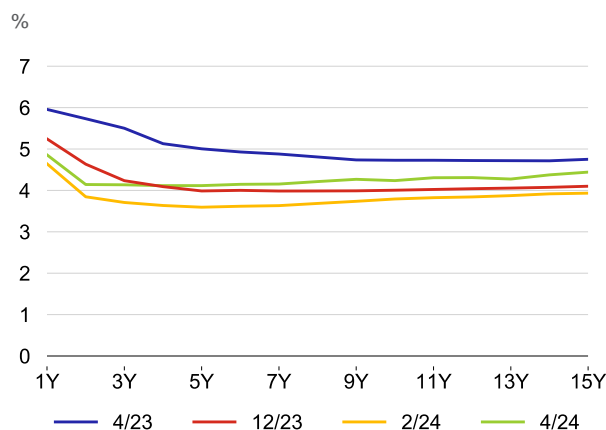
%

5Y IRS CZK   5Y IRS EUR   5Y IRS USD

Chart IV.8

The Czech government bond yield curve shifted higher compared to the start of this year; its slope is convex

%

4/23   12/23   2/24   4/24

Growth in loans to non-financial corporations slowed, while growth in loans to households stabilised

Growth in corporate loans slowed to 6.2% in 2024 Q1 (from the relatively high level recorded at the end of 2023). Foreign currency loans continued to contribute to growth in corporate loans, amid a persisting slight decline in koruna loans. The share of foreign currency loans in total loans to corporations thus increased to 52%. This share is at a similar level for new loans. Genuinely new koruna loans fell slightly year on year in January–March, and their volume is still relatively low. According to the Bank Lending Survey, corporations' total demand for loans fell slightly in 2024 Q1. This was due to still high interest rates, though their effect on demand was less intense than in the previous period. Banks continued to perceive reduced demand for loans for fixed investment, albeit less broadly than in the past. According to the forecast, growth in loans to corporations will rise in response to a gradual decline in interest rates and renewed economic growth (see Chart IV.10).

Growth in loans to households for house purchase stabilised at 4.2% following a previous slowdown. Banks perceived further growth in demand for housing loans at the start of 2024. This reflected expectations of a continued increase in activity on the residential property market accompanied by a rise in residential property prices and a fall in mortgage rates. Genuinely new mortgages are indicating a continued mortgage market recovery. According to the forecast, growth in housing loans will rise this year due to growing demand for new mortgage loans (see Chart IV.10).

The risks of the forecast are modestly inflationary

The main factor that may hinder the decline in domestic interest rates is a potential later and slower reduction in foreign interest rates and its effect on the koruna.

Several uncertainties are also associated with the forecast. On the domestic economy side, there is uncertainty about the pace of cooling of services inflation and uncertainty regarding net exports linked with external demand developments. Other uncertainties relate to wage growth and the intensity of the decline in the household saving rate. There is also general uncertainty around natural interest rate levels in the globalised economy, which has been long been a subject of debate in central bank circles.

A later and slower reduction in foreign interest rates would reduce the need to lower domestic interest rates rapidly

The main factor that may hinder the decline in domestic interest rates stems from the changing market outlooks for the USA. New data on the US economy and the communications of Fed representatives suggest that

Chart IV.9

Interest rates on loans to corporations and loans for house purchase decreased

%

- 2W repo rate
- 10Y IRS
- Interest rate on new loans to non-financial corporations
- Interest rate on new loans for house purchase
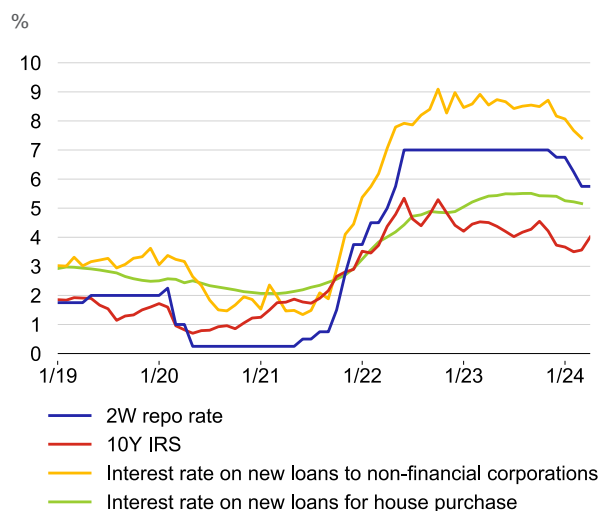
Chart IV.10

Growth in loans to corporations and to households for house purchase will accelerate this year

annual rates of growth in %

- Loans to non-financial corporations
- Loans for house purchase
- Consumer credit
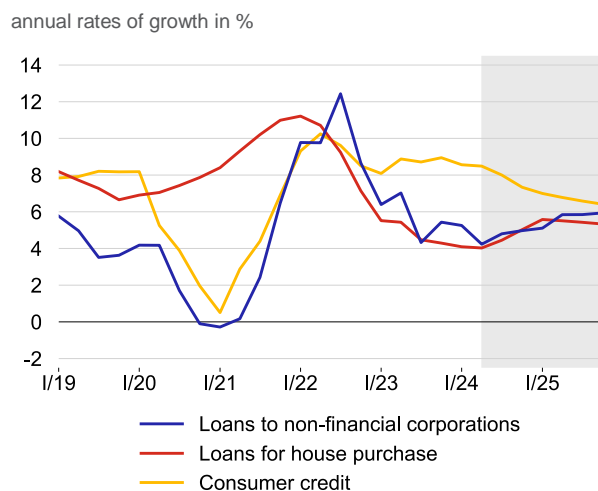
Note: The annual rates of growth in loans were affected in 2023 Q2 by the purchase of the loans of Sberbank CZ, a.s. by Česká spořitelna in April. The forecast was exceptionally made on the basis of the latest known data for February 2024. This was due to a significant revision of the data in March, which took place after the forecast had been closed.

the Federal Reserve may not start its rate-cutting cycle until the second half of this year. This may have a bearing on the decision-making of the ECB, whose representatives are increasingly mentioning the June meeting as a possible date for the first rate cut. A later and slower reduction in foreign interest rates than expected in the available market outlooks included in the baseline scenario of the forecast could push the koruna to weaker levels. This would reduce the need for a reduction in domestic interest rates relative to the forecast.

The pace of further price cooling in the services segment is an uncertainty of the forecast

While growth in goods prices slowed further at the start of this year, approaching zero, services inflation is at an elevated level (for now). Prices of services have thus slowed the decline in core inflation. The further evolution of prices of services is uncertain. A continued correction of prices of services would contribute to a further drop in core inflation. Conversely, persisting high growth in services prices, amid divergence of the more volatile goods inflation from zero or a larger-than-expected increase in the contribution of imputed rent, could lead to a rise in core inflation.[21]

Uncertainty surrounds external demand and the related further evolution of net exports

The recovery of Germany, the Czech Republic's key trading partner, has been sluggish until recently, with a turnaround only indicated by Germany's industrial production data for February. Nonetheless, the persisting structural problems of the German economy remain an uncertainty regarding its future development. In the course of 2024, faster growth in exports should be aided by a gradual recovery in external demand, which – as described above – is still very fragile. The situation is complicated by still heightened geopolitical tensions, especially the ongoing war in Ukraine and the conflict in the Middle East.

Other uncertainties relate to wage growth in market and non-market sectors and the intensity of the decline in the household saving rate

The forecast expects the high quarterly nominal wage growth recorded at the start of this year to correct quite quickly but annual wage growth to remain elevated throughout the year owing to an initial increase. However, the expected decline in wage growth is subject to an increased degree of uncertainty. Wages and salaries in non-market sectors will be affected this

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21 This topic is examined in greater detail in an analysis in Box 2 in section III. According to this analysis, the uncertainty regarding the further slowdown in services inflation is associated mainly with the fading of the currently low contribution of imputed rent in a recovering property market.

year by a public sector pay freeze. The government has started to negotiate a public sector pay increase for next year. The trade unions are demanding a pay rise of 15% following the recent significant declines in real remuneration.

Renewed growth in real wages will contribute to a recovery in household consumption over the outlook horizon. The baseline scenario of the forecast also expects a return to normal consumer behaviour by Czech households to support household consumption, amid rapidly improving sentiment and falling interest rates.[22] However, the exact timing and intensity of the decrease in the (still significantly elevated) saving rate, which will affect growth in household consumption, remain uncertain.

The natural interest rate levels in the foreign and domestic economies are also a general uncertainty of the forecast

The return of real interest rates to positive levels has opened a debate on whether there has been an increase in the natural rate of interest in advanced economies, i.e. the level consistent with inflation being at the target in the long term and the economy operating at its potential. Monetary policy-neutral rates are derived from the natural rate, which is an unobserved and thus only estimated variable.[23]

A number of reasons have recently emerged in the international debate for a possible shift of the natural rate to higher levels. In addition to higher observed long-term market rates, effects influencing the balance between saving and investment have been mentioned. The increased need for investment is linked to the green transformation of economies, higher climate risks, digitisation and the development of artificial intelligence, as well as higher defence spending. In general, a greater role for government spending and a rise in public debt creates an increased demand for loanable funds and can push the natural rate up. Partial deglobalisation is also fostering a potentially higher natural rate. The demographic trend of an ageing population can act in both directions, reducing the natural rate when savings are being built up for old age, and on the contrary increasing it when they are drawn down at retirement age.

The CNB's estimates indicate that the natural rate of interest in the Czech Republic has long been around 1% (see Chart IV.11).[24] This is the value used in the

Chart IV.11
Estimates of the natural rate of interest for the Czech economy have long been around 1%
%; p.a.

— Hlédik and Vlček (2018)
— 5y5y forward swap (smoothed by Hamilton filter)
— Modification of Holston, Laubach and Williams (2017)
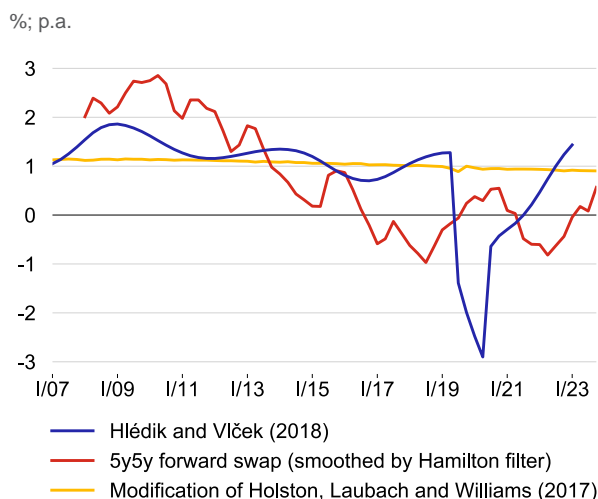
Note: The sharp drop in the natural rate of interest in 2019–2020 according to the Hlédik and Vlček methodology is due to a one-off fall in potential output.

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22 In this respect, an expert adjustment was made to household consumption.

23 In her speech, ECB Executive Board Member Isabel Schnabel also discussed the uncertainty about the natural rate of interest in the euro area.

24 See Hlédik, T., Vlček J. (2018): Quantifying the natural rate of interest in a small open economy – The Czech case and Holston, K., Laubach, T., Williams, J. C. (2017): Measuring the natural rate of interest: International trends and determinants.

baseline scenario of the forecast. However, a scenario featuring a higher natural rate of interest has been constructed to illustrate a hypothetical situation in which the natural rates in the Czech Republic and in the euro area have increased in recent years (in both cases by 0.5 pp). In this scenario, the achievement of the inflation target at the monetary policy horizon and beyond is consistent with a higher domestic interest rate path than in the baseline scenario.

Scenario of a higher natural rate of interest (r*)

An international debate has recently been going on about whether the natural rate of interest[25] – an important anchor for monetary policy in the longer term – has increased. The natural rate in the Czech economy may have been increased by a number of factors that reduce the supply of savings or increase the demand for loanable funds and investment. These factors include higher fiscal deficits since the Covid pandemic, higher riskiness of the domestic economy, slower real convergence towards the euro area and related slower appreciation of the real equilibrium exchange rate, and spillover of higher natural rates of interest from abroad. Three estimation methods were used to assess the possible size of the shift in the natural rate of interest (see Chart IV.11). Their results do not call into question the current level of 1%, which is what continues to be used in the baseline scenario of the forecast.

An estimate based on a structural model of a small open economy[26] indicates that after the period disrupted by pandemic shocks, there was a gradual increase in the natural rate of interest slightly above the level assumed in the baseline scenario of the forecast.

Another method used to estimate the natural rate of interest is the filtration of long-term interest rates (the 5Y5Y interest rate swap). It illustrates how the market itself evaluates the long-term rate outlook. This estimate was very low for a long time. It has been heading towards 1% only in recent years, and it is now moving slightly above that level. A weakness of this approach is that long-term market rates are affected to some extent by current monetary policy. Deriving movements in the natural rate of interest from them is therefore somewhat tautological.

The third estimate is based on the Federal Reserve's approach,[27] which is modified for a small open economy like the Czech Republic. The estimate based on this method has recently shown a downward tendency. However, the deviations around the assumption of the baseline scenario are very small in this case.

To sum up, the above estimates do not contradict the setting of a 1% natural rate of interest for the Czech Republic. If there has been an upward shift, the magnitude of the increase is no more than 0.5 pp. The ECB has published a similar quantification for the euro area economy[28] (0.3 pp).

The scenario considers a symmetrical increase in the natural interest rate in the Czech Republic and abroad. The settings of the remaining domestic equilibria, including the equilibrium appreciation of the koruna and the risk premium, are the same as in the baseline scenario. The scenario assumes a gradual increase in the foreign monetary policy-neutral nominal interest rate[29] of the ECB in 2021 and 2022 by 0.5 pp to 3%. In the scenario, this increase is accompanied by a parallel rise in the domestic monetary policy-neutral nominal interest rate from 3% to 3.5%. The rates remain elevated at the new levels over the outlook horizon.

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25 The natural rate of interest can be defined as the short-term interest rate consistent, in the long run, with inflation being at target and the economy operating at its potential (equilibrium) level. The natural rate is an unobserved variable. The neutral monetary policy stance in the interest rate component is derived from its level.

26 This is an update of the model-based estimate of the natural rate of interest by Hlédik, T., Vlček J. (2018): Quantifying the natural rate of interest in a small open economy – The Czech case.

27 The New York Fed regularly updates its estimates using the method by Holston, K., Laubach, T., Williams, J. C. (2017): Measuring the natural rate of interest: International trends and determinants.

28 See Brand, C., Lisack, N., Mazelis, F. (2024): Estimates of the natural interest rate for the euro area: An update.

29 The monetary policy-neutral nominal interest rate is defined as the sum of the natural rate of interest and the 2% inflation target.

In this scenario, foreign interest rates do not decrease towards 2.5% in 2025 and 2026 as assumed in the baseline scenario. Instead, they stop declining earlier at the new neutral level of 3%.[30] Foreign rates will stay at this level over the following two years.

Given the higher natural rates of interest, domestic interest rates are maintained at a slightly higher level than in the baseline scenario, so that domestic monetary policy is not significantly looser and ensures that inflation hits the target at the monetary policy horizon. Higher domestic interest rates are also fostered by a higher outlook for foreign interest rates. In this scenario, the outlook for the achievement of the inflation target in the future means that interest rates will fall slightly below the neutral level of 3.5% at the end of 2025. This, along with the expected evolution of foreign interest rates, which are well above the current market outlook used in the baseline scenario in 2026, fosters a slightly weaker koruna with no visible impact on inflation at the forecast horizon. The main role in driving a weaker exchange rate, as a significantly forward-looking variable, is played by economic agents' expectations, which almost immediately take into account the appreciably higher interest rate spread beyond the forecast horizon[31] (see Chart IV.12).

Chart IV.12
With a higher natural rate of interest, a higher market interest rate path is needed to hit the inflation target
comparison of baseline scenario with higher natural rate scenario

3M EURIBOR
%

3M PRIBOR
%

Inflation
y-o-y changes in CPI in %

Nominal exchange rate
CZK/EUR

Baseline scenario
Higher natural rate scenario
Natural rates
Differences (rhs)

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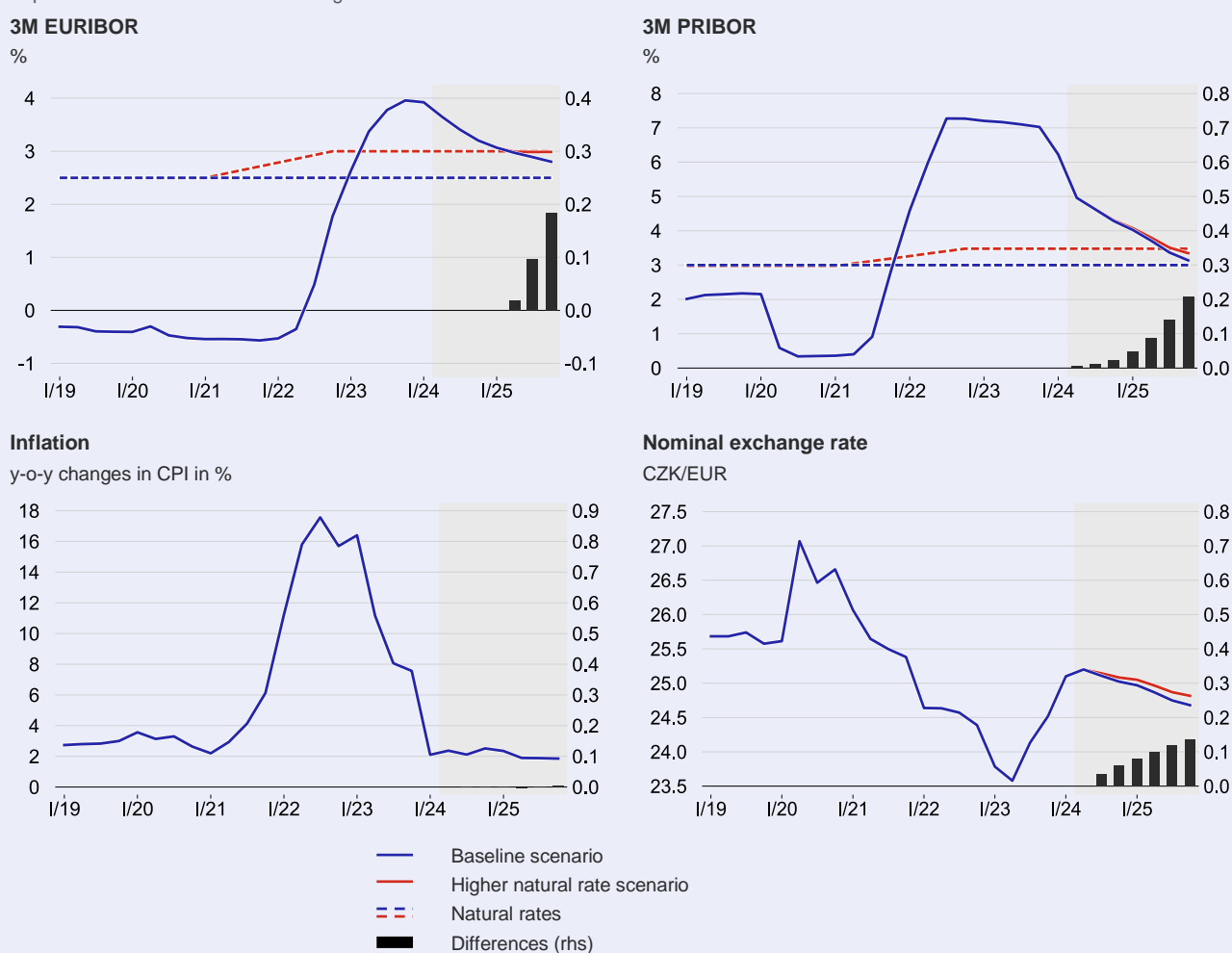
30 The scenario assumes that foreign rates will evolve in line with the baseline scenario this year, as current market expectations for ECB monetary policy this year do not rule out the materialisation of a scenario of a higher natural rate of interest in the euro area. If an increased natural rate were to lead to a higher ECB rate outlook this year, the forecast for domestic interest rates would also move higher.

31 Given the currently observed koruna exchange rate and the available leading indicators, the scenario assumes that the exchange rate and inflation forecasts for 2024 Q2 are the same as in the baseline scenario.

Beyond the scope of the forecast, the Inflation and Monetary Policy Risks Scoreboard is also indicating several upside risks to inflation

The Scoreboard is the CNB's new tool for monitoring latent inflation risks and other monetary policy threats beyond the scope of the main scenario of the forecast. Starting with this Monetary Policy Report, the CNB will regularly publish the Scoreboard.[32] It is currently identifying wide general government deficits, still elevated inflation expectations and unobserved long-term inflation, which has been elevated since the start of 2021 and could complicate the sustainable achievement of the inflation target, as upside risks to inflation. However, the intensity of these long-term risks is decreasing over time.

By contrast, the Scoreboard identifies the slope of the yield curve, which has been negative in recent years, as a potential anti-inflationary risk.

The general government deficit will remain large, despite improving, and will still contribute to increased growth in the quantity of money in the economy

The annual growth rate of M3 slowed, reaching 6.8% in March. This slowdown was due to a technical effect associated with the transfer of money from the non-bank sector to the Financial Market Guarantee System and an improvement in the general government deficit. However, the contribution of general government debt to M3 growth after taking into account central government deposits is still elevated compared to the past. It averaged 3.7 pp last year and decreased to 2.7 pp on average in Q1 (see Chart IV.13). It was 0.2 pp on average in 2010–2019. Given the ongoing consolidation of public finance (see Chart IV.14), the contribution of general government financing to M3 growth will decrease over time. On the other hand, the growth rate of loans to the private sector remains moderate due to still restrictive monetary policy and low economic activity. However, it will increase in the period ahead.

Inflation expectations have declined but remain above the 2% target so far

The available indicators are signalling that the risk of inflation expectations becoming unanchored is fading gradually. According to a joint survey conducted by the Confederation of Industry and the CNB, the inflation expectations of non-financial corporations one year ahead declined to 4.1% in March (see Table IV.1). Three years ahead, they are at the same level and thus remain above the CNB's 2% inflation target (see

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32 The Scoreboard will be regularly published in the Chartbook, which is a parallel publication to the Monetary Policy Reports. More detailed information about the Scoreboard is available in the document: Scoreboard – methodology (February 2024).

Chart IV.13
M3 growth slowed, but the contribution of general government deficit financing is still higher than in the past
annual rates of growth in %; contributions in pp

- M3
- M1
- Loans to private sector
- Net foreign assets
- Loans to government
- Deposits of central government
- Other
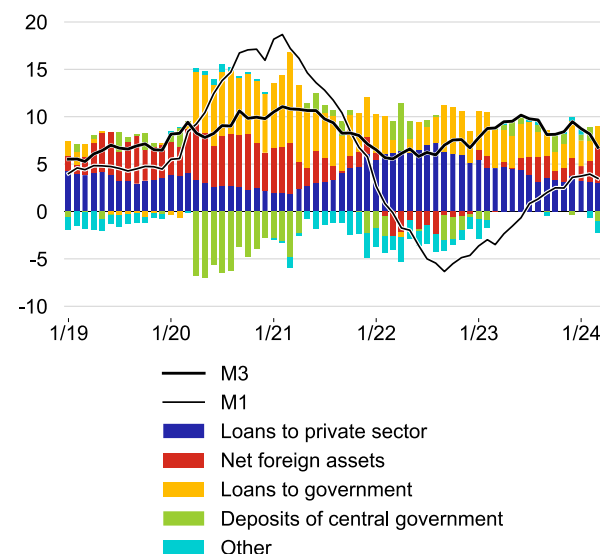
Chart IV.14
General government will continue to run a deficit, but this deficit will shrink markedly over the forecast horizon
% of nominal GDP

- General government budget balance
- Loans to general government from MFIs (opposite sign)
- Cyclical component of budget balance (aggregate method)
- Cyclically adjusted budget balance (aggregate method)
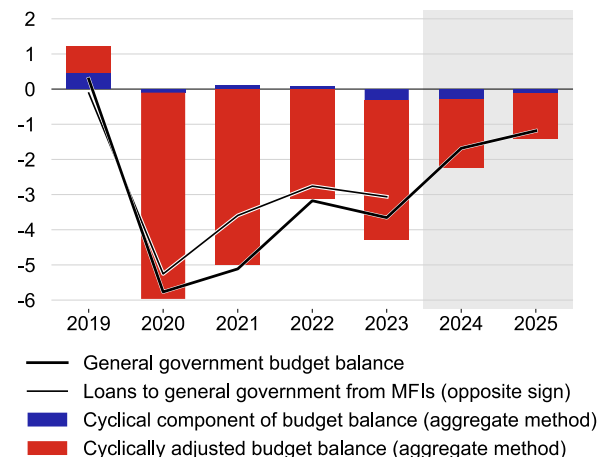
The inflation expectations of households, firms and the financial markets fundamentally affect their behaviour and decision-making, and hence also the overall economic situation and the resulting inflation rate. As expectations can be largely self-fulfilling, it is important that central banks monitor them and try to keep them close to their inflation target.

Chart IV.15). Firms are also asked about the prices of their main inputs (commodities, materials, energy, etc.) one year ahead. This forward-looking indicator decreased to 5% in March. The European Commission's business survey also shows that the share of firms expecting the prices of their products and services to increase in the near term remains low.

Concerns about growth in the price level among Czech households are also diminishing. The indicator of inflation perceived by households in the European Commission survey continued to fall from an all-time high. The indicator of the inflation rate expected one year ahead also decreased slightly at the start of this year (see Chart IV.16). According to the CZSO's April business survey, concerns about rising prices have eased markedly. In addition, the outlook for their financial situation has improved and their intention to save has increased.

Inflation expected by financial market analysts is just above the CNB's 2% target at both the one-year and three-year horizons.

Given the modestly upside risks to inflation, the decline in rates may be slower than in the forecast

Consistent with the baseline scenario of the spring forecast is a continued decline in 3M PRIBOR market interest rates from their average level of 6.2% in 2024 Q1 (5.6% at the end of the quarter) to 5% on average in Q2. The baseline scenario thus points to a need to further ease the interest rate component of the monetary conditions. The risks of the forecast are assessed as modestly inflationary overall, i.e. acting towards a slower decline in interest rates than in the baseline scenario.

The exchange rate path is an important factor for setting interest rates

The koruna depreciated noticeably after the monetary policy meeting in February. It weakened further following the publication of inflation figures and in response to the shift in expectations about the behaviour of major central banks. As a result, the previous short-term exchange rate forecast did not materialise. It is useful to describe the sensitivity of macroeconomic developments to exchange rate changes in the updated g3+ model to users of the Monetary Policy Report. For this purpose, a sensitivity scenario featuring a different exchange rate path has been prepared.

This scenario shows the effects of a short-term swing of exchange rate in either direction. Specifically, it involves a deviation of ±3% (75 hellers) from the baseline scenario in 2024 Q2. In the scenario, monetary policy compensates for the deviation of the koruna by adjusting the exchange rate path compared to the baseline scenario. However, it does not fully offset the impact on inflation.

Table IV.1

Analysts' inflation expectations at the three-year horizon are slightly above the inflation target; those of firms dropped towards 4%

sample of approximately 18 analysts and 150 corporations; 1Y horizon; annual percentage changes unless otherwise indicated

	12/23	1/24	2/24	3/24	4/24
FMIE:					
CPI	2.9	2.5	2.4	2.1	2.2
CPI, 3Y horizon	2.3	2.3	2.3	2.2	2.2
Real GDP in 2024	1.4	1.4	1.2	1.1	1.2
Real GDP in 2025		2.7	2.6	2.6	2.6
Nominal wages in 2024	6.5	6.3	6.2	6.2	6.1
Nominal wages in 2025		5.2	5.2	5.1	5.1
CZK/EUR exchange rate (level)	24.5	24.6	24.8	24.7	24.7
2W repo rate (%)	4.3	4.0	3.7	3.5	3.5
1Y PRIBOR (%)	4.1	3.9	3.5	3.5	3.5
Corporations:					
CPI	5.8			4.1	
CPI, 3Y horizon	4.9			4.1	
CF:					
Real GDP in 2024	1.6	1.4	1.3	1.2	1.2
Real GDP in 2025		2.8	2.8	2.8	2.8
Nominal wages in 2024	6.5	6.1	5.9	6.0	5.7
Nominal wages in 2025		5.2	5.1	5.2	5.1
CZK/EUR exchange rate (level)	24.7	24.7	24.7	24.7	24.9
3M PRIBOR (%)	4.3	4.0	3.6	3.6	3.6

Chart IV.15

Inflation expectations declined further among non-financial corporations at the three-year horizon but remain above the 2% target

sample of approximately 18 analysts and 150 corporations; %
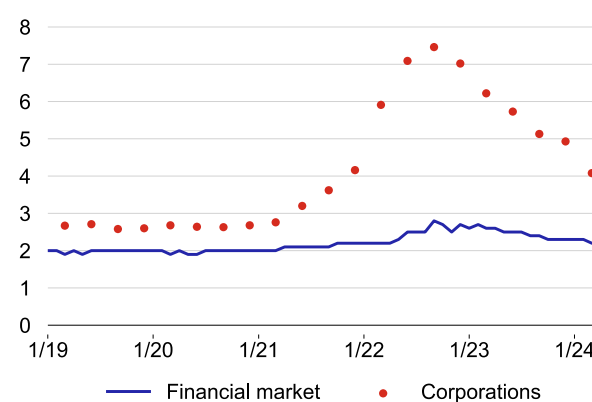
Chart IV.16

The inflation expectations of Czech and euro area households decreased further at the start of this year

households' inflation expectations in next 12 months according to European Commission Business and Consumer Survey; sample of approximately 1,000 households for the Czech Republic; in %
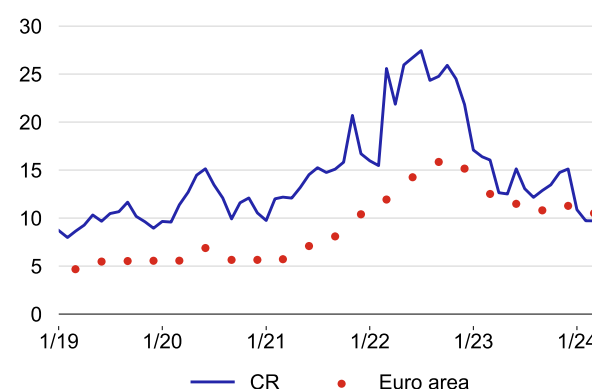
Sensitivity scenario of a temporarily different exchange rate path

This symmetric scenario shows the effects of a hypothetical situation where the exchange rate temporarily deviates by ±3% (75 hellers) from its baseline scenario level in 2024 Q2. This is a one-off, non-fundamental shock, after which – given the nature of the shock and the endogenous monetary policy response – all variables return to their baseline scenario levels.

If the koruna is stronger (red in the charts) or, analogously, weaker (yellow in the charts), the central bank responds to the weaker (stronger) inflation pressures stemming from import prices with lower (higher) interest rates compared to the baseline scenario. The interest rate path differs the most in 2024 Q3, when interest rates are about 50 basis points lower (higher). However, as interest rates affect the economy later than the exchange rate, the central bank does not fully suppress the lower (higher) inflation pressures. Inflation is thus 0.3 pp lower (higher) than in the baseline scenario in late 2024 and early 2025. The impact on economic growth is minimal, as the temporary deviation of the exchange rate from the baseline scenario affects export activity, but this is offset by an opposite reaction of domestic demand.

Chart IV.17

Monetary policy offsets the short-term deviation of the koruna from the baseline scenario by adjusting the exchange rate path

comparison of baseline scenario with stronger and weaker koruna scenarios

Nominal exchange rate
CZK/EUR
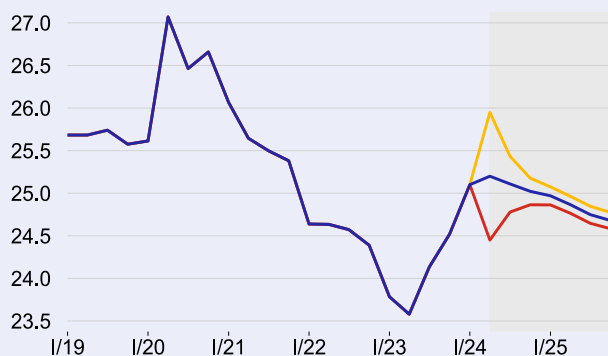
3M PRIBOR
%

Inflation
y-o-y changes in CPI in %

GDP
y-o-y changes in %

— Baseline scenario
— Stronger koruna scenario
— Weaker koruna scenario

The real monetary conditions indicate continued restrictive monetary policy

The deviations of ex ante real interest rates and the real exchange rate from their equilibrium levels (the equilibrium interest rate is proxied by its long-term average of -0.1%) enter the real monetary conditions index (RMCI). The restrictiveness of the interest rate component of the monetary conditions is expected to ease gradually this year (see Chart IV.18) as a result of the forecasted continued decline in interest rates.

The exchange rate component of the real monetary conditions is expansionary this year. This is due to the current weaker exchange rate and only slight strengthening of the koruna over the forecast horizon, which lags behind the equilibrium rate of real appreciation. The eased exchange rate component of the monetary conditions reduces the overall restrictiveness of monetary policy, which gradually diminishes due to declining interest rates.

Chart IV.18

Monetary conditions remain restrictive in the interest rate component only

real monetary conditions index (RMCI); positive (negative) values correspond to easy (tight) monetary conditions
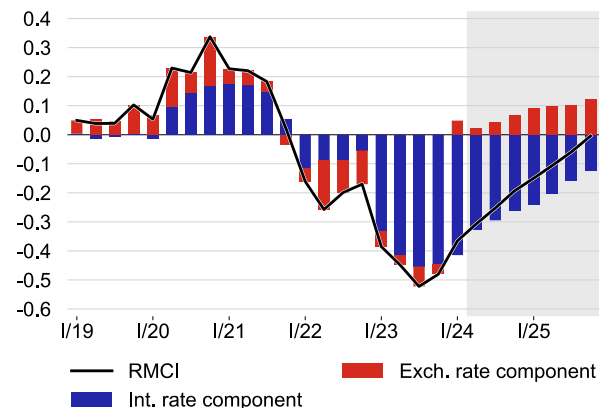
APPENDIX   Assessment of the fulfilment of the 2022 forecasts

The CNB works to ensure a high level of monetary policy credibility, accountability and transparency. Besides regularly assessing the achievement of the inflation target, usually in a box in the winter Monetary Policy Report (MPR), this involves reviewing the fulfilment of past forecasts. The reviews provide feedback on the use of the CNB's forecasting and analytical system. The core of the system is the g3+ forecasting model, the basic unifying element used in preparing the CNB's macroeconomic forecasts. The conclusions of the assessments of past forecasts are used to verify the model's current settings and to consider potential adjustments to them. Such adjustments have also resulted an updated g3+ model, which will be the CNB's core forecasting model from this MPR onwards.[1]

In this appendix, we first compare the CNB's forecasts prepared in 2022 with the contemporaneous outlooks of other analytical institutions. We then assess the fulfilment of the CNB's 2022 forecasts, starting with a comparison of their assumptions at the time (the exogenous inputs of the forecast) and the subsequently observed developments. We then compare the forecasted paths of the main domestic endogenous variables themselves with the data now known. The final passage is devoted to a hypothetical model simulation. It shows roughly what the forecast in the Summer 2022 MPR would have looked like had the subsequently observed, but then unknown, future paths of all the assumptions entering the forecast been known at the time it was prepared.

The 2022 forecasts compared to other institutions

This first section compares the CNB's 2022 forecasts with other analytical institutions' contemporaneous outlooks. Chart 1 shows the forecasted and subsequently observed main variables in whole-year terms for 2022 and 2023.

Chart 1

Comparison of the CNB's 2022 forecasts with those of other institutions (full-year data for 2022 and 2023)

The data sources are the CNB's forecasts and the Ministry of Finance (MoF) surveys published in the 2022 *Macroeconomic Forecast of the Czech Republic*. The MoF surveys are based on the publicly available forecasts of 13 institutions, eight of them domestic (CNB, Czech Banking Association, MLSA and domestic commercial banks) and the others foreign (e.g. European Commission, OECD, IMF). For the purposes of this document, the CNB's forecasts are excluded from the survey and the MoF's forecasts are included.

Example: the blue CNB dot corresponding to "Spring 22" in the "GDP for 2022" chart shows the full-year GDP growth estimate for 2022 from the central bank forecast published in spring 2022 (i.e. the Spring 2022 MPR).
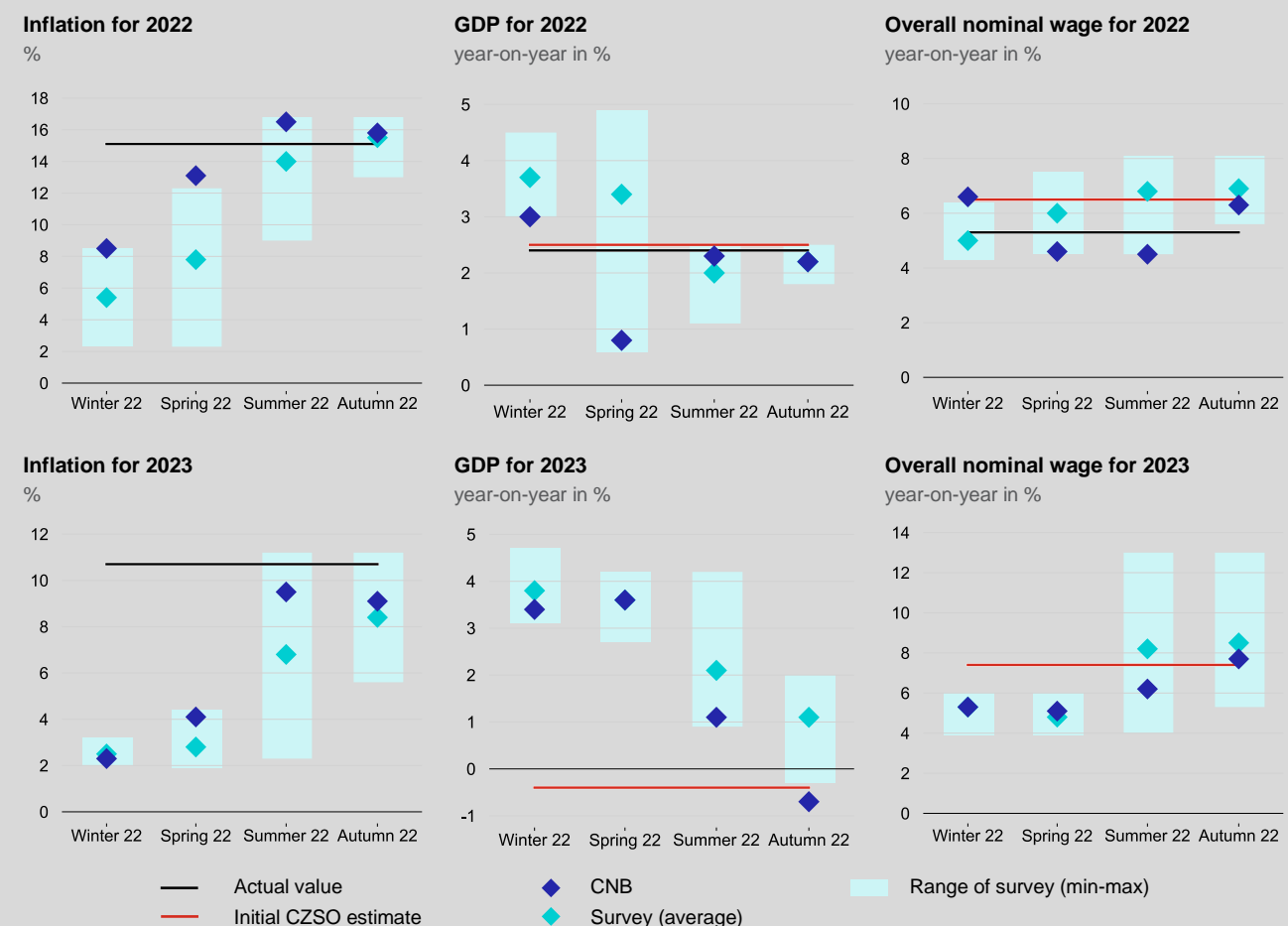
The data gathered reveals that the forecasts of the institutions under review for **consumer price inflation** took the strength and robustness of the inflation pressures into account only gradually, while the CNB estimated them better overall than the other institutions. The forecasts were additionally surrounded by a high degree of uncertainty linked primarily with the length and impacts of the conflict in Ukraine. This uncertainty was most evident in the spring forecasts, when the institutions were forced to predict whether governments would succeed in securing a substitute for Russian gas. It was in the spring forecast that the CNB was in hindsight very pessimistic in its **GDP** projection, as – contrary to its

> *The CNB's macroeconomic forecast* *serves as an important guide for the Bank Board when setting interest rates. The tool used to create the forecast is the g3+ core forecasting model. **The baseline scenario** of the forecast predicts the most probable future evolution of the domestic economy in the view of the CNB Monetary Department's economists. The domestic interest rate path consistent with this ensures the achievement of the CNB's inflation target at the monetary policy horizon.*

expectations – countries managed to fill their gas storage facilities to solid levels ahead of the next winter. In its subsequent forecasts, though, the CNB's predictions for economic activity in 2022 were only just below the outcomes. For 2023, by contrast, all the forecasts underestimated the effect of the monetary policy tightening at home and abroad, so the institutions under review predicted significantly higher growth than the CZSO estimate.[2] We should note, however, that the CNB assessed the 2023 downturn better than the other institutions, especially in the summer and autumn forecasts. In the case of **wages**, the CNB's forecasts in 2022 were on average closer to what transpired than those of the other institutions. For 2023, the forecasts of both the CNB and the other institutions initially underestimated wage growth but subsequently predicted it quite well in comparison with the CZSO estimate now available.[3]

To sum up, the CNB's forecasts for inflation and domestic economic activity were rather more accurate than those of the other analytical institutions in 2022 (except for the spring forecast for 2022). In the case of overall nominal wage growth, the CNB predicted 2022 more accurately than the other institutions, while the projections for last year can be assessed as comparably accurate.

Assessment of the fulfilment of the 2022 forecasts – assumptions

The key assumptions of the CNB's macroeconomic forecast for the domestic economy are the outlooks for the foreign environment, fiscal policy and administered prices.[4] Of all the forecasts under assessment, the assumptions of the winter 2022 forecast turned out to be most off the mark, mainly because of Russia's unexpected invasion of Ukraine, which greatly exacerbated the energy crisis in Europe (see Chart 2). The foreign assumptions of the spring and summer forecasts did include this event but only partially captured its upward effect on energy prices. Conversely, the assumptions of the autumn forecast turned out, with hindsight, to be overly pessimistic. The outlooks at the time were caught out by the mild winter coupled with the rapid sourcing of alternative (non-Russian) gas supplies to EU countries and by faster easing of the global supply chain disruption. This led to a larger-than-expected decrease in industrial producer price inflation in the effective euro area and, from spring 2023 onwards, even to a decline in producer prices, which the outlooks under assessment had not included.

Apart from the winter forecast, which had not anticipated the conflict in Ukraine and its impacts, economic growth in the effective euro area was rather higher than in the forecasts under assessment in 2022. In a broadly solid economic situation, the ECB reacted to the surprisingly rapid rise in prices with a marked tightening, which neither the financial markets, nor the assumptions of the central bank forecasts under assessment had expected. The foreign monetary policy tightening was subsequently reflected in stagnation of the Czech Republic's main trading partner economies last year, whereas the assumptions of the CNB forecasts under assessment had expected a recovery.

The larger-than-expected rise in energy prices in 2022 led to an underestimated outlook for domestic administered prices on average (see Chart 2). The assumptions of the winter 2022 forecast deviate the most from the observed values. This forecast had not expected war to break out in Ukraine and hence could not have taken its upward impact on energy prices into account. In addition, annual administered price inflation was later affected by the unexpected temporary introduction of an energy savings tariff in 2022 Q4. The tariff was not announced until after the publication of the autumn 2022 forecast and so was not included in the assumptions of the forecasts under assessment.[5] The government support provided to households and firms to help with high energy bills, along with other expenditure induced by the war in Ukraine, led to markedly higher growth in nominal general government consumption relative to the assumptions of the forecasts under assessment.

Chart 2
Selected forecast assumptions

GDP in the effective euro area
y-o-y changes in %
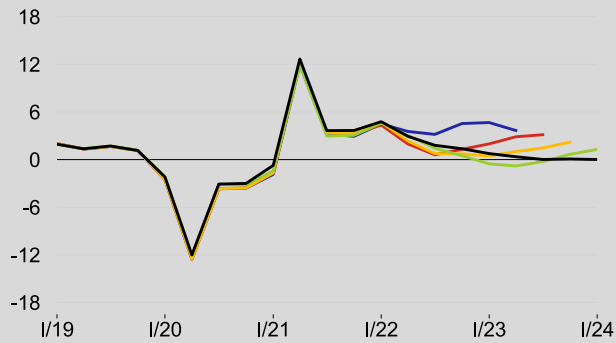
3M EURIBOR
%
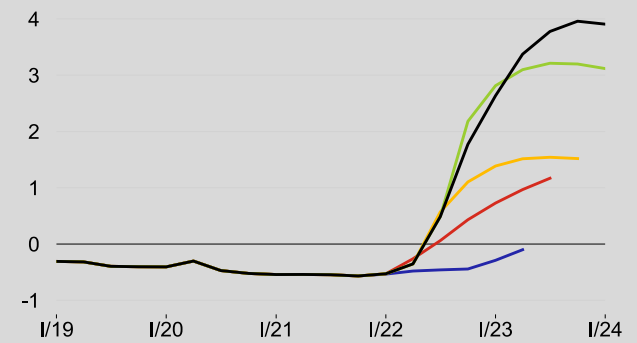
PPI in the effective euro area – total
y-o-y changes in %
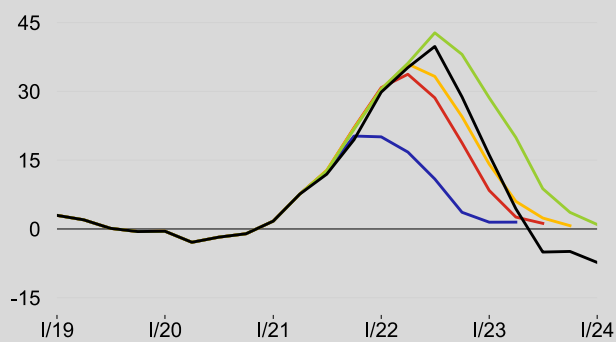
PPI in the effective euro area – energy component
y-o-y changes in %
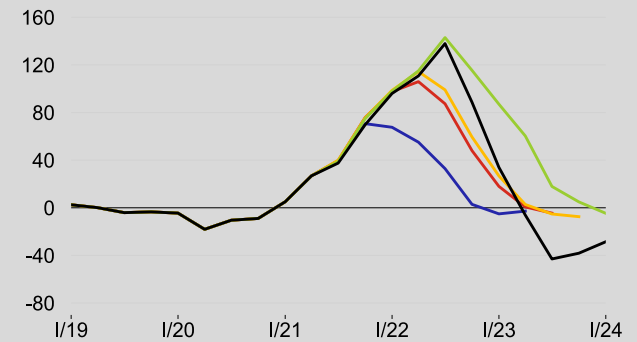
Domestic administered prices
y-o-y changes in %
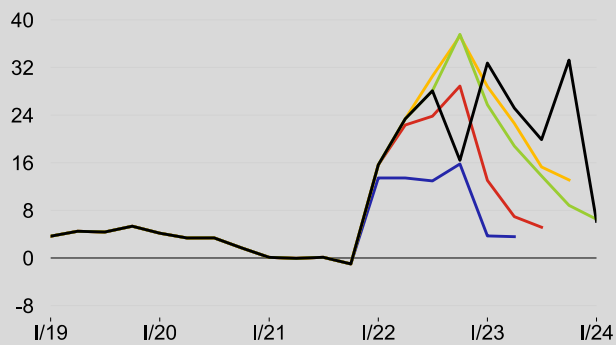
Nominal general government consumption
y-o-y changes in %
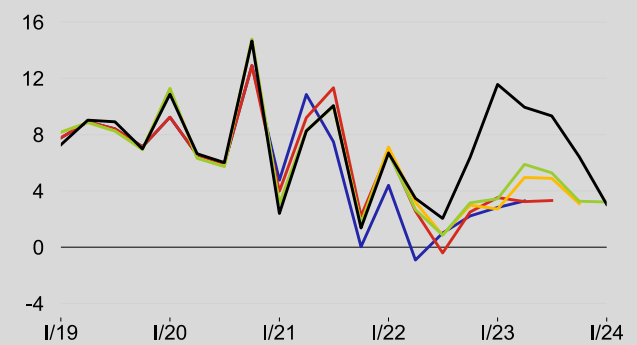
—— Actual value	—— Summer 2022 MPR	
—— Winter 2022 MPR	—— Autumn 2022 MPR	
—— Spring 2022 MPR		

Assessment of the fulfilment of the 2022 forecasts – key endogenous domestic variables

Except for the winter forecast, which had not included the effect of Russia's unexpected invasion of Ukraine on GDP growth, domestic **economic activity** developed better than in the forecasts under assessment in 2022 and early 2023 (see Chart 3). The deviations of the observed values from the forecasts were due mainly to stronger-than-assumed foreign economic activity, reflected in higher exports. The forecasts under assessment had been predicting a recovery in mid-2023, but it failed to materialise due to an unexpected continuation of the stagnation abroad (especially in Germany). This was reflected in substantially lower export activity and weaker growth in household consumption due to worse sentiment, reflected, among other things, in a surprisingly higher saving rate.

Chart 3
Forecasts of key domestic variables

Inflation
year-on-year in %

3M PRIBOR
%

GDP
y-o-y changes in %

Nominal exchange rate
CZK/EUR

Legend:
— Actual value
— Winter 2022 MPR
— Spring 2022 MPR
— Summer 2022 MPR
— Autumn 2022 MPR

Consumer inflation surged in the first half of 2022 and was thus above the level in the winter forecast at that time (see Chart 3). This was mainly due to cost effects, especially an unexpectedly sharp rise in energy prices linked with the outbreak of war in Ukraine. As time went on and the scale of the economic impacts of Russia's aggression began to become clear, the forecasts started to converge to the subsequently published figures in the course of 2022. The view of the strength of the demand pressures also became more accurate. The forecasts initially underestimated customers' willingness to accept higher prices. This even allowed sellers to raise prices faster than their costs were increasing. The summer and winter forecasts largely materialised. The exceptions were the fourth quarters of 2022 and 2023, when the aforementioned temporary introduction of an energy savings tariff played a role. The forecasts under assessment had not expected this tariff (nor, of course, the base effect it caused a year later).

After capturing the impacts of the war in Ukraine, the spring forecast – unlike the winter one – had identified a need for a further, greater tightening of **monetary policy**, which would have partially eased the elevated inflation pressures and allowed inflation to return faster to the target. However, the CNB decided not to respond fully to inflation pressures beyond the control of monetary policy (after considering, among other things, a simulation featuring a more

distant monetary policy horizon than the standard one in the [Spring 2022 MPR](#)), so the observed rate path was lower [(see Chart 3)](#). For the summer and autumn forecasts, the Bank Board decided not to react with interest rates to part of the inflation pressures, owing to their cost-push and expected temporary nature.[6] Accordingly, the monetary policy horizon in the baseline scenario itself was moved forward by two quarters in the summer forecast and one quarter in the autumn forecast.[7] Owing to the receding inflation pressures at the longer horizon, the implied rate path in the summer 2022 forecast now predicted a decline in rates, although this did not happen. The autumn 2022 forecast had expected a similar easing of inflation pressures overall, but on condition of a further temporary increase in interest rates due to a sizeable upward revision of wage growth relative to the summer forecast. The Bank Board responded to this situation by leaving interest rates higher for longer rather than raising them further and then lowering them.

The **koruna exchange rate** followed a different course than the forecasts under assessment [(see Chart 3)](#). While the winter 2022 forecast had predicted continued appreciation of the koruna, in reality the exchange rate strengthened significantly less, due to disastrously worse sentiment in the region because of Russia's aggression in Ukraine. The spring forecast had also predicted a temporary appreciation of the koruna on the back of rising rates, but a further worsening of financial market sentiment led conversely to a depreciation. However, it was dampened by actual and verbal foreign exchange interventions by the CNB (which intervened against the weakening koruna in the foreign exchange market in May and October 2022 by selling a total of EUR 25.56 billion of its foreign exchange reserves).[8] In late 2022 and early 2023, the koruna and other Central European currencies surprisingly firmed. This reflected the mild winter and the unexpectedly well-handled energy crisis in Europe. The koruna weakened following the formal ending of the intervention regime last August. This depreciation was also due in part to a narrowing of the interest rate differential vis-à-vis the euro area due to a tightening of ECB monetary policy and, at the end of the year, to the start of the domestic rate-cutting cycle as well. The CNB's forecasts in the second half of 2022 had expected the decline in interest rates and the accompanying weakening of the koruna to start earlier.

Hypothetical Summer 2022 MPR forecast incorporating knowledge of the actual evolution of the assumptions

The factors-known simulation is a hypothetical version of the Summer 2022 MPR macroeconomic forecast. It tells us what the forecast would have looked like had the subsequently observed paths of the assumptions at the time been used instead of the assumptions themselves.[9] Like the forecast at the time, the hypothetical simulation was prepared with a monetary policy horizon 18–24 months[10] ahead. However, the simulation is not a fully fledged forecast, as it does not contain additional expert adjustments.

Comparing the hypothetical factors-known simulation with the Summer 2022 MPR forecast, headline inflation is initially below the original forecast in 2022 and then above it in 2023 [(see Chart 4)](#). The difference is due partly to the aforementioned introduction of the energy savings tariff, whose effects on administered prices were not included in the original forecast. The higher inflation in the hypothetical simulation in 2023 reflects faster growth in nominal general government consumption and higher administered price inflation. In the hypothetical simulation, the central bank reacts to this outlook by temporarily raising interest rates to return inflation to the 2% target at the end of the period assessed. To achieve this, tighter monetary conditions are needed over the entire horizon of the hypothetical forecast, as it assumes considerably higher foreign interest rates than the original forecast. A more positive foreign output gap, coupled with an unexpected foreign producer price correction in 2023, leads to a stronger koruna in the hypothetical simulation. Higher general government consumption and slightly stronger external demand foster higher domestic economic growth in 2022. Owing to a subsequent stagnation of external demand, the hypothetical factors-known forecast leads to lower domestic GDP growth than predicted by the authentic forecast under assessment.

Comparing the hypothetical factors-known simulation with the historical outcome, we find that observed inflation was rather lower than in the simulation over the entire forecast horizon [(see Chart 4)](#). In reality, interest rates stayed higher for longer, suppressing the additional inflation pressures stemming from the depreciation pressure on the koruna. The stronger observed exchange rate of the koruna was additionally supported by actual and verbal foreign exchange interventions by the CNB, the impact of which the hypothetical forecast is unable to capture ex ante. Both components of the monetary conditions were thus tighter in reality, dampening economic activity. The stronger koruna led to a smaller quantity of goods and services being exported. The higher rates motivated people to save money. This was reflected in a larger decline in household consumption than in the hypothetical forecast. Overall, the factors-known simulation is closer to the historical outcomes than the summer 2022 forecast.

At the same time, the simulation shows that **starting the rate-cutting cycle earlier would have led to a smaller contraction of the economy. This would have come at the cost of somewhat higher inflation**, which, however, would also have fallen to the inflation target at the monetary policy horizon of the hypothetical forecast (i.e. in the first half of 2024).[11]

Chart 4

Comparison of the forecast and the factors-known simulation (hypothetical forecast) in the Summer 2022 MPR with the observed data

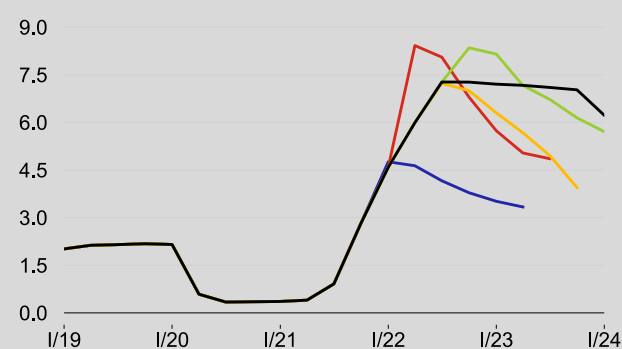light-grey area in charts shows Summer 2022 MPR forecast horizon

Inflation

year-on-year in %

3M PRIBOR

%

GDP
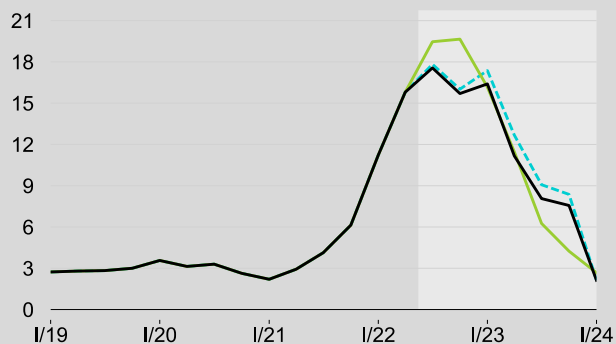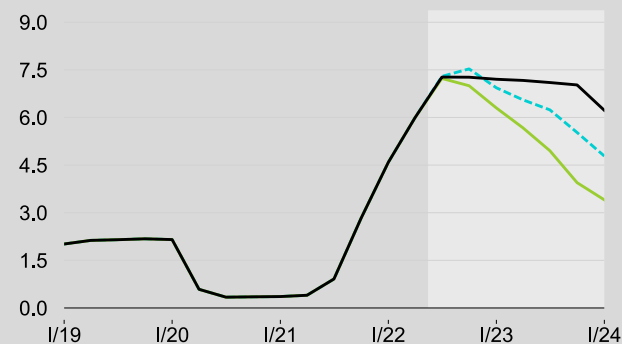
y-o-y changes in %
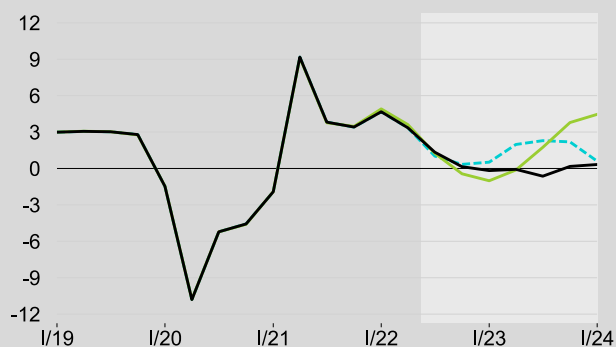
Nominal exchange rate

CZK/EUR
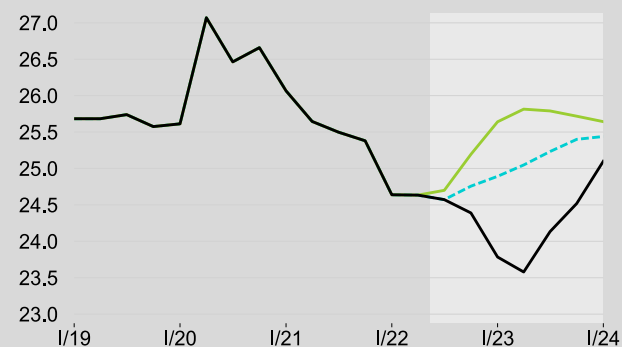
——— Actual value
——— Summer 2022 MPR forecast
- - - Summer 2022 MPR hypothetical forecast

—

1   The updated g3+ core forecasting model was described in more detail in an appendix to the Winter 2024 MPR.

2   The GDP growth figure will be revised by the CZSO simultaneously with the publication of the quarterly sectoral accounts in June 2024.

3   The whole-year wage growth figure for 2023 will be revised by the CZSO in a news release on 4 June 2024.

4   The specific indicators considered are industrial producer prices in the effective euro area (broken down into their core and energy components), foreign economic activity (the GDP trend and the output gap in the effective euro area), the USD/EUR cross rate, the Brent crude oil price and the 3M EURIBOR interest rate and its shadow component capturing the ECB's unconventional monetary policy measures (asset purchases). The domestic assumptions include the outlook for administered prices and nominal government consumption along with its deflator and the fiscal impulse.

5   This measure led to a decline in the price of energy and reduced administered price inflation in 2022 Q4. The lower base was conversely reflected in a jump in administered price inflation in the same quarter a year later, which temporarily interrupted the downward trend in annual consumer price inflation at the end of 2023.

6   In the inflation targeting regime, the need for escape clauses (exemptions from hitting the inflation target) derives from the relatively frequent occurrence of shock changes in exogenous factors (particularly supply-side shocks) that are completely or largely outside the purview of the domestic central bank's monetary policy. The escape clauses include major changes in world prices of raw materials, energy-producing materials and other commodities. Escape clauses are dealt with in more detail in an annex to Inflation Report III/2001.

7   In both the summer and autumn 2022 forecasts, the monetary policy horizon that the Bank Board focused on when making its decisions was therefore located in the first half of 2024.

8   At its monetary meeting on 3 August 2023, the Bank Board formally ended the intervention regime announced in May 2022 and resumed the programme of sales of part of the income on international reserves.

9   The factors-known simulation thus contains information regarding different ex post observed paths of administered prices, general government consumption and foreign variables.

10 The CNB normally considers a horizon 12–18 months ahead. In the summer 2022 forecast, however, the Bank Board decided not to react to part of the extraordinary cost factors from abroad and temporarily moved the horizon two quarters into the future.

11 In late 2022 and early 2023, the Bank Board gradually returned to the standard monetary policy horizon. This led to a need for tighter interest rates in the forecasts at the time than in the summer 2022 forecast.

Abbreviations

AEIS	Average Earnings Information System
BoE	Bank of England
BoJ	Bank of Japan
CF	Consensus Forecasts
CNB	Czech National Bank
CPI	consumer price index
CPIH	experimental consumer price index incorporating prices of older properties
CZK	Czech koruna
CZSO	Czech Statistical Office
DSTI	debt service-to-income
DTI	debt-to-income
ECB	European Central Bank
EEA	European Economic Area
EIA	US Energy Information Administration
EIA	Environmental Impact Assessment
EIU	Economist Intelligence Unit
ESA	European System of Accounts
ESCB	European System of Central Banks
ESI	Economic Sentiment Indicator
ESR	electronic sales registration
EU	European Union
EUR	euro
EURIBOR	Euro Interbank Offered Rate
FDI	foreign direct investment
FECF	Foreign Exchange Consensus Forecasts
Fed	US central bank
FMIE	Financial Market Inflation Expectations
FOMC	Federal Open Market Committee
FRA	forward rate agreement
GDP	gross domestic product
GNP	gross national product
GVA	gross value added
GVCs	global value chains
HP filter	Hodrick-Prescott filter
HPI	house price index
ICT	information and communications technology
IEA	International Energy Agency
Ifo	index of economic confidence in Germany
ILO	International Labour Organization
IMF	International Monetary Fund
IR	Inflation Report
IRI	Institute for Regional Information
IRS	interest rate swap
JPY	Japanese yen

LFS	Labour Force Survey
LIBOR	London Interbank Offered Rate
LTV	loan-to-value
LUCI	Labour Utilisation Composite Index
M1, M3	monetary aggregates
MFIs	monetary financial institutions
MLSA	Ministry of Labour and Social Affairs
m-o-m	month-on-month
MPR	Monetary Policy Report
NAIRU	non-accelerating inflation rate of unemployment
NBS	National Bank of Slovakia
OECD	Organisation for Economic Co-operation and Development
OPEC+	The OPEC member countries and another ten oil-exporting countries (the most important being Russia, Mexico and Kazakhstan)
PMI	Purchasing Managers Index
pp	percentage points
PPI	producer price index
PRIBOR	Prague Interbank Offered Rate
q-o-q	quarter-on-quarter
repo rate	repurchase agreement rate
rhs	right-hand scale
USD	US dollar
VAT	value added tax
WTI	West Texas Intermediate
y-o-y	year-on-year

Key macroeconomic indicators

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
DEMAND AND SUPPLY												
Gross domestic product												
GDP (CZK bn, current p., seas. adjusted)	4344.6	4627.4	4794.9	5116.9	5416.4	5793.9	5710.8	6107.0	6785.2	7352.5	**7793.9**	**8223.0**
GDP (%, y-o-y, real terms, seas. adjusted)	2.3	5.5	2.5	5.3	3.2	3.0	-5.5	3.5	2.4	-0.2	**1.4**	**2.7**
GDP (%, q-o-q, real terms, seas. adjusted)	-	-	-	-	-	-	-	-	-	-	**-**	**-**
Household consumption (%, y-o-y, real terms, seas. adjusted)	1.4	3.9	3.7	4.0	3.3	2.6	-7.4	4.1	-0.8	-3.1	**2.6**	**4.0**
Government consumption (%, y-o-y, real terms, seas. adjusted)	1.0	1.8	2.5	1.8	3.9	2.5	4.2	1.4	0.3	3.5	**2.2**	**1.1**
Gross capital formation (%, y-o-y, real terms, seas. adjusted)	7.1	13.1	-4.0	6.6	7.7	4.4	-9.2	19.0	5.6	-6.7	**-1.0**	**2.8**
Gross fixed capital formation (%, y-o-y, real terms, seas. adjusted)	3.3	9.8	-3.1	5.1	10.0	5.8	-6.0	0.7	3.1	4.2	**3.8**	**3.2**
Exports of goods and services (%, y-o-y, real terms, seas. adjusted)	8.7	6.2	4.1	7.6	3.7	1.4	-8.1	6.8	7.2	3.1	**1.1**	**4.6**
Imports of goods and services (%, y-o-y, real terms, seas. adjusted)	10.0	7.0	2.7	6.5	5.8	1.4	-8.2	13.2	6.3	-0.4	**0.8**	**5.3**
Net exports (percentage points, contributions to GDP growth)	-0.4	-0.2	1.3	1.3	-1.2	0.0	-0.4	-3.6	0.9	2.7	**0.2**	**-0.1**
PRICES												
Main price indicators												
Consumer Price Index (%, y-o-y, average)	0.4	0.3	0.7	2.5	2.1	2.8	3.2	3.8	15.1	10.7	**2.3**	**2.0**
Administered prices (%, y-o-y, average, 15.01%*)	-3.0	0.0	0.2	0.0	1.8	4.4	3.1	-0.2	20.9	27.8	**6.0**	**2.0**
Food prices (incl. alcoholic beverages and tobacco, %, y-o-y, average, 26.21%*)	1.8	0.1	0.2	3.7	1.6	2.6	4.2	2.1	12.9	10.0	**-0.9**	**1.0**
Core inflation (%, y-o-y, average, 55.27%*)	0.5	1.2	1.2	2.4	2.1	2.7	3.3	4.8	13.2	7.6	**2.6**	**2.3**
Fuel prices (%, y-o-y, average, 3.51%*)	0.2	-13.5	-8.5	6.7	6.3	-0.4	-11.4	16.7	33.6	-12.1	**4.4**	**-1.3**
Monetary policy-relevant inflation (%, y-o-y, average)	0.2	0.2	0.5	2.5	2.1	2.9	3.2	3.9	14.6	10.7	**2.2**	**1.8**
Partial price indicators												
Industrial producer prices (%, y-o-y, average)	-0.8	-3.2	-3.3	1.8	2.0	2.6	0.1	7.1	24.3	5.0	**1.3**	**1.2**
Agricultural prices (%, y-o-y, average)	-3.7	-5.9	-5.8	7.4	-0.1	5.4	-3.8	7.4	31.8	-5.5	**-6.5**	**-1.8**
GDP deflator (%, y-o-y, seas. adjusted)	2.6	1.0	1.1	1.3	2.6	3.9	4.3	3.3	8.6	8.6	**4.5**	**2.7**
LABOUR MARKET												
Average monthly wage (%, y-o-y, nominal terms)	2.9	3.2	4.4	6.7	8.2	7.9	4.6	5.8	5.3	7.5	**7.2**	**6.1**
Average monthly wage in market sectors (%, y-o-y, nominal terms)	3.0	3.2	4.3	6.7	7.7	7.6	4.1	6.1	5.9	7.9	**7.7**	**6.4**
Average monthly wage in non-market sectors (%, y-o-y, nominal terms)	2.5	3.3	4.8	7.1	10.2	9.2	6.9	4.4	2.8	5.6	**4.9**	**4.7**
Average monthly wage (%, y-o-y, real terms)	2.6	2.8	3.7	4.1	5.9	4.9	1.4	2.0	-8.4	-2.9	**4.8**	**4.1**
Unit labour costs (%, y-o-y)	1.6	-0.4	3.1	3.9	6.2	4.7	5.9	2.2	6.8	8.3	**6.0**	**3.7**
Aggregate labour productivity (%, y-o-y)	1.7	3.9	0.9	3.6	1.9	2.8	-3.8	3.1	0.9	-1.1	**1.4**	**2.5**
ILO general unemployment rate (%, average, age 15–64, seas. adjusted)	6.2	5.1	4.0	2.9	2.2	2.0	2.6	2.8	2.2	2.6	**2.9**	**3.1**
Share of unemployed persons (MLSA, %, average, seas. adjusted)	7.7	6.5	5.5	4.2	3.2	2.8	3.6	3.8	3.4	3.6	**3.8**	**4.0**
Employment (ILO, %, y-o-y)	0.7	1.3	1.8	1.5	-1.4	0.1	-1.4	0.3	-1.6	1.5	**0.3**	**0.2**
Full-time employment (%, y-o-y)	1.1	2.1	1.8	2.2	1.5	-0.3	-1.7	0.2	0.5	0.4	**0.2**	**0.3**
PUBLIC FINANCE												
Government budget balance (ESA2010, CZK bn, current prices)	-90.2	-29.8	34.1	76.7	48.3	16.7	-329.2	-312.3	-215.4	-268.4	**-131.0**	**-97.4**
Government budget balance/GDP** (%, nominal terms)	-2.1	-0.6	0.7	1.5	0.9	0.3	-5.8	-5.1	-3.2	-3.7	**-1.7**	**-1.2**
Structural balance/GDP (%, nominal terms)	-0.4	-0.8	0.2	0.9	0.5	-0.4	-5.9	-5.5	-3.3	-3.3	**-1.6**	**-1.3**
Government debt (ESA2010, CZK bn, current prices)	1818.9	1836.0	1754.7	1749.7	1734.6	1740.3	2149.8	2566.7	2997.6	3228.4	**3396.8**	**3525.3**
Government debt/GDP** (%, nominal terms)	41.9	39.7	36.6	34.2	32.1	30.0	37.7	42.0	44.2	44.0	**43.6**	**42.9**
EXTERNAL RELATIONS												
Current account												
Goods and services, net (CZK bn, current prices)	275.6	274.3	365.1	384.0	320.9	345.8	383.9	174.0	74.9	383.8	**438.7**	**461.0**
Current account (CZK bn, current prices)	7.9	20.7	85.2	79.1	24.1	19.2	113.7	-168.0	-332.8	29.2	**3.0**	**9.1**
Current account/GDP (%, nominal terms)	0.2	0.4	1.8	1.5	0.4	0.3	2.0	-2.8	-4.9	0.4	**0.0**	**0.1**
Foreign direct investment												
Direct investment (CZK bn, current prices)	-80.4	49.7	-186.5	-45.9	-51.0	-137.1	-149.1	-28.5	-83.5	-16.3	**-80.0**	**-70.0**
Exchange rates												
CZK/USD (average)	20.8	24.6	24.4	23.4	21.7	22.9	23.2	21.7	23.4	22.2	**23.1**	**22.3**
CZK/EUR (average)	27.5	27.3	27.0	26.3	25.6	25.7	26.5	25.6	24.6	24.0	**25.1**	**24.8**
MONEY AND INTEREST RATES												
M3 (%, y-o-y, average)	5.1	7.3	9.1	11.7	6.6	6.3	9.0	9.6	6.4	9.0	**8.1**	**8.6**
2W repo rate (%, average)	0.1	0.1	0.1	0.2	1.1	1.9	0.8	0.9	5.9	7.0	**5.1**	**3.6**
3M PRIBOR (%, average)	0.4	0.3	0.3	0.4	1.3	2.1	0.9	1.1	6.3	7.1	**5.0**	**3.6**
EXTERNAL ASSUMPTIONS												
Foreign GDP (%, y-o-y, seas. adjusted, effective EA)	1.9	1.9	2.0	2.8	1.6	1.4	-5.3	4.3	2.5	0.3	**0.5**	**1.5**
Foreign GDP (%, q-o-q, seas. adjusted, effective EA)	-	-	-	-	-	-	-	-	-	-	**-**	**-**
Foreign HICP (%, y-o-y, seas. adjusted, effective EA)	0.6	0.4	0.2	1.6	2.0	1.5	0.6	2.9	8.9	6.7	**2.6**	**2.2**
Foreign PPI (%, y-o-y, seas. adjusted, effective EA)	-1.5	-2.3	-2.2	2.4	3.1	1.1	-1.3	9.6	32.8	2.8	**-5.4**	**0.8**
Brent crude oil (in USD/barrel, average)	99.5	53.6	45.0	54.8	71.5	64.2	43.2	70.8	98.9	82.2	**84.2**	**79.1**
3M EURIBOR (%, average)	0.2	0.0	-0.3	-0.3	-0.3	-0.4	-0.4	-0.5	0.3	3.4	**3.5**	**2.9**
USD/EUR (average)	1.33	1.11	1.11	1.13	1.18	1.12	1.14	1.18	1.05	1.08	**1.09**	**1.11**

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

	2023				2024				2025			
	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV
DEMAND AND SUPPLY												
Gross domestic product												
GDP (CZK bn, current p., seas. adjusted)	1817.1	1840.5	1842.5	1852.5	1902.4	1936.9	1963.1	1991.5	2017.2	2043.5	2069.0	2093.4
GDP (%, y-o-y, real terms, seas. adjusted)	-0.2	-0.1	-0.6	0.2	0.3	0.7	2.2	2.4	2.6	2.7	2.7	2.8
GDP (%, q-o-q, real terms, seas. adjusted)	0.3	0.3	-0.8	0.4	0.4	0.7	0.7	0.6	0.6	0.7	0.7	0.7
Household consumption (%, y-o-y, real terms, seas. adjusted)	-5.6	-4.0	-2.3	-0.5	1.8	1.7	3.1	3.6	4.1	4.2	4.0	3.7
Government consumption (%, y-o-y, real terms, seas. adjusted)	3.1	3.6	3.7	3.8	3.0	2.6	1.7	1.4	1.2	1.2	1.0	0.9
Gross capital formation (%, y-o-y, real terms, seas. adjusted)	-3.3	-4.7	-4.0	-14.9	-7.0	-4.4	-1.9	10.9	3.6	2.7	2.4	2.6
Gross fixed capital formation (%, y-o-y, real terms, seas. adjusted)	0.7	5.0	5.0	6.2	6.1	2.4	4.0	2.8	3.2	3.2	3.2	3.0
Exports of goods and services (%, y-o-y, real terms, seas. adjusted)	7.2	4.9	-0.5	1.0	-0.7	0.6	2.7	1.7	4.0	4.6	4.9	5.0
Imports of goods and services (%, y-o-y, real terms, seas. adjusted)	3.4	1.6	-1.8	-4.7	-2.6	-0.6	1.3	5.1	5.2	5.4	5.3	5.1
Net exports (percentage points, contributions to GDP growth)	2.8	2.5	1.0	4.4	1.2	0.8	1.1	-2.2	-0.5	-0.2	0.0	0.2
PRICES												
Main price indicators												
Consumer Price Index (%, y-o-y, average)	16.4	11.2	8.1	7.6	2.1	2.4	2.1	2.5	2.4	1.9	1.9	1.9
Administered prices (%, y-o-y, average, 15.01%*)	32.8	25.2	19.9	33.2	6.2	5.5	5.5	6.7	2.0	1.8	2.0	2.1
Food prices (incl. alcoholic beverages and tobacco, %, y-o-y, average, 26.21%*)	18.3	11.9	7.3	2.6	-1.1	-0.9	-1.3	-0.4	1.5	0.7	1.0	0.7
Core inflation (%, y-o-y, average, 55.27%*)	11.9	8.7	5.9	3.9	2.8	2.6	2.5	2.6	2.4	2.5	2.3	2.1
Fuel prices (%, y-o-y, average, 3.51%*)	-3.7	-21.5	-15.5	-7.6	0.4	12.1	4.0	0.9	1.4	-3.7	-3.1	0.1
Monetary policy-relevant inflation (%, y-o-y, average)	16.4	11.1	7.9	7.5	2.1	2.3	2.0	2.4	2.1	1.7	1.7	1.7
Partial price indicators												
Industrial producer prices (%, y-o-y, average)	15.0	3.9	1.3	0.8	-0.9	1.8	2.1	2.5	1.0	1.1	1.3	1.5
Agricultural prices (%, y-o-y, average)	19.6	-8.2	-14.7	-15.0	-17.3	-7.0	0.5	0.0	-0.2	-3.1	-2.4	-1.6
GDP deflator (%, y-o-y, seas. adjusted)	11.2	10.0	7.2	6.0	4.3	4.5	4.2	5.0	3.4	2.8	2.6	2.2
LABOUR MARKET												
Average monthly wage (%, y-o-y, nominal terms)	8.8	8.0	7.1	6.3	6.4	6.9	7.5	7.9	6.8	6.2	5.9	5.7
Average monthly wage in market sectors (%, y-o-y, nominal terms)	8.9	8.5	7.6	6.8	6.9	7.4	8.0	8.4	7.1	6.5	6.2	5.9
Average monthly wage in non-market sectors (%, y-o-y, nominal terms)	8.1	5.7	5.0	4.1	4.0	4.6	5.2	5.8	5.2	4.7	4.5	4.5
Average monthly wage (%, y-o-y, real terms)	-6.6	-2.9	-0.9	-1.2	4.2	4.4	5.2	5.2	4.4	4.2	3.9	3.7
Unit labour costs (%, y-o-y)	9.9	9.0	8.3	6.3	5.8	6.3	6.0	5.8	4.5	3.8	3.4	3.1
Aggregate labour productivity (%, y-o-y)	-1.2	-1.5	-1.3	-0.3	0.0	1.4	2.1	2.1	2.4	2.5	2.5	2.6
ILO general unemployment rate (%, average, age 15–64, seas. adjusted)	2.5	2.6	2.7	2.8	2.8	2.9	3.0	3.0	3.1	3.1	3.1	3.1
Share of unemployed persons (MLSA, %, average, seas. adjusted)	3.6	3.6	3.6	3.6	3.7	3.7	3.8	3.9	4.0	4.0	4.0	4.0
Employment (ILO, %, y-o-y)	1.2	1.8	1.5	1.6	0.8	-0.2	0.4	0.3	0.2	0.2	0.2	0.2
Full-time employment (%, y-o-y)	0.8	0.3	0.3	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.3
PUBLIC FINANCE												
Government budget balance (ESA2010, CZK bn, current prices)	-	-	-	-	-	-	-	-	-	-	-	-
Government budget balance/GDP** (%, nominal terms)	-	-	-	-	-	-	-	-	-	-	-	-
Structural balance/GDP (%, nominal terms)	-	-	-	-	-	-	-	-	-	-	-	-
Government debt (ESA2010, CZK bn, current prices)	-	-	-	-	-	-	-	-	-	-	-	-
Government debt/GDP** (%, nominal terms)	-	-	-	-	-	-	-	-	-	-	-	-
EXTERNAL RELATIONS												
Current account												
Goods and services, net (CZK bn, current prices)	106.2	107.8	63.8	106.0	143.7	127.6	82.4	84.9	144.2	132.6	92.7	91.5
Current account (CZK bn, current prices)	36.6	-19.8	0.4	12.0	86.2	-9.9	-58.1	-15.2	81.9	-9.2	-53.5	-10.2
Current account/GDP (%, nominal terms)	2.1	-1.1	0.0	0.6	4.8	-0.5	-2.9	-0.7	4.3	-0.4	-2.6	-0.5
Foreign direct investment												
Direct investment (CZK bn, current prices)	-36.0	-6.7	35.5	-9.1	-20.0	-20.0	-20.0	-20.0	17.5	17.5	17.5	17.5
Exchange rates												
CZK/USD (average)	22.2	21.6	22.2	22.8	23.1	23.2	23.2	23.0	22.7	22.4	22.1	21.9
CZK/EUR (average)	23.8	23.6	24.1	24.5	25.1	25.2	25.1	25.0	25.0	24.9	24.7	24.7
MONEY AND INTEREST RATES												
M3 (%, y-o-y, average)	8.5	9.6	9.2	8.7	7.9	6.9	8.5	8.8	9.3	9.3	8.0	7.8
2W repo rate (%, average)	7.0	7.0	7.0	7.0	6.4	5.1	4.7	4.4	4.1	3.7	3.4	3.0
3M PRIBOR (%, average)	7.2	7.2	7.1	7.0	6.2	5.0	4.6	4.3	4.0	3.7	3.4	3.1
EXTERNAL ASSUMPTIONS												
Foreign GDP (%, y-o-y, seas. adjusted, effective EA)	0.6	0.3	0.1	0.2	0.1	0.3	0.6	1.0	1.3	1.5	1.5	1.6
Foreign GDP (%, q-o-q, seas. adjusted, effective EA)	0.2	0.0	0.0	-0.1	0.1	0.2	0.3	0.4	0.4	0.4	0.4	0.4
Foreign HICP (%, y-o-y, seas. adjusted, effective EA)	9.5	7.7	6.2	3.7	2.9	2.5	2.4	2.5	2.3	2.2	2.1	2.1
Foreign PPI (%, y-o-y, seas. adjusted, effective EA)	16.4	5.3	-4.1	-4.1	-7.6	-5.4	-4.7	-3.7	0.5	0.8	0.9	0.9
Brent crude oil (in USD/barrel, average)	82.2	77.7	85.9	82.9	81.8	87.4	84.9	82.8	81.0	79.6	78.4	77.3
3M EURIBOR (%, average)	2.6	3.4	3.8	4.0	3.9	3.7	3.4	3.2	3.1	3.0	2.9	2.8
USD/EUR (average)	1.07	1.09	1.09	1.08	1.09	1.08	1.08	1.09	1.10	1.11	1.12	1.13

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