Ministry of Finance
of the Czech Republic

Macroeconomic Forecast

of the Czech Republic

April 2022

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The Macroeconomic Forecast is prepared by the Economic Policy Department of the Czech Ministry of Finance. It contains forecast for the years 2022 and 2023, and for certain indicators an outlook for the 2 following years (i.e. until 2025). It is published on a quarterly basis (in January, April, August and November) and is also available on the website of the Ministry of Finance at:

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List of Abbreviations

BoP .... balance of payments
const.pr. .... constant prices
CNB .... Czech National Bank
CPI .... consumer price index
CR .... Czech Republic
curr.pr. .... current prices
CZSO .... Czech Statistical Office
EA19 .... euro zone consisting of 19 countries
EC .... European Commission
ECB .... European Central Bank
EU27 .... European Union consisting of 27 countries
Fed .... Federal Reserve System
GDP .... gross domestic product
GFCF .... gross fixed capital formation
GVA .... gross value added
IMF .... International Monetary Fund
LFS .... Labour Force Survey
MoF .... Ministry of Finance
MoLSA .... Ministry of Labour and Social Affairs
NPISHs .... non-profit institutions serving households
pp .... percentage points
TFP .... total factor productivity
VAT .... value-added tax

Symbols Used in Tables

-	A dash in place of a number indicates that the phenomenon did not occur.
.	A dot in place of a number indicates that we do not forecast that variable, or the figure is unavailable or unreliable.
x, (space)	A cross or space in place of a number indicates that no entry is possible for logical reasons.

Cut-off Date for Data Sources

The macroeconomic forecast was prepared on the basis of data known as of 31 March 2022. The cut-off date for the fiscal forecast was 6 April 2022.

Notes

All data in the Macroeconomic Forecast are unadjusted for seasonal and calendar effects, unless stated otherwise. Published aggregate data may not match sums of individual items to the last decimal place due to rounding.

Data from the previous forecast (January 2022) are indicated by italics. Data relating to the years 2024 and 2025 are an extrapolation scenario that indicates only the direction of possible developments, and as such are not commented upon in the following text.

Introduction and Summary

Russia's military aggression against Ukraine has completely changed the picture of the world in 2022 and damaged growth prospects. The most serious consequence of the war is, of course, the loss of human life and the humanitarian crisis, but the economic consequences are also very serious. Although Russia and Ukraine account for only around 2% of global GDP, they play a significant role as suppliers of many raw materials. The Russian invasion has thus had an impact on commodity markets in terms of price increases and higher volatility. The war has also underlined the importance of energy security and reducing dependence on Russia for key energy imports.

As a result of the war in Ukraine, we can at least in the short term expect lower economic growth, deeper problems in supply chains and intensification of already high inflationary pressures. In addition, fiscal policy will have to cope with increased spending to provide for Ukrainian refugees and to support the poorest households threatened by high energy prices.

In Q4 2021, **real gross domestic product** of the Czech Republic, adjusted for seasonal and calendar effects, increased by 0.8% QoQ. Year-on-year growth reached 3.7%.

Household consumption grew by 9.4%. The extremely high growth rate reflected not only the base effect but also an increase in real disposable income and a significant year-on-year decline in the saving rate. **General government consumption** grew by 2.6% due to an increase in employment and purchases of goods and services.

Gross fixed capital formation was only 0.9% higher. Investment in transport equipment and dwellings increased more significantly, while other categories stagnated or declined. From a sectoral perspective, growth was driven by household investment.

As in Q3, the contribution of **the change in inventories** and valuables to economic growth (5.8 pp) was the dominant factor behind the increase in economic output. Firms replenished inventories, presumably to avoid shortages in component supplies and losses from high inflation, and stocks of work in progress were also likely to have increased.

By contrast, the contribution of the **foreign trade** balance was deeply negative (−7.1 pp), not only because of shortfalls in export production but also because of the high rate of imports due to strong inventory accumulation.

The Czech Republic's economic output grew by **3.3%** in **2021**, with all components of domestic demand contributing positively, most notably the change in inventories and household consumption. In contrast, the balance of foreign trade in goods slowed down the growth of the economy.

The outcome of **2022** will be fundamentally affected by Russian aggression and a change in the setting of international trade relations. Amid general uncertainty, we are working with a **scenario** that the main negative impacts will be concentrated in Q2. The full-year growth rate of the Czech economy should slow to **1.2%**, driven by government and private sector investment and consumption. However, household consumption will be dampened by a sharp increase in the cost of living, especially energy prices, and tighter monetary policy. The external trade balance should hardly affect growth dynamics.

High **inflation** slows economic growth and lowers living standards. The average inflation rate is expected to reach 12.3% this year. Annual inflation is expected to be in double digits for the rest of the year, peaking above 13% in Q2. Oil, electricity and gas prices should contribute significantly to the exceptionally strong consumer price growth. Higher costs of firms will then be reflected in the prices of goods and services. Problems in supply chains and wage costs in the private sector will also be pro-inflationary. However, the increase in monetary policy rates will weaken domestic demand pressures and contribute to the appreciation of the koruna against the euro, which will have an anti-inflationary effect.

In 2023, the average inflation rate could slow to 4.4%. Annual inflation should only approach the Czech National Bank's 2% inflation target at the end of the year.

In the **labour market**, imbalances related to labour shortages, which are evident in virtually all sectors of the economy, are further exacerbated. The unemployment rate averaged 2.8% in 2021 and could fall to 2.5% this year. However, due to the lagged effects of weak growth this year, the unemployment rate could rise slightly to 2.6% in 2023.

The current account of the balance of payments ended with a deficit of 0.8% of GDP in 2021, the first deficit since 2013. The balance of services and primary and secondary income should not change significantly in relative terms over the forecast horizon. However, component shortages, together with rising input and energy prices, should lead to a further deterioration in the goods balance this year. Thus, the current account deficit is expected to reach 2.2% of GDP in 2022 and could narrow to 1.9% of GDP in 2023.

Public finances, which ended up in a deficit of 5.9% of GDP in 2021, were still affected by the coronavirus epidemic, its economic consequences and the measures implemented in the health sector, as well as by the impact of the government's stimulus policy. The estimated deficit of 4.5 % of GDP for this year reflects the waning epidemic, the expected economic and financial consequences of the Russian aggression against Ukraine and the associated humanitarian crisis, as well as the support to households and firms affected by the enormous price increases. Public debt is likely to rise from 41.9% of GDP in 2021 to 42.7% of GDP by the end of 2022.

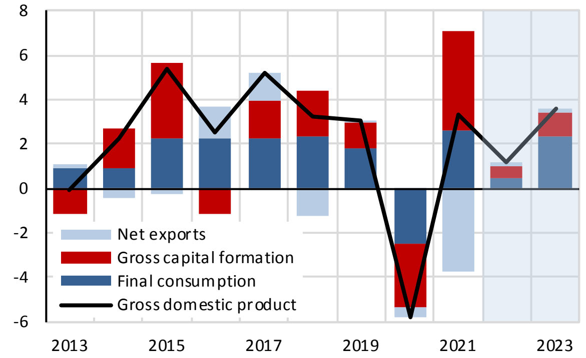
Table: Main Macroeconomic Indicators

		2017	2018	2019	2020	2021	2022	2023	2021	2022
							Current forecast		*Previous forecast*	
Nominal GDP	*bill. CZK*	**5 111**	**5 410**	**5 790**	**5 694**	**6 121**	**6 618**	**7 135**	6 103	6 617
	nominal growth in %	6.5	5.8	7.0	-1.7	7.5	8.1	7.8	7.2	8.4
Gross domestic product	*real growth in %*	**5.2**	**3.2**	**3.0**	**-5.8**	**3.3**	**1.2**	**3.6**	2.9	3.1
Consumption of households	*real growth in %*	4.0	3.5	2.7	-6.8	4.4	0.5	4.5	4.8	2.3
Consumption of government	*real growth in %*	1.8	3.8	2.5	3.4	3.0	1.0	1.0	1.9	0.4
Gross fixed capital formation	*real growth in %*	4.9	10.0	5.9	-7.5	0.6	2.2	5.9	0.8	5.4
Contribution of net exports	*pp*	1.2	-1.2	0.0	-0.5	-3.8	0.1	0.2	-3.0	0.6
Contrib. of change in inventories	*pp*	0.5	-0.5	-0.3	-0.8	4.3	0.0	-0.4	3.2	0.0
GDP deflator	*growth in %*	**1.3**	**2.6**	**3.9**	**4.4**	**4.0**	**6.9**	**4.1**	4.1	5.2
Average inflation rate	*%*	**2.5**	**2.1**	**2.8**	**3.2**	**3.8**	**12.3**	**4.4**	3.8	8.5
Employment *(LFS)*	*growth in %*	**1.6**	**1.4**	**0.2**	**-1.3**	**-0.4**	**1.2**	**0.2**	-0.4	1.1
Unemployment rate *(LFS)*	*average in %*	**2.9**	**2.2**	**2.0**	**2.6**	**2.8**	**2.5**	**2.6**	2.8	2.3
Wage bill *(domestic concept)*	*growth in %*	**9.2**	**9.6**	**7.8**	**0.2**	**6.6**	**6.0**	**6.2**	5.7	5.4
Current account balance	*% of GDP*	**1.5**	**0.4**	**0.3**	**2.0**	**-0.8**	**-2.2**	**-1.9**	-1.0	-1.3
General government balance	*% of GDP*	**1.5**	**0.9**	**0.3**	**-5.8**	**-5.9**	**-4.5**	**-3.2**	-6.1	.
Assumptions:										
Exchange rate CZK/EUR		**26.3**	**25.6**	**25.7**	**26.4**	**25.6**	**24.4**	**24.2**	25.6	24.4
Long-term interest rates	*% p.a.*	**1.0**	**2.0**	**1.5**	**1.1**	**1.9**	**3.9**	**3.6**	1.9	3.3
Crude oil Brent	*USD/barrel*	**54**	**71**	**64**	**42**	**71**	**105**	**91**	71	76
GDP in the euro area	*real growth in %*	**2.8**	**1.8**	**1.6**	**-6.5**	**5.3**	**2.6**	**2.9**	5.1	3.9

Source: CNB, CZSO, Eurostat, U. S. Energy Information Administration. Calculations and forecast of the MoF.

Economic growth driven by domestic demand

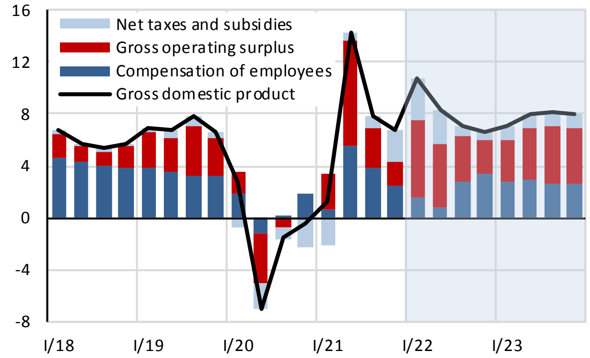
growth rate of real GDP in %, contributions in percentage points



Source: CZSO. Calculations and forecast of the MoF.

Firms' profits will continue to grow

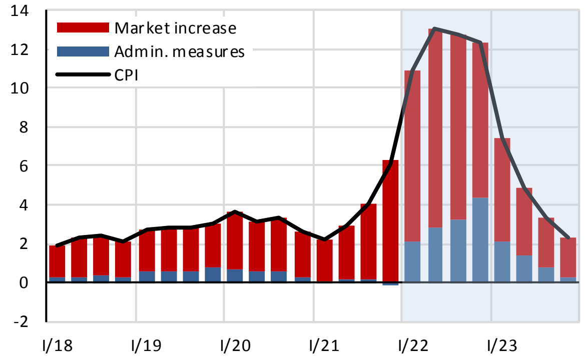
YoY growth of nominal GDP in %, contributions in percentage points



Source: CZSO. Calculations and forecast of the MoF.

Inflation back at the CNB's 2% target at the end of 2023

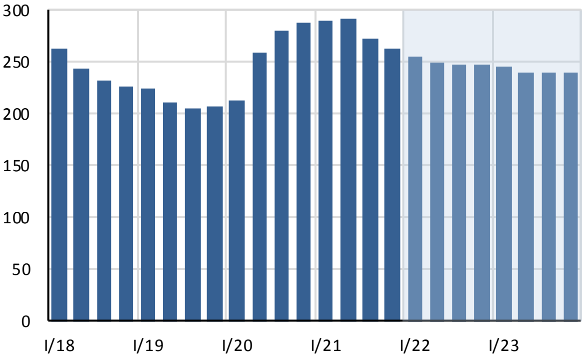
YoY growth rate of CPI in %, contributions in percentage points



Source: CZSO. Calculations and forecast of the MoF.

Unemployment should gradually decline

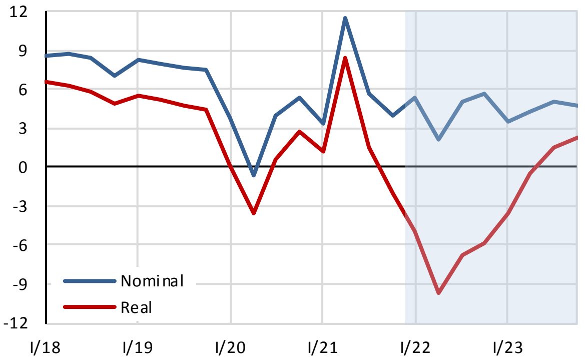
registered unemployment, in thous. of persons, seasonally adjusted



Source: MoLSA. Calc. and forecast of the MoF.

Wage growth should temporarily lag behind inflation

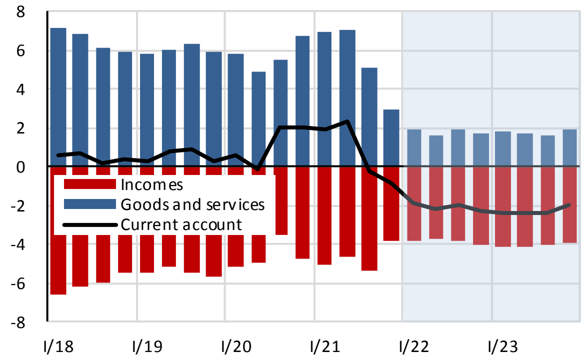
average gross monthly wage, YoY growth rate, in %



Source: CZSO. Calculations and forecast of the MoF.

Current account deficit around 2% of GDP

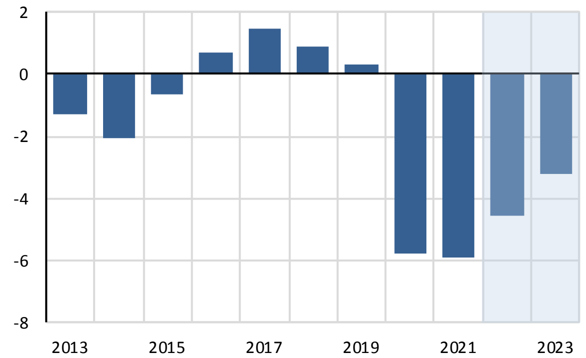
in % of GDP, yearly moving sums



Source: CNB, CZSO. Calculations and forecast of the MoF.

Start of public finance consolidation

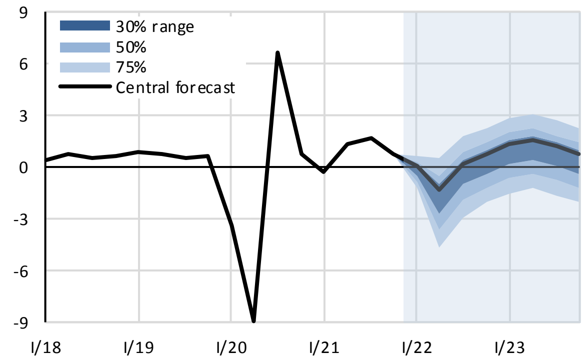
general government net lending/borrowing, in % of GDP



Source: CZSO. Calculations and forecast of the MoF.

Forecast risks are highly skewed to the downside

QoQ growth of real GDP in %



Source: CZSO. Calculations and forecast of the MoF.

Forecast Risks and Uncertainty

The macroeconomic forecast is weighed down by a number of risks which, taken together, we consider to be **highly skewed to the downside**.

The main risk is the further development of the **war in Ukraine**. The overall impact cannot be quantified precisely, but it is clear that, at least in the short term, the war will reduce economic growth, exacerbate **problems in supply chains** and intensify inflationary pressures. While most EU countries do not have strong trade links (direct or indirect) with Russia or Ukraine, Russia and Ukraine are globally important exporters of commodities such as wheat, oil, natural gas, nickel, iron ore, palladium and rare gases. In particular for some raw materials, EU countries are critically dependent on imports from Russia. A shortfall in the supply of these commodities, accompanied by a rise in their prices, would significantly exacerbate the above-mentioned negative economic effects.

In the forecast, we work with the assumption that the war in Ukraine will end this year. However, disruptions in supply chains should persist into 2023, but their intensity should gradually decrease. As a result, upward pressures on the price level should diminish. Even then, however, there could be a risk that **inflation expectations** will be anchored well above the CNB's 2% target in the short term, which would require tighter monetary policy.

We further assume that likely future waves of **COVID-19** epidemics can be managed without the need to adopt macroeconomically significant anti-epidemic restrictions. However, the emergence and spread of new coronavirus variants against which available vaccines or experienced disease would provide little protection still pose substantial risks.

Available data clearly show that imbalances that characterised the **labour market** before the outbreak of the epidemic are reappearing after a short pause. Staff shortages are evident in almost all sectors of the economy and represent a significant barrier to output growth, particularly in construction. Taking into account the high demand for labour by companies and the nature of most vacancies (jobs with low qualification requirements), we assume that refugees from Ukraine will not have any significant problems finding employment in the Czech labour market. This should also be helped by legislative changes reducing administrative barriers of employing foreigners. As a result, the mismatch between demand and supply in the labour market could be eased and upward pressure on wages weakened.

Apart from that, other challenges related to increased immigration will need to be tackled, particularly in the areas of housing, education and healthcare. The potentially unsuccessful **integration of refugees** from Ukraine could pose a significant social problem in the future.

In the medium and long term, in view of demographic developments, it will be crucial to increase **labour productivity**, e.g. by investing in automation, robotization and digital technologies. Given the high involvement of Czech firms in global supply chains, their shift to higher value-added positions (either towards the initial R&D phase or towards the sales phase of the final product) would also be a strong impetus for productivity growth.

The deep fall in real GDP in 2020 was largely determined by the decline in household consumption. The unprecedented increase in the savings rate led to a strong accumulation of financial assets, mainly in the form of currency and deposits. At the same time, households could use these funds, at least in part, to **reduce the impact** of high consumer price inflation on real disposable incomes.

Although the downturn in economic activity and the associated deterioration in the financial situation of some households and firms has not led to a significant increase in the share of non-performing loans, the rise in interest rates could cause some households whose mortgage loan fixation period is coming to an end to run into repayment problems. **Overvaluation of residential property prices** remains a risk.

Given the importance of **the automotive industry** for the Czech economy, the strong pro-cyclicality of this sector, its export orientation and dependence on supply chains is a risk. The latter factor poses a significant problem for the automotive industry even in the context of the Russian invasion of Ukraine. The risks are also exacerbated by the structural changes taking place in the automotive industry due to the gradual tightening of emission standards and the transition to electromobility. This will require huge investments in the development of technology, machinery and equipment or infrastructure. An impact on employment or supplier-customer relations can also be expected.

1 Forecast Assumptions

1.1 External Environment

The last quarter of 2021 was characterised by a strong economic recovery in the main economies outside the European Union. However, the global economy continues to face a number of challenges, particularly in the context of persistent supply chain disruptions and high inflation in many countries. The ongoing war in Ukraine and the economic sanctions imposed by Western countries on Russia exacerbate problems in supply chains and increase energy and commodity prices, which contribute to already strong global inflationary pressures. At the same time, anxiety in world markets is growing. Developments of the pandemic also increase forecast uncertainty, e.g. the worsening epidemic situation in China and its stringent anti-epidemic measures raise concerns about the functioning of supply chains. Given the expected slowdown in the growth momentum of the world's major economies, **global economic growth** could slow to 4.0% in 2022 (*vs. 4.9%*) and to 3.3% in 2023.

Quarter-on-quarter GDP growth in the **United States** accelerated to 1.7% in Q4 2021 (*vs. 1.0%*). The growth momentum was driven by an increase in inventories and household consumption. The external trade balance and government consumption were virtually neutral.

The labour market situation continues to improve. Unemployment rate fell to 3.8% in February, close to the pre-pandemic level of 3.5% in February 2020. Annual inflation is accelerating sharply, reaching 7.9% in February. In response to these developments, the Fed raised the target range for the federal funds rate to 0.25-0.50% in March. The Fed also anticipates to start reducing the amount of assets on its balance sheet in May. Fiscal policy will be stimulative this year to the extent of the investment and support packages already approved.

The impact of the Russian invasion of Ukraine on the United States remains uncertain. However, additional upward pressure on inflation from higher energy commodity prices is already seen. High fuel prices and inflation expectations have been reflected in the decline in consumer confidence, which is likely to weigh on consumer demand. In contrast, business sentiment in both manufacturing and services improved during Q1 2022. However, economic momentum may be dampened by the lingering effects of the pandemic and tensions in Sino-US relations. Increased geopolitical risks, on the other hand, are likely to be reflected in order volumes for US arms companies. Given the stronger-than-estimated growth in Q4 2021, the US economic growth could reach 3.3% this year (*vs. 3.1%*) and slow to 2.3% in 2023.

China's economy grew by 1.6% QoQ in Q4 2021 (*vs. 0.5%*). There was improvement in a number of economic indicators earlier this year. Industrial production or retail sales were higher year-on-year, and business sentiment in manufacturing improved in February. However, at the same time, the number of people infected with COVID-19 began to rise. In March, the implementation of strict anti-epidemic measures led to closures of important industrial centres, which was reflected in a renewed deterioration in business sentiment in manufacturing. This factor is also likely to have a negative impact on consumer demand and the service sector, and to further exacerbate problems in supply chains. China's economic prospects remain weighed down by the ongoing property market crisis or strained relations with the US. We expect China's GDP to grow by 4.7% in 2022 (*unchanged*) and 5.0% next year.

GDP growth in **the European Union** slowed to 0.4% QoQ (*vs. 0.3%*) in Q4 2021, and to 0.3% (*vs. 0.2%*) in the euro area. Gross capital formation was the dominant growth driver, and general government consumption also contributed positively. In contrast, household consumption and the external trade balance dampened GDP growth.

Consumer price inflation continued to accelerate in the euro area in early 2022, reaching 5.9% in February. The most important contributor to the increase in the price level was a significant rise in energy prices. The European Central Bank will continue its gradual tapering of asset purchases. Based on its March decision, the asset purchase programme is expected to end during Q3 2022, provided that expected inflationary pressures do not weaken. The key interest rate remains at zero. Fiscal policy is likely to tighten gradually over the course of this year. However, the planned fiscal consolidation will be tempered by an increase in defence spending in light of rising geopolitical risks.

The unemployment rate in the euro area continued its downward trend, reaching 6.8% in February. Purchasing managers' indices for manufacturing and services fell in March in response to concerns about the impact of the war in Ukraine, rising inflation and persistent problems in supply chains. Industrial production stagnated in January 2022. In March, consumer confidence hit the lowest level since May 2020.

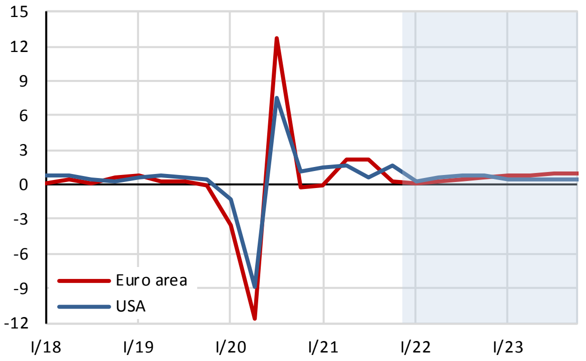
We expect GDP to increase by 2.5% this year (*vs. 4.0%*) in the EU, while growth in the euro area could reach 2.6% (*vs. 3.9%*). Next year, economic growth should accelerate to 3.1% and 2.9% in the EU and euro area, respectively. The deterioration in the forecast for this year mainly reflects the Russian military invasion of Ukraine and the associated increased market uncertainty, rising energy prices and deepening problems in supply chains.

Persistent inflationary pressures, which will weigh on real household consumption, should dampen GDP growth.

The economy of **Germany** contracted by 0.3% QoQ (*vs. growth of 0.2%*) in Q4 2021 due to a fall in household consumption. The economy was negatively affected by a reduction in household spending on services due to restrictive measures against the spread of the coronavirus. In contrast, government final consumption expenditure and gross capital formation contributed positively to growth. The purchasing managers' index in manufacturing fell for the second consecutive month in March due to persistent problems in supply chains and shortages of materials and workers, but still signalled improving conditions in the sector. In services, the purchasing managers' index pointed to a continued rebound in activity, but fell in March due to concerns about the war in Ukraine and rising price levels. Consumer confidence is at its lowest level since February 2021 due to high energy and food prices and uncertain future prospects. The unemployment rate remained at 3.1% in February. Given the disruption in the supply of automotive components from Ukraine and high inflation, we expect that German economic growth could reach 2.1% in 2022 (*vs. 4.1%*) and accelerate to 3.2% in 2023.

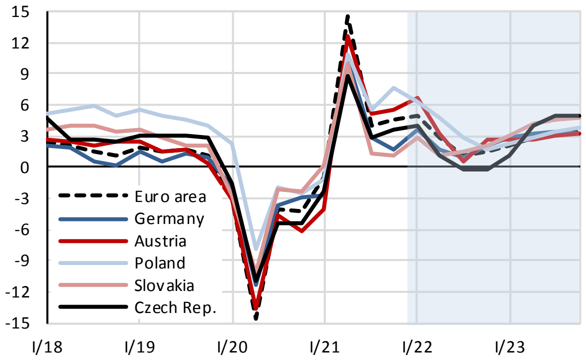
Slovakia's economic growth slowed to 0.3% QoQ (*vs. 0.1%*) in Q4 2021. Economic activity was mainly driven by net exports, gross fixed capital formation and government consumption. In contrast, household consumption and the change in inventories were negative. Industrial production fell by 1.3% month-on-month in January. The unemployment rate decreased slightly to 6.5% in February. Shortages of materials in the automotive industry, accelerating inflation, falling export orders and reduced production will have an adverse impact on the Slovak economy. In addition, the development of the epidemic is also a major risk given the low vaccination coverage. We assume that GDP could grow by 1.9% in 2022 (*vs. 4.5%*); the growth rate could accelerate to 4.2% in 2023.

Graph 1.1.1: Real GDP in the euro area and USA
QoQ growth rate in%, seasonally adjusted



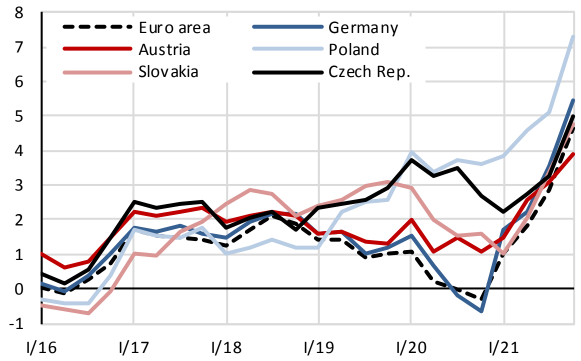
Source: Eurostat, OECD. Calculations and forecast of the MoF.

Graph 1.1.2: Real Gross Domestic Product
YoY growth in %, seasonally adjusted



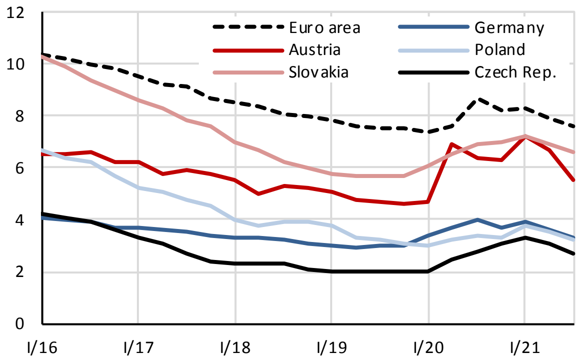
Source: CZSO, Eurostat. Calculations and forecast of the MoF.

Graph 1.1.3: HICP
quarterly averages, YoY growth in %



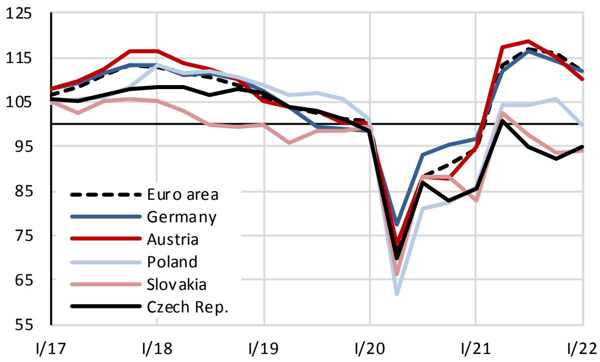
Source: Eurostat. Calculations of the MoF.

Graph 1.1.4: Unemployment Rate
in %, LFS methodology, seasonally adjusted



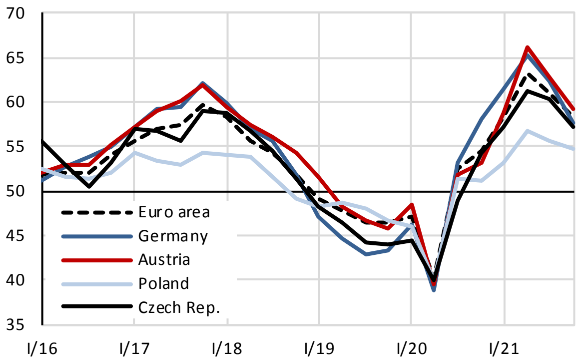
Source: Eurostat.

Graph 1.1.5: Economic Sentiment Indicator
quarterly averages, long-run average = 100



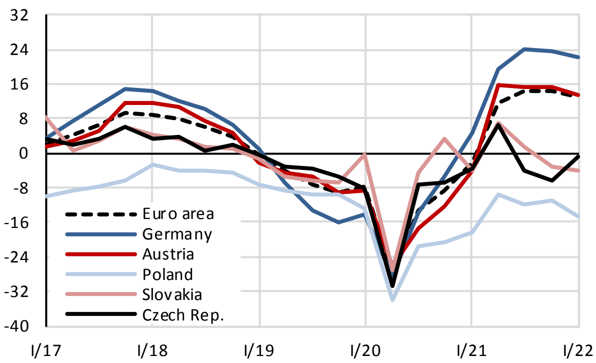
Source: Eurostat. Calculations of the MoF.

Graph 1.1.6: Purchasing Managers' Index
manufacturing, quarterly averages



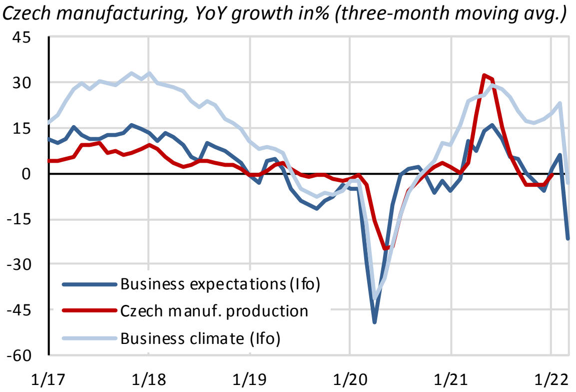
Source: Markit. Calculations of the MoF.

Graph 1.1.7: Business Tendency
manufacturing, quarterly averages



Source: OECD. Calculations of the MoF.

Graph 1.1.8: Ifo and Czech manufacturing production
balances (Ifo, manufacturing); seas. adjusted industrial production in Czech manufacturing, YoY growth in% (three-month moving avg.)



Source: CESifo, CZSO. Calculations of the MoF.

Table 1.1.1: Gross Domestic Product – yearly
growth rate of real GDP in %

		2014	2015	2016	2017	2018	2019	2020	2021 *Estimate*	2022 *Forecast*	2023 *Forecast*
World	*seasonally adjusted*	**3.6**	**3.5**	**3.3**	**3.8**	**3.6**	**2.8**	**-3.1**	**5.9**	**4.0**	**3.3**
USA	*seasonally adjusted*	**2.3**	**2.7**	**1.7**	**2.3**	**2.9**	**2.3**	**-3.4**	**5.7**	**3.3**	**2.3**
China	*seasonally adjusted*	**7.4**	**7.3**	**6.8**	**6.9**	**6.7**	**5.2**	**1.6**	**8.5**	**4.7**	**5.0**
United Kingdom	*seasonally adjusted*	**3.0**	**2.6**	**2.3**	**2.1**	**1.7**	**1.7**	**-9.3**	**7.4**	**3.8**	**1.5**
European Union	*seasonally adjusted*	**1.6**	**2.2**	**2.0**	**2.9**	**2.1**	**1.8**	**-6.1**	**5.3**	**2.5**	**3.1**
	unadjusted	1.6	2.3	2.0	2.8	2.1	1.8	-5.9	5.3	.	.
Euro area	*seasonally adjusted*	**1.4**	**1.9**	**1.8**	**2.8**	**1.8**	**1.6**	**-6.5**	**5.3**	**2.6**	**2.9**
	unadjusted	1.4	2.0	1.9	2.6	1.8	1.6	-6.4	5.3	.	.
Germany	*seasonally adjusted*	**2.2**	**1.2**	**2.1**	**3.0**	**1.1**	**1.1**	**-4.9**	**2.9**	**2.1**	**3.2**
	unadjusted	2.2	1.5	2.2	2.7	1.1	1.1	-4.6	2.9	1.8	2.9
France	*seasonally adjusted*	**1.0**	**1.0**	**1.0**	**2.4**	**1.8**	**1.8**	**-8.0**	**7.0**	**3.1**	**2.4**
	unadjusted	1.0	1.1	1.1	2.3	1.9	1.8	-7.9	7.0	3.1	2.3
Italy	*seasonally adjusted*	**0.1**	**0.7**	**1.4**	**1.7**	**0.8**	**0.5**	**-9.1**	**6.6**	**3.0**	**2.8**
	unadjusted	0.0	0.8	1.3	1.7	0.9	0.5	-9.0	6.6	2.9	2.7
Austria	*seasonally adjusted*	**0.8**	**1.0**	**1.9**	**2.4**	**2.5**	**1.5**	**-6.8**	**4.6**	**3.2**	**2.9**
	unadjusted	0.7	1.0	2.0	2.3	2.5	1.5	-6.7	4.5	3.3	2.7
Hungary	*seasonally adjusted*	**4.1**	**3.6**	**2.1**	**4.5**	**5.4**	**4.6**	**-4.9**	**7.1**	**3.3**	**3.2**
	unadjusted	4.2	3.7	2.2	4.3	5.4	4.6	-4.7	7.1	3.3	3.1
Poland	*seasonally adjusted*	**3.4**	**4.2**	**3.2**	**4.9**	**5.4**	**4.8**	**-2.5**	**5.6**	**3.9**	**3.1**
	unadjusted	3.4	4.2	3.1	4.8	5.4	4.7	-2.5	5.7	3.8	3.1
Slovakia	*seasonally adjusted*	**2.7**	**5.2**	**1.9**	**3.0**	**3.8**	**2.6**	**-4.4**	**3.0**	**1.9**	**4.2**
Czech Republic	*seasonally adjusted*	**2.3**	**5.5**	**2.4**	**5.4**	**3.2**	**3.0**	**-5.8**	**3.3**	**1.2**	**3.8**
	unadjusted	2.3	5.4	2.5	5.2	3.2	3.0	-5.8	3.3	1.2	3.6

Source: CZSO, Eurostat, IMF, OECD, Office for National Statistics. Calculations of the MoF.

Table 1.1.2: Gross Domestic Product – quarterly
growth rate of real GDP in %, data adjusted for seasonal and calendar effects

		2021				2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
						Estimate	*Forecast*	*Forecast*	*Forecast*
USA	*QoQ*	**1.5**	**1.6**	**0.6**	**1.7**	**0.2**	**0.7**	**0.7**	**0.8**
	YoY	0.5	12.2	4.9	5.5	4.1	3.2	3.3	2.4
China	*QoQ*	**0.3**	**1.3**	**0.7**	**1.6**	**1.1**	**1.0**	**1.2**	**1.3**
	YoY	18.3	7.9	4.9	4.0	4.8	4.5	4.9	4.6
United Kingdom	*QoQ*	**-1.2**	**5.6**	**0.9**	**1.3**	**0.5**	**0.4**	**0.4**	**0.3**
	YoY	-5.0	24.5	6.9	6.6	8.4	3.0	2.5	1.5
European Union	*QoQ*	**0.1**	**2.1**	**2.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.5**
	YoY	-0.9	14.0	4.2	4.8	4.9	2.9	1.1	1.2
Euro area	*QoQ*	**-0.1**	**2.2**	**2.3**	**0.3**	**0.2**	**0.2**	**0.5**	**0.6**
	YoY	-0.9	14.6	4.0	4.6	4.9	2.9	1.2	1.6
Germany	*QoQ*	**-1.7**	**2.2**	**1.7**	**-0.3**	**0.1**	**0.3**	**0.8**	**0.9**
	YoY	-2.8	10.4	2.9	1.8	3.6	1.7	0.9	2.2
France	*QoQ*	**0.2**	**1.3**	**3.1**	**0.7**	**0.1**	**0.3**	**0.4**	**0.6**
	YoY	1.7	19.0	3.5	5.4	5.3	4.3	1.5	1.4
Italy	*QoQ*	**0.3**	**2.7**	**2.5**	**0.6**	**0.2**	**0.2**	**0.4**	**0.5**
	YoY	0.1	17.6	3.9	6.2	6.0	3.5	1.4	1.3
Austria	*QoQ*	**-0.4**	**4.1**	**3.4**	**-1.5**	**0.7**	**0.7**	**0.6**	**0.6**
	YoY	-4.1	12.7	5.2	5.6	6.8	3.3	0.5	2.6
Hungary	*QoQ*	**1.8**	**2.2**	**0.9**	**2.0**	**0.3**	**0.2**	**0.5**	**0.5**
	YoY	-1.3	17.7	6.5	7.0	5.5	3.4	2.9	1.4
Poland	*QoQ*	**1.6**	**1.8**	**2.3**	**1.7**	**0.3**	**0.3**	**0.4**	**0.5**
	YoY	-1.1	10.9	5.5	7.6	6.3	4.8	2.8	1.7
Slovakia	*QoQ*	**-1.4**	**1.9**	**0.4**	**0.3**	**0.2**	**0.2**	**0.8**	**0.9**
	YoY	0.2	10.0	1.2	1.2	2.8	1.1	1.6	2.1
Czech Republic	*QoQ*	**-0.3**	**1.4**	**1.7**	**0.8**	**0.1**	**-1.3**	**0.2**	**0.8**
	YoY	-2.3	8.7	2.8	3.6	4.0	1.2	-0.2	-0.2

Source: CZSO, Eurostat, OECD, Office for National Statistics. Calculations and forecast of the MoF.

1.2 Commodity Prices

We estimate that the **price of Brent crude oil** increased by almost two-thirds year-on-year to USD 101/bbl in Q1 2022 (*vs. USD 77/bbl*). This was mainly driven by aspects related to the war in Ukraine.

The Organization of Petroleum Exporting Countries and other affiliates continued to gradually ease production limits in Q1 2022. As a result, daily oil production is expected to increase by 0.4 million barrels in April and May.

Alongside rising global oil production, oil consumption has also increased as the world economy has recovered. The U.S. Energy Information Administration estimates that crude oil stocks were declining between Q3 2020 and the end of last year, but starting in Q2 2022, global oil production should slightly exceed consumption.

The oil futures market has seen considerable volatility since the outbreak of the war in Ukraine. Oil with later delivery is trading cheaper than oil with closer delivery. The forecast price of Brent crude oil reflects this downward sloping futures curve, but is set noticeably higher than in the January forecast. This year, the average price of a barrel of Brent crude oil should increase by 48% YoY to USD 105 (*vs. USD 76*), with a slightly higher increase in koruna terms. For 2023, we assume an average price of USD 91/bbl.

The strong upward trend in **commodity markets** has resumed in the context of the risk of a natural gas supply disruption from the Russian Federation. The wholesale price of natural gas in Europe more than quadrupled year-on-year in Q1 2022. High commodity prices are gradually feeding through to corporate costs and consumer prices (see Section 3.2).

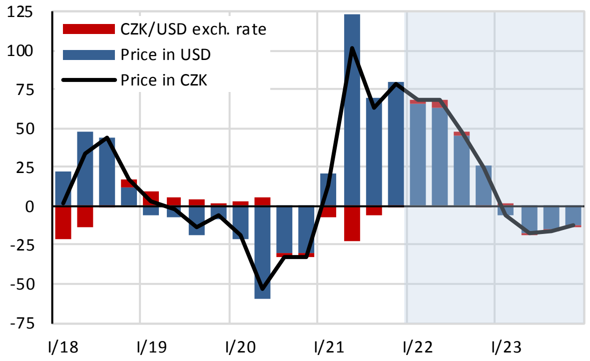
Graph 1.2.1: Dollar Price of Brent Crude Oil

USD/barrel

Source: U. S. EIA. Calculations and forecast of the MoF.

Graph 1.2.2: Koruna Price of Brent Crude Oil

YoY change of the CZK price of Brent crude oil in %, contributions in pp



Source: CNB, U. S. EIA. Calculations and forecast of the MoF.

Table 1.2.1: Prices of Selected Commodities – yearly

spot prices

		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
										Forecast	*Forecast*
Crude oil Brent	*USD/barrel*	**99.0**	**52.4**	**43.6**	**54.2**	**71.4**	**64.3**	**41.8**	**70.8**	**105**	**91**
	growth in %	-8.8	-47.1	-16.9	24.3	31.7	-9.9	-35.0	69.3	48.0	-12.8
Crude oil Brent index *(in CZK)*	*2010=100*	**134.6**	**85.0**	**70.1**	**83.1**	**102.2**	**97.1**	**63.6**	**101.2**	**152**	**132**
	growth in %	-3.8	-36.9	-17.4	18.5	23.0	-5.0	-34.6	59.1	50.6	-13.0
Natural gas (Europe)	*USD/MMBtu*	**10.1**	**6.8**	**4.6**	**5.7**	**7.7**	**4.8**	**3.2**	**16.1**	**.**	**.**
	growth in %	-14.7	-32.1	-33.1	25.3	34.4	-37.5	-32.5	397.1	.	.
Natural gas (Europe) index *(in CZK)*	*2010=100*	**131.7**	**106.2**	**70.7**	**84.2**	**106.0**	**69.6**	**47.1**	**223.0**	**.**	**.**
	growth in %	-9.8	-19.4	-33.4	19.2	25.8	-34.3	-32.4	373.7	.	.

Source: CNB, U. S. Energy Information Administration, World Bank. Calculations and forecast of the MoF.

Table 1.2.2: Prices of Selected Commodities – quarterly

spot prices

		2021				2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
						Estimate	*Forecast*	*Forecast*	*Forecast*
Crude oil Brent	*USD/barrel*	**61.0**	**69.0**	**73.5**	**79.6**	**101**	**112**	**106**	**100**
	growth in %	21.3	132.3	71.3	79.7	65.6	62.3	44.2	25.6
Crude oil Brent index *(in CZK)*	*2010=100*	**86.9**	**96.6**	**104.7**	**116.3**	**146**	**163**	**154**	**145**
	growth in %	12.9	101.2	63.7	78.3	68.2	69.0	47.4	25.1
Natural gas (Europe)	*USD/MMBtu*	**6.5**	**8.8**	**16.9**	**32.2**	**.**	**.**	**.**	**.**
	growth in %	111.2	383.8	489.4	520.6	.	.	.	.
Natural gas (Europe) index *(in CZK)*	*2010=100*	**89.3**	**118.2**	**231.7**	**452.7**	**.**	**.**	**.**	**.**
	growth in %	96.5	319.0	463.2	515.9	.	.	.	.

Source: CNB, U. S. Energy Information Administration, World Bank. Calculations and forecast of the MoF.

1.3 Fiscal Policy

According to CZSO data, the **general government sector** ended with a deficit of 5.9% of GDP **in 2021** (*vs. 6.1% of GDP*) and was still heavily influenced by the ongoing coronavirus epidemic, its economic consequences and the measures implemented in the area of public health or fiscal stimulus. Although last year's deficit is mainly attributable to the state budget, even the increased transfers from the state budget to health insurance companies in the form of higher payments for the state insured persons did not compensate for the high health expenditure and the balance of social security funds also ended in a slight deficit. On the other hand, local governments again posted a surplus, helped also by a more favourable tax assignment. In terms of the structural balance, expansionary fiscal policy led to a deficit of 4.1% of GDP (*vs. 3.9% of GDP*), as a number of measures were of one-off or temporary nature and the decline in revenue was to some extent cyclical.

Growth in tax revenues and social security contributions was 4.3%, but tax revenues themselves fell by 1.4%, mainly as a result of the approved "2021 tax package". **Corporate income tax** revenue grew by 3.9% and was also negatively affected by several measures of the above-mentioned tax package, e.g. the possibility of applying extraordinary depreciation.

Social security contributions rose by 11.4%. Their pace reflected the growth in wages and salaries in the economy, reinforced by the gradual withdrawal of measures to mitigate the socio-economic impact of the anti-epidemic restrictions and by the extraordinary bonuses paid to selected groups of public sector employees in the context of the epidemic. The double-digit growth was also driven by a CZK 29.1 billion increase in payments to the public health insurance system for the state insured persons.

Value added tax revenue grew by 9.7%. The autonomous development, driven by revived household consumption, was affected by a number of discretionary measures with a negative impact totalling CZK 10.1 billion. Excluding subsidies for renewable energy sources, **excise** revenue grew by 2.6%. In particular, changes in the rates on tobacco products had a positive impact of CZK 5.2 billion. In contrast, mineral oil tax revenue was dampened by a reduction in the tax rate on diesel totalling CZK 5.6 billion.

Final consumption expenditure maintained its strong momentum at 5.7%, with contributions from social transfers in kind, compensation of employees and intermediate consumption. On the other hand, growth was offset by higher output. **Compensation of employees** in the public sector increased by 6,5% and, in addition to increases in the salaries of education, health and social services workers, it reflected exceptional remuneration for health and social services workers and the armed forces. The growth rate of 11.0% in **social transfers in kind** maintained the strong momentum of the previous two years, as this expenditure was also still burdened by the epidemic situation and the vaccination of the population. At the same time, remunerations paid by health insurance companies to health workers in private establishments increased their volume. **Intermediate consumption** rose by 2.3%, partly due to higher real consumption (especially in the health care sector) and partly due to higher inflation, mainly driven by rising energy prices at the end of the year.

The 4.7% increase in **cash social benefits** reflected both the statutory indexation of pension benefits and the adjustment of some benefits supporting families with children, nursing allowances in the event of school closures or child quarantine, and an increase in transfers to public health insurance.

Fixed capital **investment** grew at a rate of 3.1% and while central government increased investment by 7.2%, local government investment fell by 1.7%. In terms of their financing (especially in the transport sector), the Recovery and Resilience Facility has already been engaged.

The support programmes related to COVID-19 were the reason for the 15.1% increase in **subsidies**. Other forms of support (notably the compensation bonus) were classified as **capital transfers**, but these fell by 22.3% due to the high base of 2020.

In 2022, the balance is expected to improve by 1.3 pp year-on-year to −4.5% of GDP. In structural terms, this represents a fiscal effort of 0.9 pp. The main burden should be borne by the state budget, which is reflected in its projected deficit. Local government is likely to return to surplus, while social security funds are forecast to end up in a slight deficit.

The personal income tax yield should essentially remain at last year's level, as the estimated 4.7% growth in compensation of employees in the economy is counterbalanced by an increase in the basic personal tax credit with an impact of CZK 12.3 billion. **Social security contributions** are also linked to expected earnings developments, with an estimated increase of 4.4%. The dynamics of taxation and employment taxes are also affected by the extraordinary remuneration paid last year to workers in the health sector, social services and the armed forces. The decision to keep the average payment per state insured person at the 2021 level is also significant, but an estimated CZK 3.9 billion will be reflected in the state's payment to the public health insurance system due to the increase in the number of state insured persons as a result of immigration from Ukraine.

Corporate income tax dynamics should be dampened by the end of the effective change in the method of creating and tax deductibility of technical provisions for insurance companies, the tax exemption of income from government bonds or the additional effect of the introduction of the "meal voucher lump sum" with a total impact of CZK 8.3 billion. The termination of accelerated depreciation from 2020 and 2021, as well as the unwinding of the negative impact of the increase in the entry price threshold for depreciation of tangible assets in the total estimated amount of CZK 5.5 billion has the opposite effect. This should result in an increase in this tax of 9.0%.

The development of the **value added tax** should be influenced mainly by rising nominal household consumption. The negative impact of the previously approved discretionary measures (reclassification of selected services to the second reduced tax rate in the first half of 2020, reduction of the rate for accommodation, sports and cultural events, ski lifts and other selected services from July 2020) should be outweighed by the positive impact of the end of the temporary tax waiver on electricity and gas supplies in late 2021, the end of the tax waiver on the purchase of respirators or the year-on-year smaller impact of the tax waiver on the purchase of vaccines and tests. In total, the value added tax is expected to increase by 12.2%.

For **excise duties** excluding renewable energy subsidies, we estimate that their revenue will increase by 4.2%. The main influences include the continuing economic recovery, and, among discretionary measures, an increase in the tax on tobacco products of CZK 2.5 billion and the solar electricity levy rates with an estimated impact of CZK 3 billion. A reduction in road tax and a temporary reduction in excise duty on diesel and petrol in response to a jump in fuel prices will be associated with an estimated revenue shortfall of CZK 8.4 billion.

Growth in **government final consumption** expenditure is expected to slow to 4.4% year-on-year. Social transfers in kind and compensation of employees in the general government sector should grow at slower pace, mainly due to the assumption of a gradual return to normal conditions in the health care system and an increased base in last year due to extraordinary bonus payments. **Compensation of employees** is expected to grow only moderately (0.5%). Only the salary scales of doctors, non-medical health workers, social services workers and teachers in regional education have been increased. At the same time, we are considering an increase in the amount of compensation in the education sector for the education of Ukrainian children. In addition, the tariffs of soldiers and members of the security forces have been also raised. The 2.1% increase in **social transfers in kind** reflects expenditure on health and social services, also used by Ukrainian refugees. In addition, it reflects higher expenditure in the form of housing allowance and housing supplement. Reimbursement for COVID-19 tests will cost health insurers an estimated CZK 6.4 billion this year. The estimate of annual growth in **intermediate consumption** (11.7%) takes into account the exceptionally high inflation as well as the impact of EU co-financed projects. The impact of the migration wave from Ukraine will also be reflected in the volume of purchases of goods and services.

In the area **of cash social benefits**, we expect primarily an increase in pension benefits, which are determined this year by both the rule-based indexation increased by CZK 300 above the legal rate and the expected extraordinary indexation by an average of CZK 1,017 due to the high inflation rate. In connection with the migration wave of refugees from Ukraine, the forecast accounts for the payment of the humanitarian benefit in the estimated amount of CZK 7.7 billion or a higher payment by the state to the public health insurance system. As a result of economic developments and the discretionary measures mentioned above, cash social benefits are expected to increase by 7.0%.

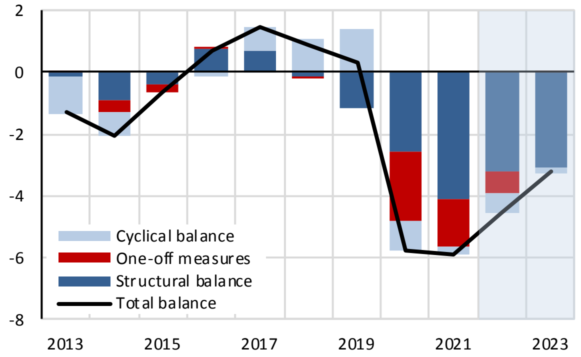
We expect a 10.0% increase in fixed asset **investment** expenditure. Investment should be significantly supported by EU budget funds, either due to the impending end of the 2014–2020 programming period or the involvement of new funds from the Next Generation EU Instrument, which should account for more than 31% of total investment.

The phasing out of anti-crisis measures and related support programmes should lead to a 21.3% year-on-year decline in **subsidies**. The positive effect of the termination of the payment of the compensation bonus should be outweighed by the payment of refunds of deposits of former customers of Sberbank CZ from the Financial Market Guarantee System in the amount of CZK 26.0 billion, which should lead to a further year-on-year increase in **capital transfers** by 37.2%.

Deficit balance of government institutions, in particular the state budget, was also reflected in the level of **debt** in 2021, which rose by 4.2 pp to 41.9% of GDP (*vs. 42.0% of GDP*). In 2022, we expect a further increase in the debt quota, dampened by nominal GDP growth, by 0.8 pp to 42.7% of GDP.

Graph 1.3.1: General Government Balance

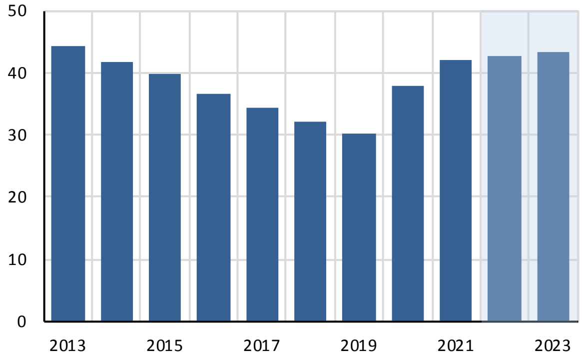
in % of GDP



Source: CZSO. Calculations and forecast of the MoF.

Graph 1.3.2: General Government Debt

in % of GDP



Source: CZSO. Calculations and forecast of the MoF.

Table 1.3.1: Net Lending/Borrowing and Debt

		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
								Forecast	*Forecast*	*Outlook*	*Outlook*
General government balance	*% GDP*	**0.7**	**1.5**	**0.9**	**0.3**	**-5.8**	**-5.9**	**-4.5**	**-3.2**	**-2.9**	**-2.7**
	bill. CZK	34	77	48	17	-329	-359	-300	-229	-218	-211
Cyclical balance	*% GDP*	**-0.1**	**0.8**	**1.1**	**1.4**	**-1.0**	**-0.2**	**-0.6**	**-0.2**	**0.0**	**0.0**
Cyclically adjusted balance	*% GDP*	**0.8**	**0.7**	**-0.2**	**-1.1**	**-4.8**	**-5.6**	**-3.9**	**-3.0**	**-2.9**	**-2.7**
One-off measures [1)]	*% GDP*	**0.1**	**0.0**	**-0.1**	**0.0**	**-2.2**	**-1.5**	**-0.7**	**0.0**	**0.0**	**0.0**
Structural balance	*% GDP*	**0.8**	**0.7**	**-0.1**	**-1.1**	**-2.6**	**-4.1**	**-3.2**	**-3.1**	**-2.9**	**-2.7**
Fiscal effort [2)]	*pp*	**1.2**	**-0.1**	**-0.8**	**-1.0**	**-1.5**	**-1.5**	**0.9**	**0.1**	**0.2**	**0.2**
Interest expenditure	*% GDP*	**0.9**	**0.7**	**0.7**	**0.7**	**0.8**	**0.7**	**0.9**	**1.0**	**1.1**	**1.2**
Primary balance	*% GDP*	**1.6**	**2.2**	**1.6**	**1.0**	**-5.0**	**-5.1**	**-3.6**	**-2.3**	**-1.8**	**-1.5**
Cyclically adjusted primary balance	*% GDP*	**1.7**	**1.4**	**0.5**	**-0.4**	**-4.0**	**-4.9**	**-3.0**	**-2.1**	**-1.8**	**-1.5**
General government debt	*% GDP*	**36.6**	**34.2**	**32.1**	**30.1**	**37.7**	**41.9**	**42.7**	**43.4**	**44.4**	**45.4**
	bill. CZK	1 755	1 750	1 735	1 740	2 149	2 567	2 828	3 099	3 351	3 592
Change in debt-to-GDP ratio	*pp*	**-3.1**	**-2.3**	**-2.2**	**-2.0**	**7.7**	**4.2**	**0.8**	**0.7**	**0.9**	**1.1**

[1)] One-off and temporary measures are such measures that have only a temporary impact on public budgets. Besides their temporary impact on overall balance, these measures are usually of non-recurring nature and very often result from the events that are beyond the direct power of the government.

[2)] Change in structural balance.

Source: CZSO. Calculations and forecast of the MoF.

1.4 Monetary Policy, Financial Sector and Exchange Rates

The Czech National Bank raised the **two-week repo rate** to 4.50% in Q1 2022. At the monetary policy meeting on 31 March, the rate was increased by 50 basis points, but this value is only effective from 1 April. This was due to the sharp rise in inflation, which is now well above the upper bound of the tolerance band, caused primarily by cost factors of a global nature. In addition to the already long-standing high prices of some commodities and energy, inflationary pressures are strengthening due to the war in Ukraine and ongoing problems in production chains. However, domestic demand is also having a significant impact, supported by upward pressure on wages caused by staff shortages or the expansionary fiscal policy of the past period.

In view of the forecast inflation, which is expected to stay very high during this year, and the monetary policy response so far, we don't expect the CNB to cut the primary interest rate in the remainder of the year so as not to jeopardise a return of inflation to the 2% target in the medium term. A gradual appreciation of the koruna in response to the positive interest rate differential vis-à-vis the euro area should also contribute to a slowdown in inflation next year. With inflationary pressures easing and expectations anchored close to the inflation target, the CNB could start gradually cutting interest rates in 2023.

The three-month PRIBOR rate rose to 4.6% on average (*vs. 4.4%*) in Q1 2022 in connection with the CNB's increase in primary interest rates. For the full year 2022, it could rise to 5.3% (*vs. 4.6%*), and in 2023, with the assumed monetary policy stance, it could fall to 4.9%.

We estimate that the **yield to maturity on 10-year government bonds** rose to 3.3% on average in Q1 2022 (*vs. 3.2%*), and could reach 3.9% for the full year 2022 (*vs. 3.3%*). Taking into account the assumed monetary policy stance of the CNB and the ECB and inflation developments, we believe that long-term interest rates could fall to 3.6% on average in 2023, with the yield curve still being inverted.

The strong growth in **loans to households** continued during Q1 2022, with their volume increasing by 10.3% year-on-year in both January and February. In addition to households' concerns about rising interest rates, the retightening of mortgage lending conditions effective from the beginning of April contributed to this. The average customer interest rate on total household loans was virtually unchanged month-on-month in February 2022, with interest rates on new mortgage loans already rising gradually.

Annual growth in **loans to non-financial corporations** accelerated markedly to 9.3% in February. The growth was driven by both koruna and foreign currency loans, and in terms of maturity, particularly by loans with maturity of less than 1 year. The average client interest rate on total loans to non-financial corporations rose to 5.3% (up 2.7 pp year-on-year).

The share of non-performing loans in total loans remains virtually stagnant. Although the financial situation of some households and firms has deteriorated as a result of the coronavirus pandemic, the impact on the quality of banks' loan portfolios has been minimal.

In connection with the invasion of Ukraine by Russia in February 2022, there was a strong outflow of deposits from Sberbank CZ. Due to the bank's imminent bankruptcy, the CNB initiated steps leading to the revocation of its banking licence at the end of February. Most of Sberbank CZ's clients will be compensated through the Financial Market Guarantee System. However, the collapse of this bank is macroeconomically insignificant and does not pose a risk to the stability of the banking sector.

The exchange rate of the koruna against the euro averaged CZK 24.7/EUR (*vs. CZK 24.4/EUR*) in Q1 2021, which meant a year-on-year appreciation of 5.7% (*vs. 6.8%*). After the start of the Russian invasion of Ukraine, the koruna depreciated sharply to CZK 26/EUR, but at the beginning of March the CNB started to intervene in the foreign exchange market in favour of the domestic currency. The exchange rate then returned to the vicinity of CZK 24.4/EUR thanks also to the calming of the situation in financial markets.

With the widening of the positive interest rate differential and some stabilisation of international financial markets, the exchange rate should return to the path of gradual trend appreciation. It should reach CZK 24.4/EUR (*unchanged*) on average for the whole of 2022 and strengthen slightly to CZK 24.2/EUR in 2023. The interest rate differential, which should not widen further from Q2 2022, and suspended real convergence of the Czech economy to the euro area should slow the pace of appreciation.

The expected **exchange rate of the koruna against the US dollar** is implied by the USD/EUR exchange rate, for which an assumption has been adopted of stability at the average of the last 10 days before the cut-off date for selected forecast assumptions, i.e. at USD 1.10/EUR (*vs. USD 1.13/EUR*).

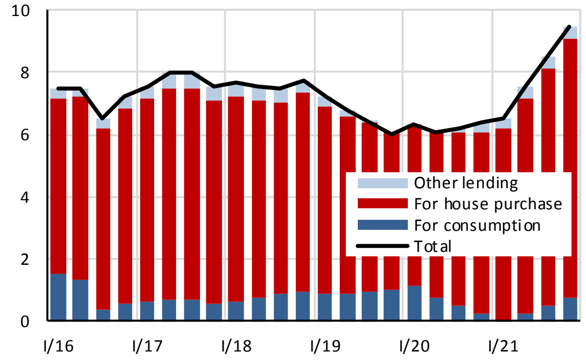
Graph 1.4.1: Interest Rates

in % p.a.

Source: CNB. Calculations and forecast of the MoF.

Graph 1.4.2: Loans to Households

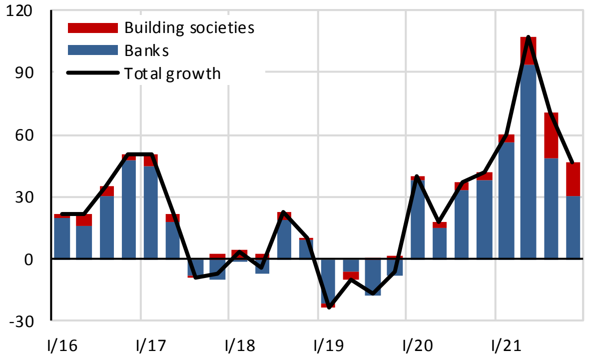
YoY growth rate in%, contributions in percentage points



Source: CNB. Calculations of the MoF.

Graph 1.4.3: New Mortgage Loans

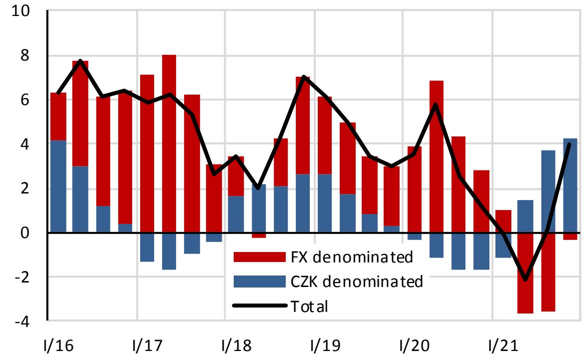
for purchase of residential property, YoY growth in %, contributions in pp



Source: CNB. Calculations of the MoF.

Graph 1.4.4: Loans to Non-financial Corporations

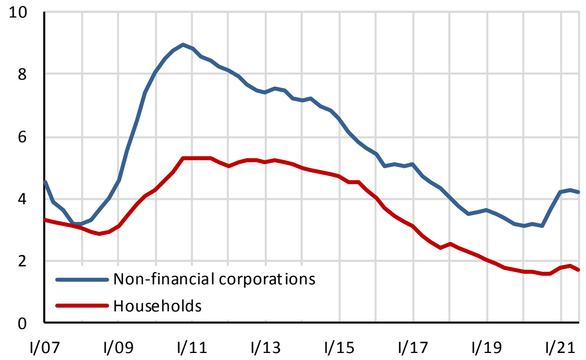
YoY growth rate in%, contributions in percentage points



Source: CNB. Calculations of the MoF.

Graph 1.4.5: Non-performing Loans

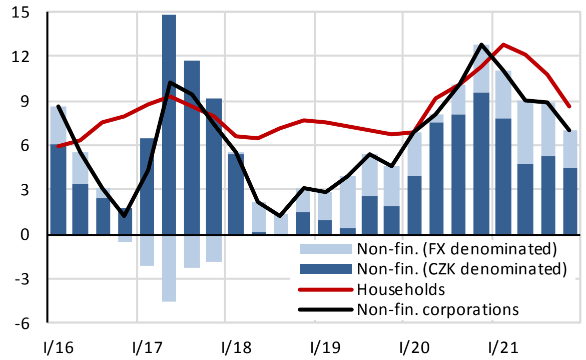
ratio of non-performing to total loans, in%



Source: CNB. Calculations of the MoF.

Graph 1.4.6: Deposits

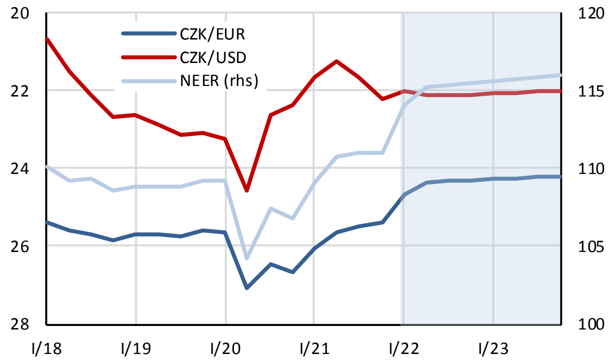
YoY growth rate in%, contributions in percentage points



Source: CNB. Calculations of the MoF.

Graph 1.4.7: Nominal Exchange Rates

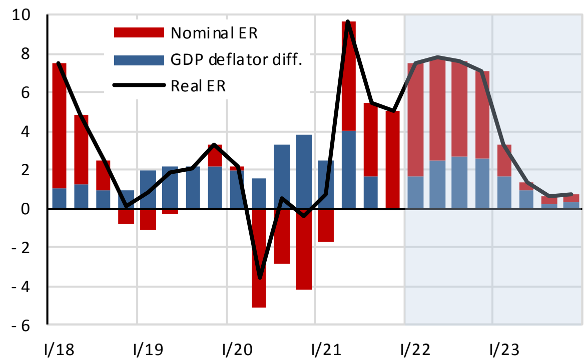
quarterly averages, average 2015=100 (rhs)



Source: CNB. Calculations and forecast of the MoF.

Graph 1.4.8: Real Exchange Rate to the EA19

deflated by GDP deflators, YoY growth rate in %, contributions in pp



Source: CNB, CZSO, Eurostat. Calculations and forecast of the MoF.

Table 1.4.1: Interest Rates – yearly

average of period, unless stated otherwise

		2014	2015	2016	2017	2018	2019	2020	2021	2022 *Forecast*	2023 *Forecast*
Repo 2W rate CNB (*end of period*)	*in % p.a.*	0.05	0.05	0.05	0.50	1.75	2.00	0.25	3.75	.	.
Main refinancing rate ECB (*end of period*)	*in % p.a.*	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	.	.
Federal funds rate (*end of period*)	*in % p.a.*	0.25	0.50	0.75	1.50	2.50	1.75	0.25	0.25	.	.
PRIBOR 3M	*in % p.a.*	0.36	0.31	0.29	0.41	1.23	2.12	0.86	1.13	5.3	4.9
YTM of 10Y government bonds	*in % p.a.*	1.58	0.58	0.43	0.98	1.98	1.55	1.13	1.90	3.9	3.6
Client interest rates											
Loans to households	*in % p.a.*	5.59	5.15	4.65	4.10	3.76	3.66	3.53	3.31	.	.
Loans to non-financial corporations	*in % p.a.*	3.01	2.78	2.59	2.57	3.05	3.75	2.96	2.86	.	.
Deposits of households	*in % p.a.*	0.85	0.65	0.47	0.36	0.33	0.39	0.35	0.26	.	.
Deposits of non-financial corporations	*in % p.a.*	0.29	0.19	0.10	0.05	0.11	0.37	0.20	0.11	.	.

Source: CNB, ECB, Fed. Calculations and forecast of the MoF.

Table 1.4.2: Interest Rates – quarterly

average of period, unless stated otherwise

		2021				2022			
		Q1	Q2	Q3	Q4	Q1 *Estimate*	Q2 *Forecast*	Q3 *Forecast*	Q4 *Forecast*
Repo 2W rate CNB (*end of period*)	*in % p.a.*	0.25	0.50	0.75	3.75	4.50	.	.	.
Main refinancing rate ECB (*end of period*)	*in % p.a.*	0.00	0.00	0.00	0.00	0.00	.	.	.
Federal funds rate (*end of period*)	*in % p.a.*	0.25	0.25	0.25	0.25	0.50	.	.	.
PRIBOR 3M	*in % p.a.*	0.36	0.40	0.91	2.86	4.59	5.6	5.6	5.6
YTM of 10Y government bonds	*in % p.a.*	1.55	1.76	1.79	2.53	3.3	4.1	4.1	4.1
Client interest rates									
Loans to households	*in % p.a.*	3.39	3.32	3.28	3.26	.	.	.	.
Loans to non-financial corporations	*in % p.a.*	2.55	2.54	2.74	3.62	.	.	.	.
Deposits of households	*in % p.a.*	0.25	0.23	0.23	0.32	.	.	.	.
Deposits of non-financial corporations	*in % p.a.*	0.06	0.05	0.07	0.27	.	.	.	.

Source: CNB, ECB, Fed. Calculations and forecast of the MoF.

Table 1.4.3: Loans and Deposits – yearly averages

		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Households											
Loans	*growth in %*	**5.0**	**4.0**	**3.4**	**4.8**	**7.2**	**7.8**	**7.6**	**6.6**	**6.3**	**8.0**
For consumption	*growth in %*	-1.0	-0.1	-0.9	3.4	6.0	4.3	5.4	6.4	4.4	2.6
For house purchase	*growth in %*	6.4	5.5	4.5	5.6	8.1	9.0	8.5	7.4	7.3	9.5
Other lending	*growth in %*	6.0	1.2	2.9	1.0	3.0	4.2	4.3	1.1	0.9	4.2
CZK denominated	*growth in %*	4.9	4.0	3.4	4.7	7.2	7.7	7.6	6.6	6.3	8.0
FX denominated	*growth in %*	30.8	-1.3	0.0	12.7	8.5	36.3	1.7	9.0	6.1	16.9
Deposits	*growth in %*	**4.5**	**3.3**	**2.9**	**4.8**	**7.0**	**8.7**	**7.0**	**7.2**	**9.4**	**11.1**
CZK denominated	*growth in %*	4.7	3.3	2.7	4.1	6.9	9.7	7.1	6.9	9.2	10.9
FX denominated	*growth in %*	-2.1	2.3	8.5	22.5	7.3	-13.9	3.5	15.2	14.5	16.6
Non-performing loans *(banking statistics)*	*share, in %*	**5.2**	**5.2**	**4.9**	**4.5**	**3.6**	**2.7**	**2.4**	**1.9**	**1.6**	**1.7**
Loans to deposits ratio	*in %*	**63**	**63**	**63**	**63**	**63**	**63**	**63**	**63**	**61**	**59**
Non-financial corporations											
Loans	*growth in %*	**3.5**	**1.3**	**1.9**	**6.5**	**6.6**	**5.0**	**4.2**	**4.3**	**3.2**	**0.5**
CZK denominated	*growth in %*	2.6	0.3	-1.0	5.9	2.8	-1.4	3.0	1.9	-1.8	3.2
FX denominated	*growth in %*	7.8	5.7	13.7	9.0	20.5	24.4	6.9	10.0	14.0	-4.6
Deposits	*growth in %*	**8.9**	**4.9**	**7.6**	**10.3**	**4.6**	**7.8**	**3.0**	**4.2**	**9.5**	**9.0**
CZK denominated	*growth in %*	8.2	4.2	5.6	6.7	4.5	13.9	2.1	1.9	9.4	7.1
FX denominated	*growth in %*	11.8	8.0	15.2	23.2	4.8	-11.1	6.6	13.0	9.9	15.3
Non-performing loans *(banking statistics)*	*share, in %*	**7.8**	**7.4**	**7.0**	**6.0**	**5.2**	**4.7**	**3.7**	**3.4**	**3.3**	**4.2**
Loans to deposits ratio	*in %*	**120**	**116**	**110**	**106**	**108**	**105**	**106**	**106**	**100**	**92**

Note: All indicators, except for the share of non-performing loans, are from the monetary statistics.
Source: CNB, ECB. Calculations of the MoF.

Table 1.4.4: Loans and Deposits – quarterly averages

		2020				2021			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Households									
Loans	*growth in %*	**6.3**	**6.1**	**6.2**	**6.4**	**6.5**	**7.5**	**8.5**	**9.5**
For consumption	*growth in %*	7.6	5.2	3.6	1.6	0.0	1.7	3.3	5.5
For house purchase	*growth in %*	6.9	7.1	7.3	7.7	8.1	9.0	10.0	10.8
Other lending	*growth in %*	-0.4	-0.7	1.1	3.7	3.8	4.1	4.5	4.4
CZK denominated	*growth in %*	6.3	6.1	6.2	6.4	6.5	7.5	8.5	9.5
FX denominated	*growth in %*	-2.7	4.9	7.4	15.5	15.8	11.7	21.6	18.3
Deposits	*growth in %*	**6.9**	**9.1**	**10.1**	**11.3**	**12.8**	**12.1**	**10.8**	**8.6**
CZK denominated	*growth in %*	6.4	8.9	10.1	11.2	12.9	11.9	10.5	8.4
FX denominated	*growth in %*	21.0	14.7	9.0	14.1	12.6	18.2	20.3	15.2
Non-performing loans *(banking statistics)*	*share, in %*	**1.7**	**1.7**	**1.6**	**1.6**	**1.8**	**1.8**	**1.7**	**1.6**
Loans to deposits ratio	*in %*	**63**	**61**	**61**	**60**	**59**	**58**	**59**	**61**
Non-financial corporations									
Loans	*growth in %*	**3.5**	**5.7**	**2.6**	**1.2**	**-0.1**	**-2.1**	**0.2**	**3.9**
CZK denominated	*growth in %*	-0.5	-1.6	-2.5	-2.5	-1.7	2.3	5.7	6.6
FX denominated	*growth in %*	12.5	21.8	13.4	8.7	3.1	-10.0	-9.9	-0.9
Deposits	*growth in %*	**6.9**	**8.2**	**10.0**	**12.9**	**11.1**	**9.0**	**8.9**	**7.0**
CZK denominated	*growth in %*	5.0	9.7	10.4	12.4	10.2	6.0	6.7	5.8
FX denominated	*growth in %*	13.9	2.8	8.7	14.5	14.2	20.1	16.5	10.8
Non-performing loans *(banking statistics)*	*share, in %*	**3.1**	**3.2**	**3.2**	**3.7**	**4.2**	**4.3**	**4.2**	**3.9**
Loans to deposits ratio	*in %*	**103**	**103**	**100**	**96**	**93**	**92**	**92**	**93**

Note: All indicators, except for the share of non-performing loans, are from the monetary statistics.
Source: CNB, ECB. Calculations of the MoF.

Table 1.4.5: Exchange Rates – yearly

		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
								Forecast	*Forecast*	*Outlook*	*Outlook*
Nominal exchange rates											
CZK / EUR	*average*	**27.03**	**26.33**	**25.65**	**25.67**	**26.44**	**25.65**	**24.4**	**24.2**	**24.1**	**24.0**
	appreciation in %	0.9	2.7	2.7	-0.1	-2.9	3.1	5.1	0.7	0.4	0.4
CZK / USD	*average*	**24.43**	**23.39**	**21.74**	**22.94**	**23.19**	**21.68**	**22.1**	**22.0**	**21.9**	**21.9**
	appreciation in %	0.7	4.5	7.6	-5.2	-1.1	7.0	-1.8	0.2	0.4	0.4
NEER	*average of 2015=100*	**102.4**	**105.5**	**109.3**	**108.9**	**106.9**	**110.5**	**115**	**116**	**116**	**117**
	appreciation in %	2.8	3.0	3.6	-0.4	-1.9	3.3	4.2	0.7	0.4	0.4
Real exchange rate to EA19 [1)]	*average of 2015=100*	**101.2**	**104.0**	**107.9**	**110.1**	**109.8**	**115.5**	**124**	**126**	**127**	**128**
	appreciation in %	1.2	2.8	3.8	2.0	-0.3	5.2	7.5	1.5	1.0	0.9
REER [2)]	*average of 2015=100*	**102.6**	**106.6**	**111.1**	**111.5**	**112.4**	**116.6**	**.**	**.**	**.**	**.**
	appreciation in %	2.6	3.9	4.3	0.3	0.8	3.8	.	.	.	.

[1)] *Deflated by GDP deflators.*
[2)] *Eurostat calculations, deflated by CPI, versus 42 countries.*
Source: CNB, Eurostat. Calculations and forecast of the MoF.

Table 1.4.6: Exchange Rates – quarterly

		2021				2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
						Estimate	*Forecast*	*Forecast*	*Forecast*
Nominal exchange rates									
CZK / EUR	*average*	**26.07**	**25.64**	**25.50**	**25.38**	**24.65**	**24.4**	**24.3**	**24.3**
	appreciation in %	-1.7	5.5	3.8	5.1	5.7	5.3	4.8	4.4
CZK / USD	*average*	**21.64**	**21.27**	**21.63**	**22.19**	**21.99**	**22.1**	**22.1**	**22.1**
	appreciation in %	7.4	15.5	4.6	0.8	-1.6	-3.9	-2.2	0.5
NEER	*average of 2015=100*	**109.1**	**110.7**	**111.0**	**111.1**	**114**	**115**	**115**	**116**
	appreciation in %	-0.2	6.2	3.4	4.0	4.6	4.1	3.9	4.0
Real exchange rate to EA19 [1)]	*average of 2015=100*	**112.7**	**116.3**	**116.8**	**116**	**121**	**125**	**126**	**124**
	appreciation in %	0.8	9.7	5.5	5.1	7.5	7.8	7.6	7.1
REER [2)]	*average of 2015=100*	**115.2**	**116.7**	**117.4**	**117.2**	**.**	**.**	**.**	**.**
	appreciation in %	1.0	6.9	3.4	4.1	.	.	.	.

[1)] *Deflated by GDP deflators.*
[2)] *Eurostat calculations, deflated by CPI, versus 42 countries.*
Source: CNB, Eurostat. Calculations and forecast of the MoF.

1.5 Demographic Trends

According to the results of the 2021 Census and the following balance, the population of the Czech Republic was 10.494 million at the beginning of 2021. Compared to the data valid to date, this is 208 thousand fewer people. During 2021, the population increased by 21.9 thousand to 10.516 million. Population growth was driven by a positive balance of international migration (50.0 thousand), while the balance of natural change was negative (−28.1 thousand).

Last year, 111.8 thousand children **were born** alive, 1.6 thousand more than in 2020, despite the lower number of women of reproductive age. The fertility rate increased, reaching 1.83 children per woman, the highest in the history of the independent Czech Republic, according to preliminary results.

The number of **deaths** (139.9 thousand) exceeded the 2020 level by 10.6 thousand. It was the highest since the end of World War II. Compared to the 2015-2019 average, the number of deaths was almost 26% higher. The main cause of the increased mortality was the COVID-19 epidemic.

The balance of international migration improved by 23 thousand people year-on-year and was the highest since 2008. The number of immigrants rose by almost a quarter to 69.2 thousand, while the number of emigrants fell by a third to 19.2 thousand. As in previous years, the positive balance was highest with citizens of Ukraine (28.4 thousand).

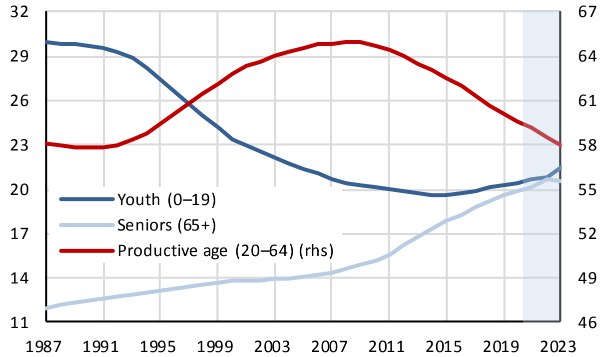
The intensity of migration flows this year will be fundamentally affected by the war in Ukraine. We assume that the positive balance of migration will be higher by 325 thousand people compared to the medium variant of the CZSO's demographic projection, i.e. it will reach 351 thousand people. In terms of age structure, 55% of the refugees from Ukraine are expected to be of working age (of which about 80% will be women), 42% will be children and young people under 19 and the remaining 3% will be seniors. While some refugees may return to Ukraine in the coming years, increased immigration from Ukraine can be expected at the same time. We therefore keep the migration balance according to the CZSO's projection.

Detailed data on the **age structure of the** Czech population at the beginning of 2022 will be published in June. An increase in the population in the youngest age groups and in the elderly age group can be expected, where the increase was probably significantly lower than in previous years due to COVID-19 deaths. In contrast, the decline in the population aged 20–64, although somewhat slowed by immigration with a favourable age structure, appears to have continued.

At the end of 2021, the Czech Social Security Administration registered 2.378 million **old-age pensioners**, which corresponded to 22.4% of the Czech population. The extension of the statutory retirement age combined with increased mortality led to a year-on-year decline in the number of old-age pensioners by 22.7 thousand. , i.e. by 0.9%.

Graph 1.5.1: Age Groups

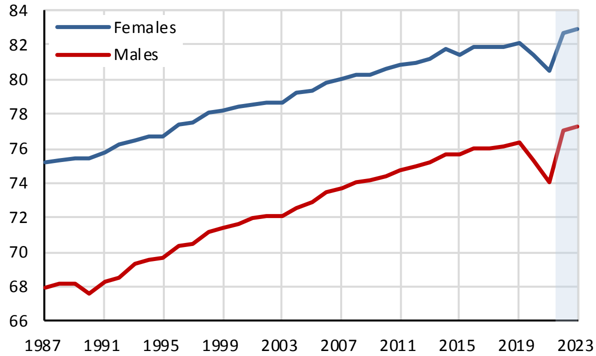
as of 1 January of the given year, shares in total population, in %



Source: CZSO. Calculations of the MoF.

Graph 1.5.2: Life Expectancy at Birth

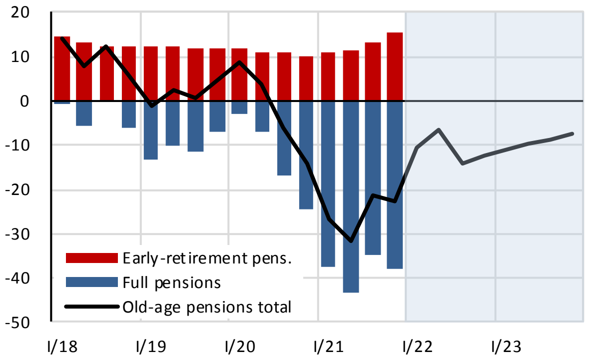
in years



Source: CZSO.

Graph 1.5.3: Old-Age Pensioners

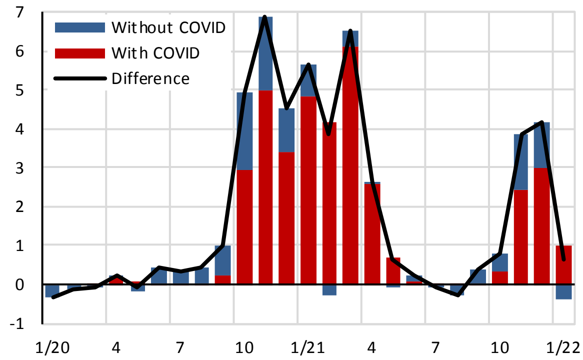
absolute increase over a year in thousands of persons



Source: Czech Social Security Administration. Calculations and forecast of the MoF.

Graph 1.5.4: Number of Deaths

difference from the 2015–2019 average, in thousands



Source: CZSO, Institute of Health Information and Statistics. Calculations of the MoF.

Table 1.5.1: Demographics

		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
							Estimate	*Forecast*	*Forecast*	*Outlook*	*Outlook*
Population (as of 1 January)	*thous. persons*	**10 554**	**10 579**	**10 610**	**10 650**	**10 694**	**10 494**	**10 516**	**10 858**	**10 873**	**10 885**
	growth in %	0.1	0.2	0.3	0.4	0.4	-1.9	0.2	3.3	0.1	0.1
0–19 years	*thous. persons*	2 082	2 106	2 133	2 160	2 188	2 168	2 183	2 334	2 346	2 352
	growth in %	0.9	1.2	1.3	1.3	1.3	-0.9	0.7	6.9	0.5	0.3
20–64 years	*thous. persons*	6 540	6 484	6 437	6 403	6 374	6 209	6 155	6 300	6 278	6 269
	growth in %	-0.8	-0.9	-0.7	-0.5	-0.4	-2.6	-0.9	2.4	-0.3	-0.1
65 and more years	*thous. persons*	1 932	1 989	2 040	2 087	2 132	2 117	2 178	2 224	2 249	2 264
	growth in %	2.8	2.9	2.6	2.3	2.2	-0.7	2.9	2.1	1.1	0.6
Old-age pensioners (as of 1 January) [1]	*thous. persons*	**2 377**	**2 395**	**2 404**	**2 410**	**2 415**	**2 400**	**2 378**	**2 365**	**2 358**	**2 351**
	growth in %	0.9	0.8	0.4	0.3	0.2	-0.6	-0.9	-0.5	-0.3	-0.3
Old-age dependency ratios (as of 1 January)											
Demographic [2]	*%*	29.5	30.7	31.7	32.6	33.4	34.1	35.4	35.3	35.8	36.1
Under current legislation [3]	*%*	39.8	40.1	40.4	40.4	40.5	40.2	40.7	39.6	39.3	39.1
Effective [4]	*%*	46.8	46.2	45.7	45.2	45.5	46.0	45.2	44.7	44.5	44.3
Fertility rate	*children*	**1.630**	**1.687**	**1.708**	**1.709**	**1.707**	**1.830**	**1.70**	**1.70**	**1.70**	**1.71**
Population increase	*thous. persons*	**25**	**31**	**40**	**44**	**8**	**22**	**342**	**15**	**12**	**9**
Natural increase	*thous. persons*	**5**	**3**	**1**	**0**	**-19**	**-28**	**-9**	**-11**	**-14**	**-17**
Live births	*thous. persons*	113	114	114	112	110	112	105	103	101	99
Deaths	*thous. persons*	108	111	113	112	129	140	114	114	115	116
Net migration	*thous. persons*	**20**	**28**	**39**	**44**	**27**	**50**	**351**	**26**	**26**	**26**
Immigration	*thous. persons*	38	46	58	66	56	69	.	.	.	.
Emigration	*thous. persons*	17	18	20	21	29	19	.	.	.	.
Census difference	*thous. persons*	**x**	**x**	**x**	**x**	**x**	**-208**	**x**	**x**	**x**	**x**

[1] In 2010 disability pensions of pensioners over 64 were transferred into old-age pensions.
[2] Demographic dependency: ratio of people in senior ages (65 and more) to people in productive age (20–64).
[3] Dependency under current legislation: ratio of people above the official retirement age to the people over 19 below the official retirement age.
[4] Effective dependency: ratio of old-age pensioners to working people (LFS methodology).
Source: Czech Social Security Administration, CZSO. Calculations and forecast of the MoF.

1.6 Other Assumptions

In addition to the factors mentioned in the previous chapters, the forecast is based on the following assumptions:

- the war in Ukraine will end later this year;
- economic sanctions against the Russian Federation will not disrupt oil and gas supplies to Europe;
- problems in supply chains will be deeper due to the invasion of Ukraine and will continue to hamper global economic growth next year;
- thanks to vaccination coverage of the population, high number of people who have had COVID-19 and wider treatment options, it will not be necessary to adopt macroeconomically significant restrictions in the future if the epidemic situation worsens;
- the rates of major types of taxes and compulsory levies (value added tax, personal and corporate income tax, social and health insurance contributions) will remain unchanged;
- the minimum wage and the lowest levels of the guaranteed wage will be increased in the coming years in line with the forecast growth of average nominal wage.

2 Economic Cycle

2.1 Position within the Economic Cycle

As a result of the epidemic and related measures, the Czech economy fell into a **significantly negative output gap**. In Q2 2020, real gross value added fell short of its potential level by more than 8%, by far the highest difference in the history of the independent Czech Republic. However, thanks to the economic recovery in the following quarters, the output gap for the whole of 2020 reached −2.7% (*vs. −2.8%*). In full-year terms it was thus smaller than in the recessions of 2009 and 2013. Due to the improvement in economic performance, the negative output gap narrowed to −0.7% of potential output last year (*vs. −1.3%*).

As a result of the much weaker forecast for the economic growth rate, the negative output gap should be closed later, at the end of next year at the earliest. Given the persistent period of heightened uncertainty and volatility in economic developments, the results should be treated with caution.

Potential output, whose growth slowed markedly in 2019 and 2020 due to the economic slowdown and subsequent recession, is currently estimated to have risen by 1.0% in 2021 (*vs. 1.1%*). Growth could accelerate to 2.2% this year and around 2.5% in the following years.

The trend component of **total factor productivity** remains the main driver of potential growth in the long run (see Graph 2.1.2). Its contribution could reach 1.4 pp this year (*vs. 1.2 pp*) and increase further in the following years.

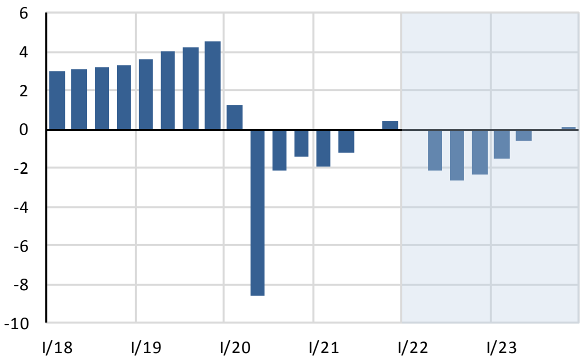
A significant reduction in investment activity in 2020 and only a slight recovery in 2021 resulted in a slower increase in the **capital stock**. Given the slow pace of gross fixed capital formation, this factor could contribute 0.6 pp to potential growth in 2022 (*unchanged*).

Gradual population ageing manifests itself as a long-term decline in the number of people in the working age (20–64 years). **Labour supply** thus took 0.3 pp off potential output growth in 2021 (*unchanged*). This value was also expected for this year, but given the current immigration wave from Ukraine (largely in the 20–64 age group, Chapter 1.5), demographic developments could make a significant positive contribution of 0.8 pp in 2022.

Until 2018, economic growth accompanied by rising labour demand led to a rapid increase in the **participation rate**, which more than offset the negative impact of demographic developments. This trend temporarily stopped after the economic downturn in 2020. Renewed situation of labour shortages should boost the participation rate in the coming years. However, for methodological reasons (Chapter 3.3), the migration wave should put a brake on the increase in the participation rate. Overall, the contribution of the participation rate could reach −0.2 pp this year (*vs. 0.6 pp*).

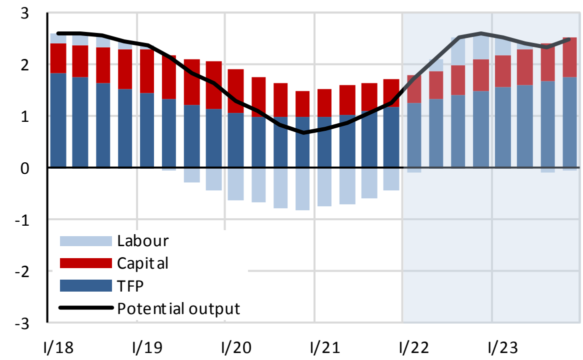
The average number of **hours usually worked** has been decreasing over the long term. While in 2017–2020 this number was in the range of 39.9–40.2 hours, in 2021 values in the range of 39.3–39.5 hours were reported. Thus, there has been a clear break in the time series from Q1 2021 onwards (see Graph 2.1.4), which is not economically justified and most likely results from methodological changes in the LFS. The number of hours usually worked thus took 0.5 pp off potential growth last year (*vs. 0.4 pp*), in 2022 its contribution could be −0.2 pp (vs *−0.1 pp*).

Graph 2.1.1: Output Gap
in % of potential product



Source: CZSO. Calculations and forecast of the MoF.

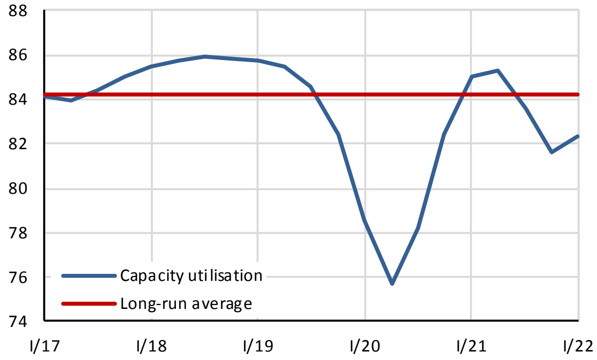
Graph 2.1.2: Potential Output
YoY growth rate in %, contributions in percentage points



Source: CZSO. Calculations and forecast of the MoF.

Graph 2.1.3: Capacity Utilisation in Industry

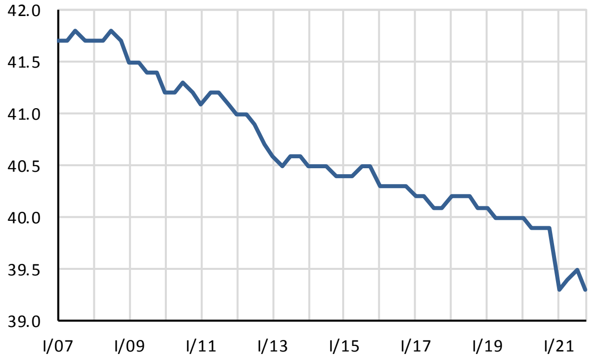
smoothed by Hodrick-Prescott filter, in %



Source: CZSO.

Graph 2.1.4: Hours Usually Worked

number of hours usually worked per week



Source: Eurostat.

Table 2.1.1: Output Gap and Potential Product

		2016	2017	2018	2019	2020	2021	2022 *Forecast*	2023 *Forecast*	2024 *Outlook*	2025 *Outlook*
Output gap	*%*	**-0.3**	**2.4**	**3.2**	**4.1**	**-2.7**	**-0.7**	**-1.8**	**-0.5**	**-0.1**	**-0.1**
Potential product [1)]	*growth in %*	**2.8**	**2.7**	**2.6**	**2.0**	**1.0**	**1.0**	**2.2**	**2.5**	**2.6**	**2.5**
Contributions											
Trend total factor productivity	*pp*	2.0	2.0	1.7	1.3	1.0	1.1	1.4	1.7	1.8	1.9
Fixed assets	*pp*	0.6	0.5	0.7	0.9	0.7	0.5	0.6	0.7	0.8	0.6
Population 20–64 years	*pp*	-0.5	-0.5	-0.4	-0.3	-0.3	-0.3	0.8	0.2	-0.1	-0.1
Participation rate	*pp*	0.8	0.7	0.7	0.2	-0.1	0.2	-0.2	-0.1	0.1	0.1
Usually worked hours	*pp*	-0.1	-0.2	-0.1	-0.1	-0.3	-0.5	-0.2	0.0	0.0	0.0

[1)] *Based on gross value added.*

Source: CZSO. Calculations and forecast of the MoF.

2.2 Business Cycle Indicators

The development of confidence indicators in Q1 2022 points to an acceleration in the year-on-year growth of gross value added in industry, trade, services and construction. However, the correlation between the development of confidence and gross value added is very low in the latter sector.

The composite indicator of exports of goods, compiled by the Ministry of Finance from sub-questions of the CZSO's business cycle survey and business confidence in Germany, continues to indicate a year-on-year decline in exports of goods.

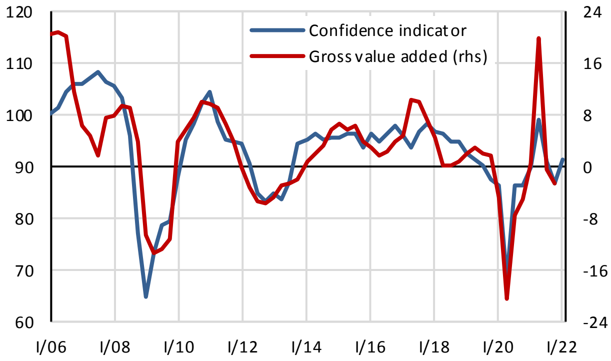
The CZSO's consumer confidence indicator deteriorated further in Q1 2022. Its development for the first half of 2022 (the confidence indicator has a lead of 1–2 quarters) signals a noticeable slowdown in the year-on-year growth of household final consumption expenditure. The consumer confidence indicator, compiled by the Ministry of Finance from sub-questions of the European Commission's consumer survey, also declined in Q1 2022 compared to the previous period. A significantly negative assessment of the economic situation persists among consumers, but the financial situation of households and their willingness to spend have also deteriorated.

As a result, the aggregate confidence indicator signals a slowdown in the year-on-year growth of total gross value added in Q1 2022.

In response to the war in Ukraine, problems in supply chains and rising inflationary pressures, the composite leading indicator points to a widening of the negative output gap in the first half of this year.

Graph 2.2.1: Confidence and GVA in Industry

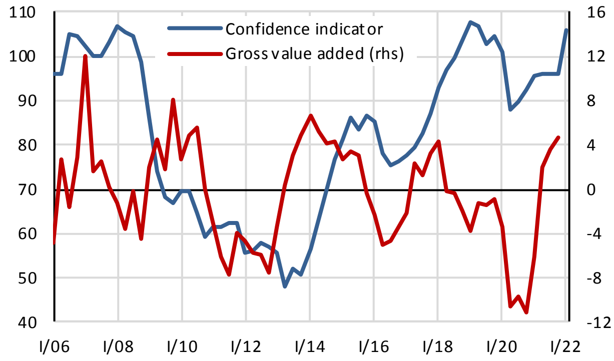
2005=100 (lhs), YoY growth in % (rhs)



Source: CZSO.

Graph 2.2.2: Confidence and GVA in Construction

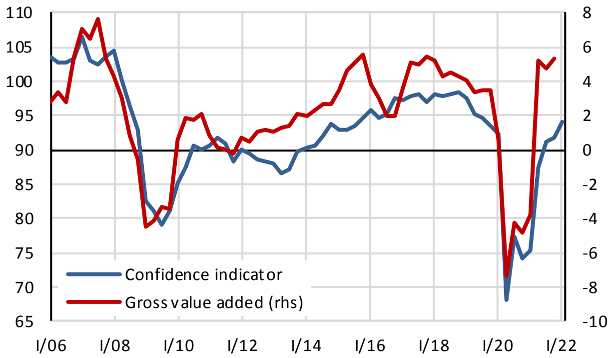
2005=100 (lhs), YoY growth in % (rhs)



Source: CZSO.

Graph 2.2.3: Confidence and GVA in Trade and Services

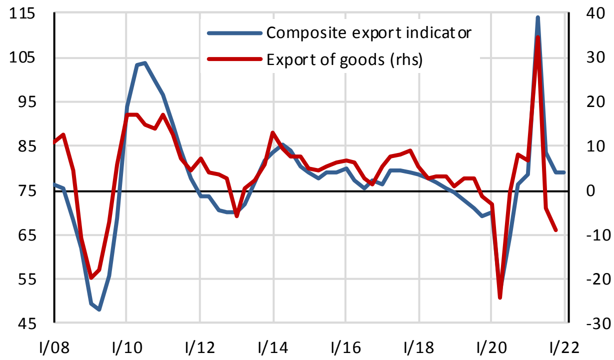
2005=100 (lhs), YoY growth in % (rhs)



Source: CZSO. Calculations of the MoF.

Graph 2.2.4: Composite Export Indicator

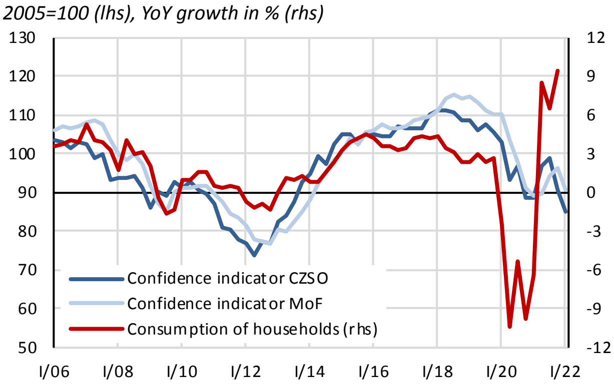
2010=100 (lhs), YoY growth in % (rhs)



Source: CESifo, CZSO. Calculations of the MoF.

Graph 2.2.5: Consumer Confidence and Consumption

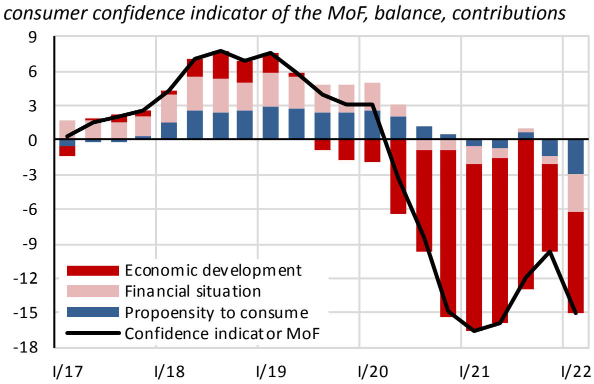
2005=100 (lhs), YoY growth in % (rhs)



Source: CZSO, European Commission. Calculations of the MoF.

Graph 2.2.6: Decomposition of Consumer Sentiment

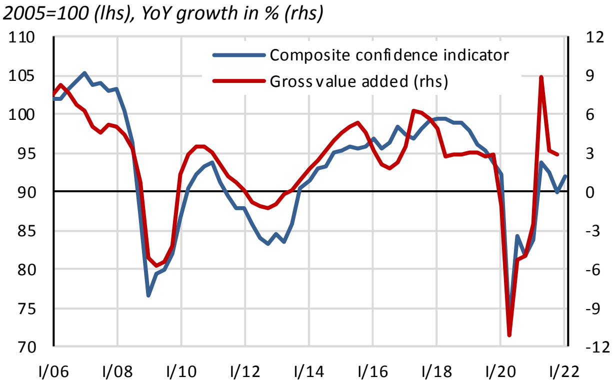
consumer confidence indicator of the MoF, balance, contributions



Source: European Commission. Calculations of the MoF.

Graph 2.2.7: Composite Confidence Indicator and GVA

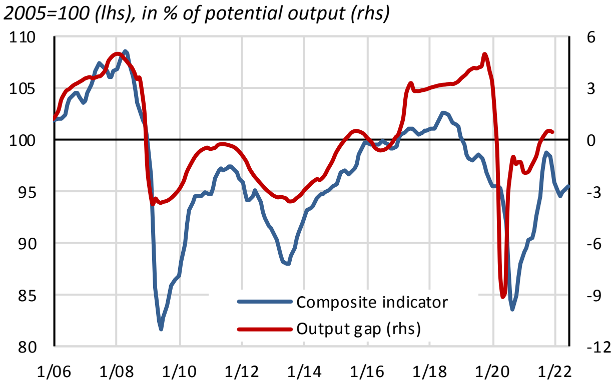
2005=100 (lhs), YoY growth in % (rhs)



Source: CZSO.

Graph 2.2.8: Composite Leading Indicator

2005=100 (lhs), in % of potential output (rhs)



Source: CZSO. Calculations of the MoF.

3 Forecast of Macroeconomic Developments in the CR

3.1 Economic Output

The Czech economy grew by 3.7% YoY (*vs. 2.3%*) **in Q4 2021**. Quarter-on-quarter growth in seasonally adjusted **GDP** slowed to 0.8% (*vs. 0.0%*). Economic activity was noticeably dampened by manufacturing, which was hit by a shortage of production components. The CZSO revised up the quarter-on-quarter real GDP growth in the preceding quarters of 2021 by 0.1 pp.

Annual real GDP growth in Q4 2021 was driven entirely by domestic demand, mainly by strong inventory accumulation and growth in household consumption. In contrast, the balance of foreign trade in goods and services dampened the economy significantly.

Household consumption increased by 9.4% year-on-year (*vs. 11.6%*). Its dynamics were significantly boosted by the base effect and a decline in the savings rate. This is because the anti-epidemic restrictions were less stringent compared to the end of 2020, and households' ability to spend on selected goods and services was thus constrained less. An increase in real disposable income also had a positive impact on the year-on-year growth rate of consumption. Spending on intermediate consumption goods grew fastest, but consumption growth was most supported by an increase in spending on services. **Government consumption** rose by 2.6% (*vs. 0.9%*), driven by positive employment growth and purchases of goods and services, with purchases driven by health insurance companies.

Gross fixed capital formation increased by 0.9% (*in line with the estimate*), driven exclusively by investment in transport equipment and dwellings. In contrast, other components decreased or stagnated. From a sectoral perspective, investment activity was driven by households. Business investment was negatively affected by production shutdowns due to input shortages. Government investment declined year-on-year due to nationally funded projects. A significantly positive contribution of 5.8 pp from the change in inventories was behind the 24.3% increase in gross capital formation (*vs. 6.5%*). Firms were apparently replenishing inventories to avoid shortfalls in the supply of components as well as losses resulting from high inflation. Inventories of work in progress probably also increased.

The **foreign trade balance** made a strong negative contribution to GDP growth of 7.1 pp. Imports of goods and services, on the other hand, strengthened by 4.5% (*vs. 1.7%*) thanks to extraordinary stock accumulation.

Given Russia's invasion of Ukraine, which has resulted in higher commodity prices, trade sanctions, and enforced production curtailments in manufacturing due to supply chain problems, we estimate that quarter-on-quarter GDP growth slowed to 0.1% in **Q1 2022** (*vs. 0.5%*), and GDP thus rose by 4.3% year-on-year[1] (*vs. 3.6%*). This takes into account both the data on economic developments in early 2022 that were available at the forecast cut-off date (confidence indicators, industrial and construction output, retail and services sales, and foreign trade) and estimates of the impact of the war.

In 2022, GDP growth should be driven exclusively by domestic demand, while the external trade balance should be virtually neutral. We expect real GDP to grow by 1.2% this year (*vs. 3.1%*) and by 3.6% in 2023. Economic activity should decline more sharply in Q2 2022 due to restricted foreign trade with Russia and Ukraine, supply shortfalls of key components for manufacturing and construction, and a jump in energy and fuel prices.

Household final consumption expenditure is expected to be negatively affected by the decline in real disposable income and tighter monetary policy. The increase in the cost of living will mainly affect low-income households, while for middle- and especially high-income households the effect of the rising price level could be dampened by drawing on savings accumulated during the epidemic. However, the savings rate will still remain above the long-term average. The decline in labour taxation since the beginning of the year (see Section 1.3) and the growth profile of consumption in 2021 (if household consumption stagnated at the level of Q4 2021 for the whole of this year, it would still increase by 2.3% for the whole of 2022) should have a positive impact on the full-year dynamics. In view of the aforementioned strongly negative factors, real household consumption should grow by only 0.5% this year (*vs. 2.3%*). In 2023, household consumption should be supported by continued decline in the savings rate, renewed growth in real disposable income and spending of Ukrainian refugees (see Box 1). Consumption could thus increase by 4.5%.

We expect **general government consumption** to grow by 1.0% in 2022 (*vs. 0.4%*). The pace of employment is expected to be weaker overall than in 2021; however, there will be pressure to increase staff capacity, especially in education, due to the migration wave from Ukraine. Purchasing and spending in the health sector should weaken due to the waning of the epidemic, but this will be offset by humanitarian needs. We forecast the same dynamics as in 2022 for 2023, when government consumption should be boosted by spending on purchases of goods and services, supported by current subsidies

[1] The improvement in the estimate of annual GDP growth in Q1 2022, despite the worse quarter-on-quarter dynamics, stems mainly from better-than-expected growth at the end of last year.

from EU funds as the end of the 2014–2020 financial perspective approaches.

Gross fixed capital formation is expected to continue its gradual recovery in 2022, driven by economic growth abroad, the lagged impact of easy monetary conditions and investment activity in the general government sector supported by the implementation of projects co-financed by EU funds. However, private investment will be weighed down by problems in supply chains and a substantial increase in uncertainty related to the possible escalation of the war in Ukraine and the extension of economic sanctions against the Russian Federation. The projected easing of these challenges and the acceleration of growth in foreign economies in 2023 could contribute to a noticeable increase in private investment dynamics despite the restrictive monetary policy. Overall investment activity will also be supported by military equipment purchases and the use of expiring EU funds from the previous financial perspective. Gross fixed capital formation could increase by 2.2% in 2022 (*vs. 5.4%*), while growth of 5.9% is forecast for 2023.

In 2022, we expect companies to accumulate a similar volume of **inventories** as in the previous year, both for prudential reasons and due to interruptions in the supply of certain components. In future years, the change in inventories could then contribute slightly negatively to GDP growth. Gross capital formation could thus increase by 1.9% this year (*vs. 4.9%*) and by 3.6% in 2023.

We expect **exports of goods and services** to grow by 1.5% this year (*vs. 4.4%*), and to strengthen by 4.2% in 2023. Export growth in 2022 reflects the recovery in export markets (see Chapter 3.4) and consumption by immigrants from Ukraine (see Box 1), while export performance is substantially dampened by supply disruptions. The acceleration in exports next year reflects the continued economic recovery in the countries of major trading partners and the fading supply-side frictions. The dynamics of exports and import-intensive investment demand is then reflected in the pace of **imports of goods and services**, which could rise by 1.3% in 2022 (*vs. 3.8%*). The acceleration to 4.0% in 2023 reflects higher growth rates of gross capital formation, exports and household consumption.

Box 1: Impact of the Migration Wave from Ukraine on Household Consumption

Successful integration of refugees from Ukraine poses a significant challenge, especially in the areas of housing, education and health care. There will be additional costs for public finances in the short-term, but from the economic perspective the situation could be considerably benefitial. The participation of Ukrainian citizens in the Czech labour market could alleviate existing imbalances between demand and supply. Taxes and social security contributions paid on their earnings will then strengthen the revenue side of public budgets. Finally, refugees from Ukraine will act as consumers in the Czech economy, which will boost economic activity and further increase tax revenues.

At the outset, it should be stressed that Ukrainian refugees will be classified as non-residents during their first year of their stay in the Czech Republic. Therefore, although their consumption expenditures in the Czech Republic will be part of household consumption in the domestic concept (expenditures of residents and non-residents in the Czech Republic), they will not be included in household consumption in the national concept (expenditures of residents in the Czech Republic and abroad). Thus, under the expenditure method of GDP estimation, these expenditures will initially not be captured in household consumption (national concept) but in exports of goods and services. In the vast majority of cases, consumer expenditures of refugees from Ukraine will represent a transaction between a resident and a non-resident unit, and from the perspective of national accounts they will therefore constitute foreign trade.

An indicative estimate of the increase in consumption due to the immigration wave from Ukraine presented here is based on the following factors:

- the number of female and male arrivals, including a breakdown into the main age categories (see Chapter 1.5);
- the number of refugees who find work in the Czech Republic;
- their average (gross and net) wages;
- propensity to consume;
- the amount and conditions of the humanitarian benefit and other social benefits.

We expect that 325 thousand people will emigrate from Ukraine to the Czech Republic this year, of which almost 180 thousand will be of working age. According to the Ministry of the Interior, approximately four-fifths of adult refugees are women. We work with this relative representation of women (80%) and men (20%) among working-age refugees in our estimates.

The number of Ukrainians who find employment in the Czech labour market is based on the results of the LFS. In 2020, the employment rate of non-EU citizens aged 20–64 living in the Czech Republic was 93.2% and 71.2% for men and women, respectively. However, refugees will face a language barrier in the Czech labour market and some of them may not be interested in working in the Czech Republic (e.g. because they believe they will return to Ukraine soon). Therefore, we expect that the employment rate of newcomers from Ukraine will gradually increase and in Q4 2023 it will reach the above-mentioned values reduced by 5.0 percentage points.

The estimate of average earnings is based on data of the Ministry of Labour and Social Affairs on job vacancies. At the end of March, there were almost 335,000 vacancies in this database, but we have narrowed down the selection to jobs meeting the following conditions:

- it is not an offer from an entity that has already ceased to exist or is in liquidation according to information from the Register of Economic Entities;
- the last change in the vacancy offer is after 1 October 2021 and the start date is on or after 1 January 2022;
- the employer agrees to employ non-EU nationals;
- it is a full-time position;
- the monthly salary offered is at least the minimum wage (CZK 16,200).

From this narrowed sample, which contains about 102 thousand vacancies, we calculated the average offered wage for each type of occupation (at the level of single-digit CZ-ISCO classification code). However, given the nature of the information on offered wages contained in the open data, this is more or less the lower limit of offered earnings. We then calculated the overall average wage, separately for men and women, as a weighted average, with the weights corresponding to the occupational structure of Ukrainian employees (see Box 3, Table 2). We also performed an analogous calculation for individual industries of the economy (instead of occupation types), with the industry classification of the job derived from the Register of Economic Entities (databases were matched via the Company Identification Number). The resulting average wage, which for both men and women amounts to almost CZK 22 thousand, is then a simple average of the two estimates.

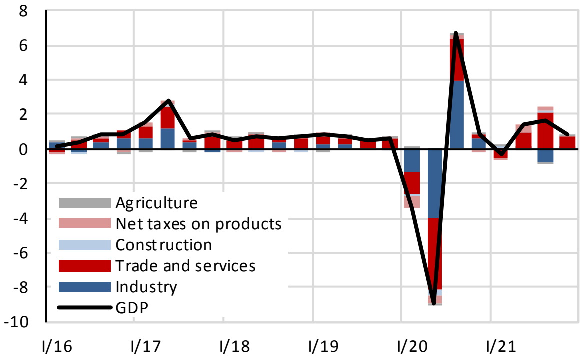
Compared to the average earnings of employees from Ukraine who are already working in the Czech Republic (see Box 3, Table 3), this is a much lower wage (which is partly due to the information in the job vacancies database, see above), but newcomers will in most cases have no experience in the position, which should be reflected in lower remuneration. In addition, it is possible that (especially) Ukrainian women will be more interested in part-time work. For 2023, we expect the average wage of Ukrainian refugees to increase by 5%.

For the calculation of average net pay, we assume that men will only claim the basic personal tax credit, while women will also use the child tax credit (one child per woman). The average net wage for women in 2022 will thus be approximately CZK 19,900, while for men it will be roughly CZK 18,500. We then expect 90% propensity to consume. We also estimate that in 2022 and 2023 refugees from Ukraine will receive the so-called humanitarian benefit (CZK 5,000 per month for a maximum of 6 months) and other social benefits totalling CZK 9.0 billion. For expenditures financed from social benefits, we work with 100% propensity to consume.

As a result, consumer spending by refugees from Ukraine could reach CZK 19.4 billion this year and CZK 26.5 billion in 2023. However, in 2022 and early 2023, they will be included not in household consumption but in exports of goods and services, for the reasons mentioned above.

Graph 3.1.1: Resources of Gross Domestic Product

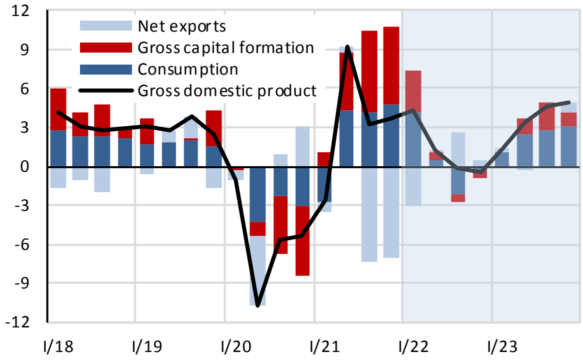
QoQ growth rate of real GDP in %, contrib. in pp, season. adjusted



Source: CZSO. Calculations of the MoF.

Graph 3.1.2: GDP by Type of Expenditure

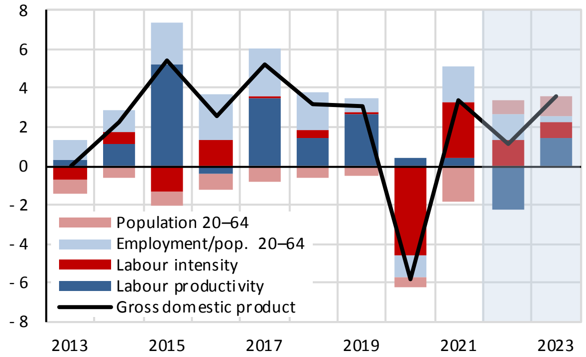
YoY growth rate of real GDP in %, contributions in pp



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.1.3: Real Gross Domestic Product

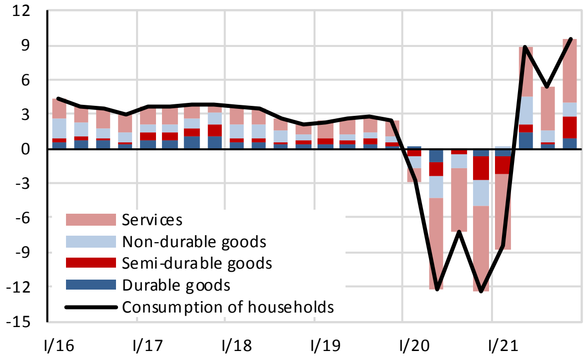
growth in %, contributions in percentage points



Note: Labour intensity gauges the number of hours worked per worker.
Source: CZSO. Calculations and forecast of the MoF.

Graph 3.1.4: Real Consumption of Households

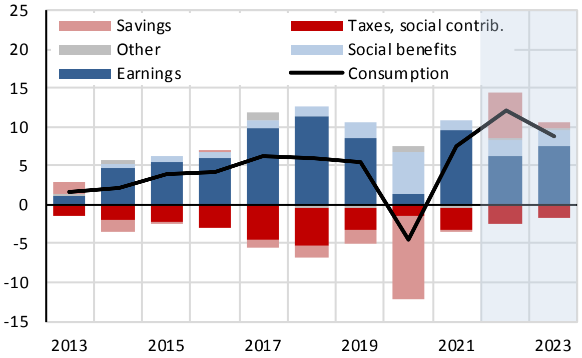
domestic concept, YoY growth rate in %, contributions in pp



Source: CZSO. Calculations of the MoF.

Graph 3.1.5: Nominal Consumption of Households

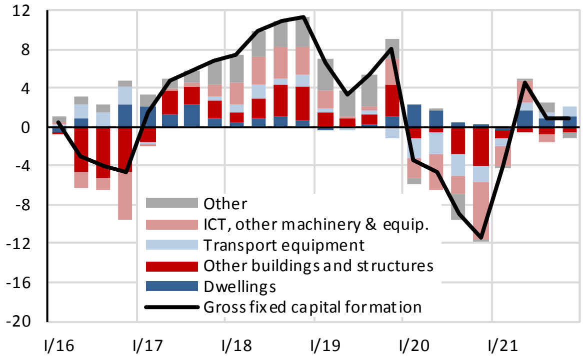
national concept, YoY growth rate in %, contributions in pp



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.1.6: Investment by Type of Expenditure

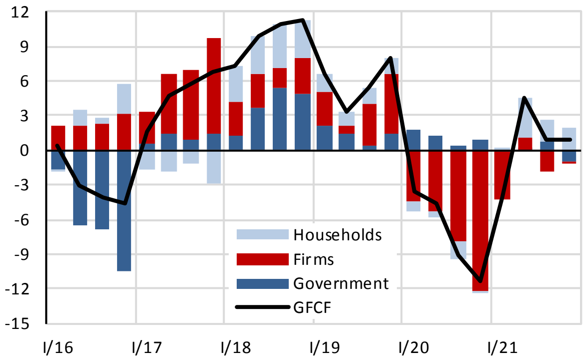
YoY growth rate of real GFCF in %, contributions in pp



Source: CZSO. Calculations of the MoF.

Graph 3.1.7: Investment by Sector

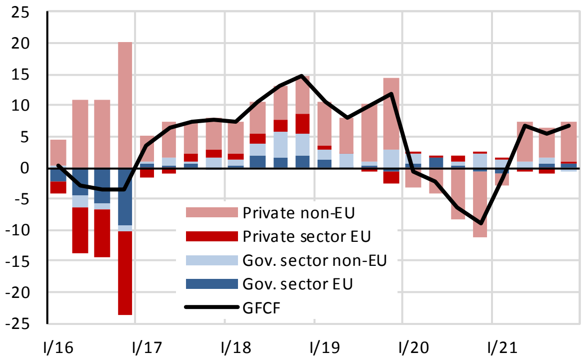
YoY growth rate of real GFCF in %, contributions in percentage points



Source: CZSO. Calculations of the MoF.

Graph 3.1.8: Investment Co-financing from EU Funds

YoY growth rate of nominal GFCF in %, contributions in pp



Source: CZSO. Calculations of the MoF.

Table 3.1.1: Real GDP by Type of Expenditure – yearly

chained volumes, reference year 2015

		2016	2017	2018	2019	2020	2021	2022 *Forecast*	2023 *Forecast*	2024 *Outlook*	2025 *Outlook*
Gross domestic product	*bill. CZK 2015*	**4 743**	**4 988**	**5 147**	**5 303**	**4 996**	**5 163**	**5 222**	**5 411**	**5 585**	**5 721**
	growth in %	2.5	5.2	3.2	3.0	-5.8	3.3	1.2	3.6	3.2	2.4
	growth in % [1]	2.4	5.4	3.2	3.0	-5.8	3.3	1.2	3.8	3.0	2.5
Private consumption expenditure [2]	*bill. CZK 2015*	**2 264**	**2 355**	**2 438**	**2 504**	**2 334**	**2 437**	**2 450**	**2 560**	**2 662**	**2 755**
	growth in %	3.8	4.0	3.5	2.7	-6.8	4.4	0.5	4.5	4.0	3.5
Government consumption exp.	*bill. CZK 2015*	**897**	**913**	**948**	**972**	**1 005**	**1 035**	**1 045**	**1 055**	**1 066**	**1 083**
	growth in %	2.5	1.8	3.8	2.5	3.4	3.0	1.0	1.0	1.1	1.6
Gross capital formation	*bill. CZK 2015*	**1 243**	**1 323**	**1 425**	**1 489**	**1 336**	**1 566**	**1 597**	**1 654**	**1 641**	**1 620**
	growth in %	-4.0	6.5	7.7	4.5	-10.3	17.2	1.9	3.6	-0.8	-1.3
Gross fixed capital formation	*bill. CZK 2015*	1 190	1 248	1 374	1 455	1 346	1 355	1 385	1 467	1 469	1 473
	growth in %	-3.0	4.9	10.0	5.9	-7.5	0.6	2.2	5.9	0.1	0.2
Change in stocks and valuables	*bill. CZK 2015*	53	75	51	34	-10	211	211	187	172	147
Exports of goods and services	*bill. CZK 2015*	**3 888**	**4 168**	**4 322**	**4 386**	**4 083**	**4 292**	**4 354**	**4 537**	**4 705**	**4 822**
	growth in %	4.3	7.2	3.7	1.5	-6.9	5.1	1.5	4.2	3.7	2.5
Imports of goods and services	*bill. CZK 2015*	**3 549**	**3 771**	**3 989**	**4 051**	**3 773**	**4 208**	**4 264**	**4 437**	**4 522**	**4 584**
	growth in %	2.8	6.3	5.8	1.5	-6.9	11.5	1.3	4.0	1.9	1.4
Gross domestic expenditure	*bill. CZK 2015*	**4 404**	**4 592**	**4 810**	**4 963**	**4 681**	**5 038**	**5 092**	**5 269**	**5 371**	**5 459**
	growth in %	1.2	4.3	4.8	3.2	-5.7	7.6	1.1	3.5	1.9	1.6
Methodological discrepancy [3]	*bill. CZK 2015*	0	-1	3	3	11	41	42	41	32	25
Real gross domestic income	*bill. CZK 2015*	**4 780**	**4 988**	**5 148**	**5 323**	**5 075**	**5 248**	**5 234**	**5 422**	**5 610**	**5 754**
	growth in %	3.4	4.3	3.2	3.4	-4.7	3.4	-0.3	3.6	3.5	2.6
Contributions to GDP growth [4]											
Gross domestic expenditure	*pp*	**1.2**	**3.9**	**4.4**	**3.0**	**-5.3**	**7.1**	**1.0**	**3.4**	**1.9**	**1.6**
Consumption	*pp*	**2.3**	**2.3**	**2.4**	**1.8**	**-2.5**	**2.6**	**0.5**	**2.3**	**2.1**	**2.0**
Household expenditure	*pp*	1.8	1.9	1.7	1.3	-3.2	2.0	0.2	2.1	1.9	1.7
Government expenditure	*pp*	0.5	0.3	0.7	0.5	0.7	0.6	0.2	0.2	0.2	0.3
Gross capital formation	*pp*	**-1.1**	**1.7**	**2.0**	**1.2**	**-2.8**	**4.5**	**0.6**	**1.1**	**-0.2**	**-0.4**
Gross fixed capital formation	*pp*	-0.8	1.2	2.5	1.6	-2.0	0.2	0.6	1.5	0.0	0.1
Change in stocks	*pp*	-0.3	0.5	-0.5	-0.3	-0.8	4.3	0.0	-0.4	-0.3	-0.4
Foreign balance	*pp*	**1.4**	**1.2**	**-1.2**	**0.0**	**-0.5**	**-3.8**	**0.1**	**0.2**	**1.3**	**0.9**
External balance of goods	*pp*	1.0	0.9	-1.0	0.4	-0.4	-3.8	-0.1	0.0	1.1	0.8
External balance of services	*pp*	0.4	0.3	-0.2	-0.4	-0.1	0.1	0.2	0.2	0.2	0.1
Gross value added	*bill. CZK 2015*	**4 269**	**4 491**	**4 643**	**4 783**	**4 515**	**4 659**	.	.	.	.
	growth in %	2.5	5.2	3.4	3.0	-5.6	3.2	.	.	.	.
Net taxes and subsidies on products	*bill. CZK 2015*	**474**	**497**	**504**	**521**	**481**	**504**	.	.	.	.

[1] From working day adjusted data.
[2] Including consumption of non-profit institutions serving households (NPISH).
[3] Deterministic impact of using prices and structure of the previous year for calculation of y-o-y growth.
[4] Calculated on the basis of prices and structure of the previous year with perfectly additive contributions.
Source: CZSO. Calculations and forecast of the MoF.

Table 3.1.2: Real GDP by Type of Expenditure – quarterly

chained volumes, reference year 2015

		2021				2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
						Estimate	*Forecast*	*Forecast*	*Forecast*
Gross domestic product	*bill. CZK 2015*	**1 198**	**1 303**	**1 320**	**1 342**	**1 249**	**1 319**	**1 318**	**1 336**
	growth in %	-2.6	9.3	3.2	3.7	4.3	1.3	-0.2	-0.5
	growth in % [1]	-2.3	8.7	3.6	3.6	4.0	1.2	-0.2	-0.2
	QoQ in % [1]	-0.3	1.4	1.7	0.8	0.1	-1.3	0.2	0.8
Private consumption expenditure [2]	*bill. CZK 2015*	**548**	**613**	**637**	**640**	**593**	**611**	**614**	**632**
	growth in %	-6.2	8.7	5.9	9.4	8.2	-0.3	-3.6	-1.1
Government consumption exp.	*bill. CZK 2015*	**238**	**246**	**257**	**294**	**244**	**253**	**252**	**296**
	growth in %	0.4	1.7	7.2	2.6	2.6	2.6	-1.9	0.8
Gross capital formation	*bill. CZK 2015*	**328**	**397**	**434**	**407**	**367**	**405**	**425**	**399**
	growth in %	4.0	15.8	24.0	24.3	12.0	2.0	-2.0	-2.0
Gross fixed capital formation	*bill. CZK 2015*	289	340	347	378	300	338	356	391
	growth in %	-4.1	4.5	0.8	0.9	3.8	-0.6	2.6	3.3
Change in stocks and valuables	*bill. CZK 2015*	39	57	87	29	67	67	70	8
Exports of goods and services	*bill. CZK 2015*	**1 089**	**1 124**	**986**	**1 092**	**1 073**	**1 104**	**1 044**	**1 133**
	growth in %	2.6	32.2	-3.2	-5.2	-1.5	-1.8	5.9	3.7
Imports of goods and services	*bill. CZK 2015*	**1 008**	**1 086**	**1 007**	**1 108**	**1 035**	**1 062**	**1 026**	**1 142**
	growth in %	4.1	33.4	8.2	4.5	2.7	-2.2	2.0	3.1
Gross domestic expenditure	*bill. CZK 2015*	**1 114**	**1 256**	**1 326**	**1 342**	**1 203**	**1 269**	**1 290**	**1 330**
	growth in %	-2.0	9.1	11.3	11.6	8.0	1.0	-2.7	-0.9
Methodological discrepancy [3]	*bill. CZK 2015*	**3**	**8**	**13**	**18**	**8**	**7**	**9**	**18**
Real gross domestic income	*bill. CZK 2015*	**1 225**	**1 330**	**1 339**	**1 354**	**1 256**	**1 325**	**1 318**	**1 334**
	growth in %	-1.3	9.9	2.9	2.4	2.5	-0.4	-1.5	-1.5
Gross value added	*bill. CZK 2015*	**1 093**	**1 177**	**1 187**	**1 203**	**.**	**.**	**.**	**.**
	growth in %	-2.6	9.6	2.8	3.3	.	.	.	.
	growth in % [1]	-2.3	8.9	3.2	3.1	.	.	.	.
	QoQ in % [1]	-0.3	1.0	1.6	0.9	.	.	.	.
Net taxes and subsidies on products	*bill. CZK 2015*	**104**	**126**	**134**	**141**	**.**	**.**	**.**	**.**

[1] From seasonally and working day adjusted data

[2] Including consumption of non-profit institutions serving households (NPISH).

[3] Deterministic impact of using prices and structure of the previous year for calculation of y-o-y growth.

Source: CZSO. Calculations and forecast of the MoF.

Table 3.1.3: Nominal GDP by Type of Expenditure – yearly

		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
								Forecast	*Forecast*	*Outlook*	*Outlook*
Gross domestic product	*bill. CZK*	**4 797**	**5 111**	**5 410**	**5 790**	**5 694**	**6 121**	**6 618**	**7 135**	**7 550**	**7 904**
	growth in %	3.7	6.5	5.8	7.0	-1.7	7.5	8.1	7.8	5.8	4.7
Private consumption expenditure [1)]	*bill. CZK*	**2 273**	**2 420**	**2 568**	**2 711**	**2 598**	**2 796**	**3 135**	**3 413**	**3 620**	**3 821**
	growth in %	4.2	6.5	6.1	5.6	-4.2	7.6	12.1	8.9	6.1	5.5
Government consumption exp.	*bill. CZK*	**910**	**959**	**1 049**	**1 133**	**1 232**	**1 313**	**1 371**	**1 426**	**1 470**	**1 520**
	growth in %	4.0	5.4	9.4	8.1	8.7	6.6	4.4	4.0	3.0	3.4
Gross capital formation	*bill. CZK*	**1 248**	**1 348**	**1 472**	**1 599**	**1 476**	**1 825**	**1 993**	**2 155**	**2 196**	**2 216**
	growth in %	-3.6	8.0	9.2	8.7	-7.7	23.7	9.2	8.1	1.9	0.9
Gross fixed capital formation	*bill. CZK*	1 196	1 273	1 423	1 568	1 490	1 559	1 706	1 883	1 936	1 984
	growth in %	-2.5	6.4	11.7	10.2	-4.9	4.6	9.4	10.4	2.8	2.5
Change in stocks and valuables	*bill. CZK*	52	74	49	31	-15	267	288	272	260	232
External balance	*bill. CZK*	**366**	**384**	**321**	**347**	**389**	**187**	**119**	**141**	**263**	**347**
Exports of goods and services	*bill. CZK*	3 795	4 039	4 163	4 279	4 043	4 442	4 774	5 134	5 417	5 602
	growth in %	1.8	6.4	3.1	2.8	-5.5	9.9	7.5	7.5	5.5	3.4
Imports of goods and services	*bill. CZK*	3 429	3 654	3 842	3 932	3 654	4 256	4 655	4 993	5 154	5 254
	growth in %	-0.7	6.6	5.1	2.3	-7.1	16.5	9.4	7.3	3.2	2.0
Gross national income	*bill. CZK*	**4 473**	**4 821**	**5 113**	**5 440**	**5 510**	**5 884**	**6 324**	**6 848**	**7 251**	**7 583**
	growth in %	3.8	7.8	6.0	6.4	1.3	6.8	7.5	8.3	5.9	4.6
Primary income balance	*bill. CZK*	**-324**	**-289**	**-297**	**-350**	**-184**	**-237**	**-294**	**-287**	**-299**	**-321**

[1)] Including consumption of non-profit institutions serving households (NPISH).
Source: CZSO. Calculations and forecast of the MoF.

Table 3.1.4: Nominal GDP by Type of Expenditure – quarterly

		2021				2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
						Estimate	*Forecast*	*Forecast*	*Forecast*
Gross domestic product	*bill. CZK*	**1 388**	**1 541**	**1 575**	**1 617**	**1 538**	**1 670**	**1 686**	**1 724**
	growth in %	1.3	14.3	7.9	6.7	10.8	8.4	7.1	6.6
Private consumption expenditure [1]	*bill. CZK*	**615**	**698**	**736**	**747**	**731**	**781**	**796**	**826**
	growth in %	-5.1	11.2	9.7	14.6	19.0	11.9	8.1	10.6
Government consumption exp.	*bill. CZK*	**286**	**316**	**326**	**386**	**307**	**333**	**331**	**401**
	growth in %	3.0	9.7	11.4	3.1	7.4	5.3	1.6	3.9
Gross capital formation	*bill. CZK*	**372**	**454**	**513**	**487**	**446**	**499**	**539**	**508**
	growth in %	8.4	20.4	32.5	32.0	20.0	10.1	5.0	4.5
Gross fixed capital formation	*bill. CZK*	324	384	403	449	359	411	442	493
	growth in %	-1.6	6.8	5.4	6.8	10.9	7.1	9.8	10.0
Change in stocks and valuables	*bill. CZK*	48	70	111	38	87	89	97	15
External balance	*bill. CZK*	**116**	**74**	**-1**	**-2**	**54**	**56**	**20**	**-11**
Exports of goods and services	*bill. CZK*	1 097	1 151	1 035	1 160	1 174	1 210	1 154	1 236
	growth in %	5.7	35.0	3.3	0.8	7.0	5.1	11.5	6.6
Imports of goods and services	*bill. CZK*	980	1 078	1 036	1 162	1 120	1 154	1 135	1 247
	growth in %	4.9	35.3	16.0	12.9	14.2	7.1	9.5	7.3

[1)] Including consumption of non-profit institutions serving households (NPISH).
Source: CZSO. Calculations and forecast of the MoF.

Table 3.1.5: GDP by Type of Income – yearly

		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
								Forecast	*Forecast*	*Outlook*	*Outlook*
GDP	*bill. CZK*	**4 797**	**5 111**	**5 410**	**5 790**	**5 694**	**6 121**	**6 618**	**7 135**	**7 550**	**7 904**
	growth in %	3.7	6.5	5.8	7.0	-1.7	7.5	8.1	7.8	5.8	4.7
Balance of taxes and subsidies	*bill. CZK*	**454**	**493**	**504**	**534**	**449**	**477**	**585**	**656**	**682**	**705**
	% of GDP	9.5	9.7	9.3	9.2	7.9	7.8	8.8	9.2	9.0	8.9
	growth in %	4.8	8.6	2.2	6.0	-16.0	6.2	22.7	12.2	4.0	3.5
Taxes on production and imports	*bill. CZK*	595	635	656	696	660	713	.	.	.	.
	growth in %	4.4	6.6	3.3	6.2	-5.2	8.1	.	.	.	.
Subsidies on production	*bill. CZK*	141	142	152	162	211	236	.	.	.	.
	growth in %	3.2	0.4	7.2	6.7	30.3	12.0	.	.	.	.
Compensation of employees	*bill. CZK*	**2 003**	**2 185**	**2 399**	**2 586**	**2 622**	**2 797**	**2 929**	**3 110**	**3 231**	**3 360**
(domestic concept)	*% of GDP*	41.7	42.8	44.3	44.7	46.1	45.7	44.3	43.6	42.8	42.5
	growth in %	5.9	9.1	9.8	7.8	1.4	6.7	4.7	6.2	3.9	4.0
Wages and salaries	*bill. CZK*	1 538	1 680	1 842	1 986	1 991	2 123	2 250	2 388	2 481	2 580
	growth in %	5.7	9.2	9.6	7.8	0.2	6.6	6.0	6.2	3.9	4.0
Social security contributions	*bill. CZK*	464	505	557	599	631	674	680	721	750	779
	growth in %	6.4	8.7	10.3	7.6	5.4	6.8	0.8	6.2	3.9	4.0
Gross operating surplus	*bill. CZK*	**2 340**	**2 432**	**2 506**	**2 670**	**2 623**	**2 847**	**3 105**	**3 370**	**3 637**	**3 839**
	% of GDP	48.8	47.6	46.3	46.1	46.1	46.5	46.9	47.2	48.2	48.6
	growth in %	1.7	4.0	3.0	6.5	-1.8	8.5	9.1	8.5	7.9	5.5
Consumption of capital	*bill. CZK*	988	1 022	1 074	1 153	1 225	1 291	1 377	1 442	1 516	1 612
	growth in %	3.2	3.5	5.0	7.4	6.2	5.4	6.7	4.7	5.1	6.3
Net operating surplus	*bill. CZK*	1 352	1 410	1 433	1 517	1 398	1 556	1 728	1 928	2 121	2 227
	growth in %	0.6	4.3	1.6	5.9	-7.8	11.3	11.0	11.6	10.0	5.0

Source: CZSO. Calculations and forecast of the MoF.

Table 3.1.6: GDP by Type of Income – quarterly

		2021				2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
						Estimate	*Forecast*	*Forecast*	*Forecast*
GDP	*bill. CZK*	**1 388**	**1 541**	**1 575**	**1 617**	**1 538**	**1 670**	**1 686**	**1 724**
	growth in %	1.3	14.3	7.9	6.7	10.8	8.4	7.1	6.6
Balance of taxes and subsidies	*bill. CZK*	**72**	**117**	**147**	**141**	**118**	**157**	**158**	**152**
	growth in %	-28.6	6.8	10.2	33.6	64.0	34.7	7.3	7.7
Compensation of employees	*bill. CZK*	**651**	**703**	**696**	**747**	**672**	**716**	**740**	**802**
(domestic concept)	*growth in %*	1.4	11.8	8.7	5.1	3.2	1.7	6.3	7.3
Wages and salaries	*bill. CZK*	485	531	534	573	516	550	568	616
	growth in %	-1.6	14.3	7.4	6.9	6.4	3.6	6.4	7.4
Social security contributions	*bill. CZK*	166	173	161	174	156	166	172	186
	growth in %	11.2	4.8	13.2	-0.3	-6.4	-4.0	6.3	7.1
Gross operating surplus	*bill. CZK*	**665**	**721**	**732**	**729**	**749**	**797**	**788**	**771**
	growth in %	6.0	18.1	6.6	4.2	12.6	10.6	7.7	5.8

Source: CZSO. Calculations and forecast of the MoF.

3.2 Prices

Annual **consumer price** inflation was 11.1% (*vs. 9.7%*) in February 2022. The unexpectedly rapid growth in market components of inflation, mainly food and non-alcoholic beverages, contributed to the forecast error. In terms of the consumer basket divisions, housing contributed the most (4.1 pp) to the February annual inflation, chiefly due to price increases of electricity (22.6%), natural gas (28.3%), heat and hot water (12.4%) and costs of owner-occupied housing (15.7%). Other significant contributions were recorded in transport (1.7 pp), where fuel prices rose rapidly, and in food and non-alcoholic beverages (1.3 pp), especially bakery and dairy products. None of the consumer basket divisions posted a year-on-year price decline. Administrative measures contributed 2.2 pp to inflation, of which administered prices accounted for 1.8 pp and changes in indirect taxes for 0.4 pp.

The deviation between actual and expected inflation was one of the reasons for the increase in the forecast for this year's average inflation rate. Needless to say, the war in Ukraine, which has caused a significant upward shift in the projected oil price (see Chapter 1.2) and also increased the prices of other commodities, presents a major factor. Food, especially cereals, of which Ukraine and Russia are major world producers, should see significant price increases. By contrast, growth in real household consumption should be very weak this year (see Chapter 3.1) which could partly dampen inflationary demand pressures.

Inflation will increase significantly **in 2022** compared to the previous year. Administrative measures are likely to contribute to the average inflation rate to the extent of 3.1 pp (*vs. 2.1 pp*). Administered prices, especially energy prices, remain the dominant factor. The high contribution of energy prices includes not only increases for consumers with variable price lists, but newly also changes for consumers with expiring fixed prices contracts. The slightly positive contribution of the change in indirect taxes reflects a further increase in excise duties on tobacco products. This year, inflation is expected to be determined mainly by market factors. These will reflect not only high oil and material prices stemming from supply frictions and considerable global uncertainty, but also rising unit labour costs affected by raised inflation expectations. The interim valorisation of pensions effective from June 2022 should boost household consumption, thereby increasing inflationary pressures. Conversely, the strengthening of the koruna against the euro should have an anti-inflationary effect. The impact of the economy's position in the business cycle on inflation is not clear. While we estimate that the output gap will average −1.7% of potential output this year, this will be largely due to supply-side factors.

Annual inflation will be well above the CNB's inflation target in 2022. We expect the **average inflation rate** to accelerate to 12.3% **in 2022** (*vs. 8.5%*).

Inflationary pressures will continue to prevail in **2023**, mainly due to market factors. Problems with the supply of production inputs should persist to some extent, which could be reflected in their further price increases. Growth in unit labour costs should continue. In contrast, the price of oil should have an anti-inflationary effect in 2023. Inflation should be dampened through the transmission mechanisms of higher monetary policy rates and, to a lesser extent, a continued appreciation of the koruna. The contribution of administered prices to the average inflation rate should be positive, mainly due to energy price increases. Regarding the effect of indirect taxes, we expect a further increase in the excise duty on tobacco products. With respect to the above-mentioned assumptions, we expect the **average inflation rate** to reach 4.4% **in 2023**. We consider the risks to the inflation forecast to be skewed to the upside, mainly due to possible global commodity price increases (see Chapter 1.2) and the conceivable impacts of the war in Ukraine.

The price increase relevant for a potential interim pension valorisation should be around the 5% statutory threshold in June 2022.

The lower forecast of the average inflation rate as measured by the HICP compared with the national CPI (see Tables 3.2.1 and 3.2.2) is due to the rapid growth in imputed rents, which are not included in the HICP.

In Q4 2021, **GDP deflator** increased by 2.9% (*vs. 3.8%*), with the gross domestic expenditure deflator rising by 4.0% (*vs. 5.0%*) and terms of trade deteriorating by 1.6% (*vs. 1.7%*). The evolution of the gross domestic expenditure deflator reflected mainly growth in consumer prices and investment product prices. Growth in the government consumption deflator slowed down markedly. The worse terms of trade were mainly due to high import prices of raw materials and production inputs in the automotive industry.

In 2022, the GDP deflator could increase by 6.9% (*vs. 5.2%*). The significant growth in dynamics compared to 2021 will be due to the acceleration of the gross domestic expenditure deflator, but the deterioration in terms of trade will work in the opposite direction. Within domestic demand, the main driver will be the growth of the household consumption deflator. In 2023, GDP deflator growth could slow to 4.1%, mainly due to lower dynamics of the household consumption deflator. The situation is clearly depicted in Graph 3.2.5.

Both export and import prices in 2022 will be affected by a strong increase in the price of oil and other production inputs and an appreciation of the effective exchange rate. As a result, terms of trade could deteriorate by 1.9% (*vs. 1.4%*). In contrast, they could improve by 0.1% in 2023, due to a decline in the price of oil and a continued appreciation of the koruna.

Box 2: Simulations of the Macroeconomic Impact of Higher Energy Prices

One of the main risks to macroeconomic developments is the question of the future development of energy prices on world markets. In particular, in view of the geopolitical developments related to the war conflict in Ukraine, energy prices may rise even more dramatically than in the baseline scenario of the Macroeconomic Forecast. For this year, the Macroeconomic Forecast assumes a year-on-year increase in oil, gas and electricity prices of around 50%.

We consider three sensitivity scenarios that illustrate the possible macroeconomic effects of an additional increase in energy prices of 10 pp, 30 pp and 50 pp from Q3 2022. The impacts are calculated using a DSGE model developed by the MoF.

In all three scenarios considered, the same effects would be at work, differing only in their magnitude. We estimate that the impacts on the main macroeconomic variables would be most pronounced this year and next, and rather negligible in 2024.

Higher energy prices on world markets would result in higher import prices and a deterioration in terms of trade. This would lead to a further increase in firms' costs, which would be reflected in higher output prices and a slowdown in the rate of investment growth. Households would also be adversely affected by the price increases, which would further increase their cost of living. In response, real consumption would slow down, increasing by only 0.1% in the first alternative scenario, instead of 0.5% in the baseline. In the case of the steepest energy price increases, real household consumption could fall by up to 1.8% this year.

The impact of higher energy prices on household consumption should be cushioned by high labour demand. The unemployment rate in 2023 could thus be, in comparison with the baseline, only 0.1 pp higher in the first scenario, or 0.4 pp higher in the most pessimistic scenario.

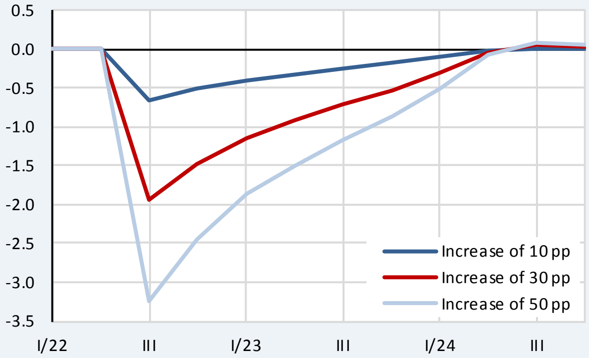
Higher prices and lower firms' output would have an impact on exports – their growth would slow down the most next year compared to the baseline scenario, by 0.4 pp and 1.9 pp in the worst case scenario. Similarly, the growth rate of imports would slow by 0.4 pp and 1.8 pp in 2023, respectively, due to a slowdown in export activity, a decline in household consumption and weaker investment dynamics.

The result would be a slowdown in real GDP growth, which would rise by 0.9% in the first scenario compared with the 1.2% forecast for this year. In the case of other scenarios of even higher energy price increases, GDP growth would then slow to 0.3%, or the economy would contract by 0.3%.

An increase in energy prices would have a significant impact on the consumer price index, both directly through import prices and with regard to the pass-through of higher costs to firms' output. We estimate that the inflation rate would be 0.5 pp higher this year due to an additional 10 pp increase in energy prices, and up to 2.5 pp higher in the case of the most significant increase

Graph 1: Higher Energy Prices – impact on GDP

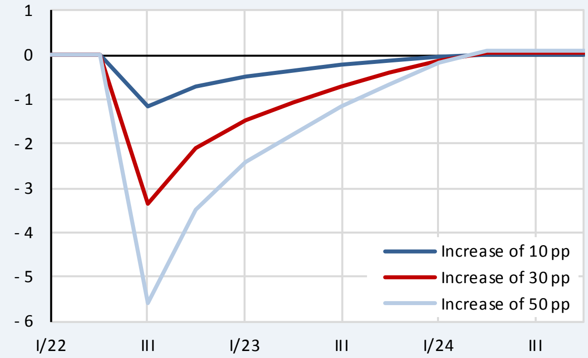
difference against the baseline scenario, in percentage points



Source: Calculations of the MoF.

Graph 2: Higher Energy Prices – impact on pvt. consumption

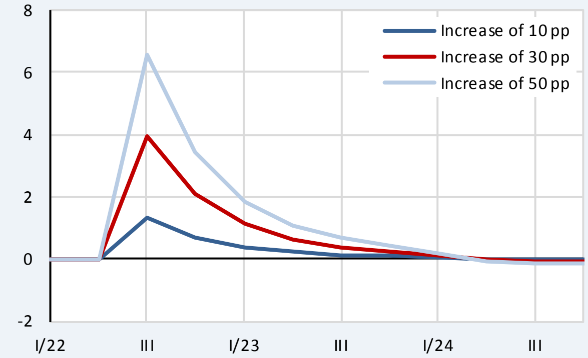
difference against the baseline scenario, in percentage points



Source: Calculations of the MoF.

Graph 3: Higher Energy Prices – impact on inflation

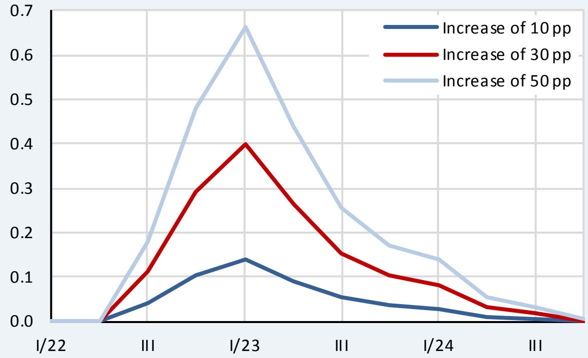
difference against the baseline scenario, in percentage points



Source: Calculations of the MoF.

Graph 4: Higher energy prices – impact on unempl. rate

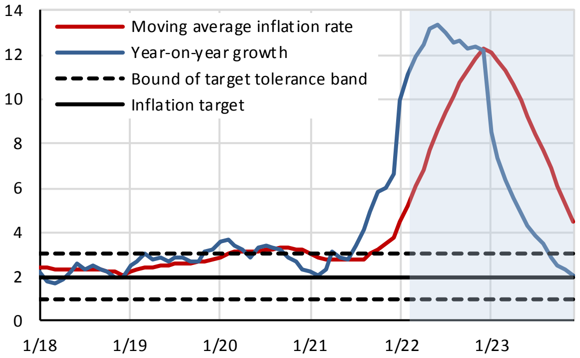
difference against the baseline scenario, in percentage points



Source: Calculations of the MoF.

Graph 3.2.1: Consumer Prices

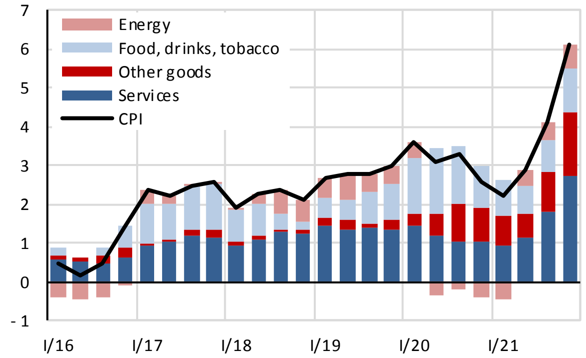
YoY growth rate in %



Source: CNB, CZSO. Calculations and forecast of the MoF.

Graph 3.2.2: Consumer Prices in Main Divisions

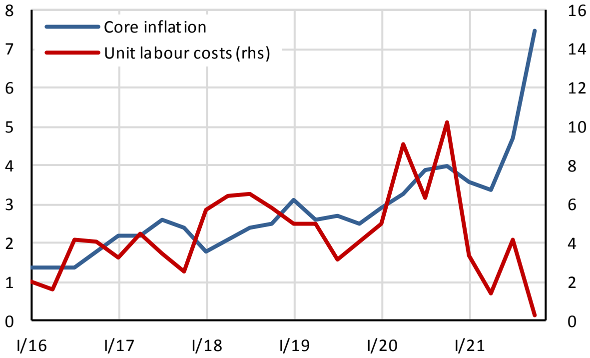
YoY growth of consumer price index in %, contributions in pp



Source: CZSO. Calculations of the MoF.

Graph 3.2.3: Core Inflation and Unit Labour Costs

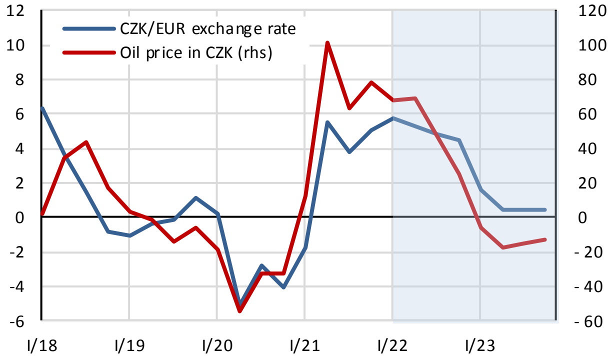
YoY growth rate in %



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.2.4: CZK/EUR and Koruna Price of Oil

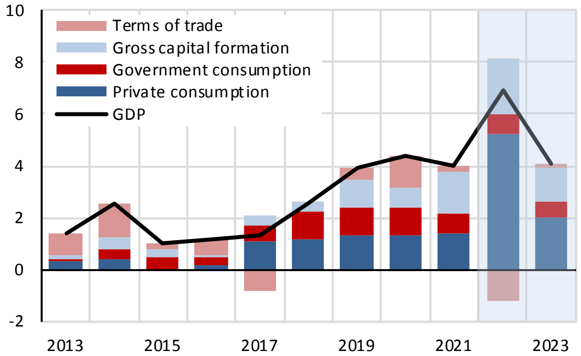
CZK/EUR appreciation, YoY change in CZK price of oil, in %



Source: CNB, U.S. EIA. Calculations and forecast of the MoF.

Graph 3.2.5: Gross Domestic Product Deflator

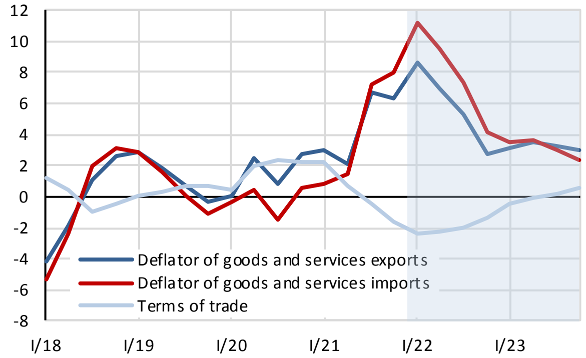
growth rate in %, contributions in percentage points



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.2.6: Terms of Trade

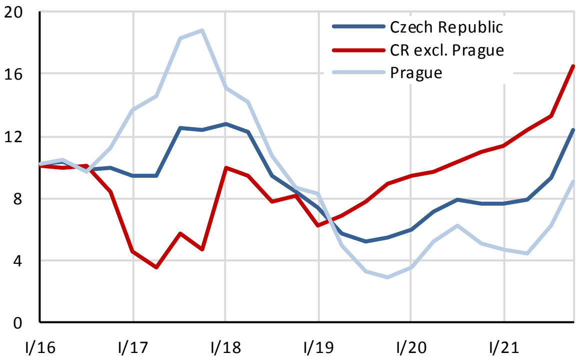
YoY growth rate in %



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.2.7: Offering Prices of Flats

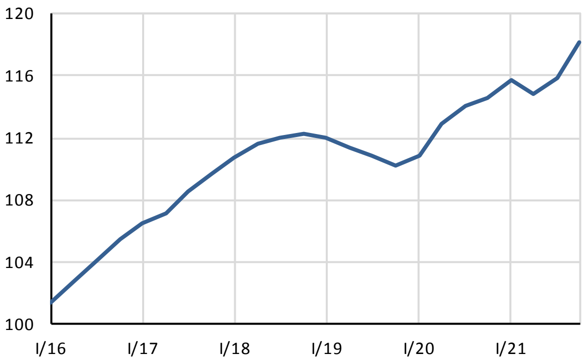
YoY growth rate in %



Source: CZSO.

Graph 3.2.8: Prices of Flats Relative to Average Wage

ratio of index of offering prices of flats to index of average wage, annual moving totals, 2015=100



Source: CZSO. Calculations and forecast of the MoF.

Table 3.2.1: Prices – yearly

		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
								Forecast	*Forecast*	*Outlook*	*Outlook*
Consumer Price Index											
Level	*average 2015=100*	**100.7**	**103.1**	**105.3**	**108.3**	**111.8**	**116.1**	**130.3**	**136.1**	**138.9**	**141.7**
Average inflation rate	*%*	**0.7**	**2.5**	**2.1**	**2.8**	**3.2**	**3.8**	**12.3**	**4.4**	**2.1**	**2.0**
Administrative measures [1]	*percentage points*	0.2	-0.1	0.3	0.6	0.5	0.0	3.1	1.1	0.2	0.2
Market increase	*percentage points*	0.5	2.6	1.8	2.2	2.7	3.8	9.1	3.3	1.9	1.9
Harmonized index of consumer prices											
Level	*average 2015=100*	**100.7**	**103.1**	**105.1**	**107.8**	**111.4**	**115.1**	**128.1**	**133.5**	**136.2**	**138.8**
Average inflation rate	*growth in %*	**0.6**	**2.4**	**2.0**	**2.6**	**3.3**	**3.3**	**11.3**	**4.2**	**2.0**	**2.0**
Deflators											
GDP	*average 2015=100*	**101.1**	**102.5**	**105.1**	**109.2**	**114.0**	**118.6**	**126.7**	**131.9**	**135.2**	**138.2**
	growth in %	1.1	1.3	2.6	3.9	4.4	4.0	6.9	4.1	2.5	2.2
Gross domestic expenditure	*average 2015=100*	**100.6**	**102.9**	**105.8**	**109.7**	**113.3**	**117.8**	**127.6**	**132.7**	**135.7**	**138.4**
	growth in %	0.6	2.3	2.8	3.7	3.3	3.9	8.4	4.0	2.2	2.0
Consumption of households	*average 2015=100*	**100.4**	**102.7**	**105.3**	**108.3**	**111.3**	**114.7**	**128.0**	**133.3**	**136.0**	**138.7**
	growth in %	0.4	2.3	2.5	2.8	2.8	3.1	11.5	4.2	2.0	2.0
Consumption of government	*average 2015=100*	**101.4**	**105.0**	**110.6**	**116.6**	**122.6**	**126.9**	**131.3**	**135.2**	**137.8**	**140.3**
	growth in %	1.4	3.5	5.4	5.4	5.1	3.6	3.4	3.0	1.9	1.8
Fixed capital formation	*average 2015=100*	**100.5**	**102.0**	**103.6**	**107.7**	**110.7**	**115.0**	**123.1**	**128.3**	**131.7**	**134.7**
	growth in %	0.5	1.5	1.6	4.0	2.8	3.9	7.0	4.2	2.7	2.2
Exports of goods and services	*average 2015=100*	**97.6**	**96.9**	**96.3**	**97.5**	**99.0**	**103.5**	**109.6**	**113.1**	**115.1**	**116.2**
	growth in %	-2.4	-0.7	-0.6	1.3	1.5	4.5	5.9	3.2	1.8	0.9
Imports of goods and services	*average 2015=100*	**96.6**	**96.9**	**96.3**	**97.1**	**96.8**	**101.1**	**109.2**	**112.5**	**114.0**	**114.6**
	growth in %	-3.4	0.3	-0.6	0.8	-0.2	4.4	7.9	3.1	1.3	0.6
Terms of trade	*average 2015=100*	**101.0**	**100.0**	**100.0**	**100.5**	**102.2**	**102.3**	**100.4**	**100.5**	**101.0**	**101.3**
	growth in %	1.0	-1.0	0.0	0.5	1.7	0.1	-1.9	0.1	0.5	0.3

[1] The contribution of change in regulated prices and indirect taxes to the average inflation rate.
Source: CZSO, Eurostat. Calculations and forecast of the MoF.

Table 3.2.2: Prices – quarterly

		2021				2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
						Estimate	*Forecast*	*Forecast*	*Forecast*
Consumer Price Index	*average 2015=100*	**113.6**	**114.7**	**117.0**	**118.9**	**126.0**	**129.6**	**131.9**	**133.5**
	growth in %	2.2	2.9	4.1	6.1	11.0	13.0	12.7	12.3
Of which the contribution of:									
Administrative measures [1]	*percentage points*	0.0	0.1	0.1	-0.2	2.1	2.8	3.3	4.4
Market increase	*percentage points*	2.2	2.8	4.0	6.3	8.8	10.3	9.5	7.9
Harmonized index of consumer prices	*average 2015=100*	**113.1**	**114.2**	**115.7**	**117.2**	**124.3**	**127.9**	**129.5**	**130.8**
	growth in %	2.2	2.8	3.3	5.0	9.9	12.0	11.9	11.7
Deflators									
GDP	*average 2015=100*	**115.9**	**118.3**	**119.3**	**120.4**	**123.1**	**126.6**	**127.9**	**129.1**
	growth in %	4.0	4.6	4.6	2.9	6.2	7.0	7.2	7.2
Gross domestic expenditure	*average 2015=100*	**114.2**	**116.9**	**118.8**	**120.6**	**123.4**	**127.2**	**129.1**	**130.5**
	growth in %	2.4	4.1	4.8	4.0	8.1	8.8	8.7	8.2
Consumption of households	*average 2015=100*	**112.2**	**113.9**	**115.7**	**116.7**	**123.4**	**127.8**	**129.8**	**130.6**
	growth in %	1.2	2.3	3.6	4.8	10.0	12.3	12.2	11.9
Consumption of government	*average 2015=100*	**120.2**	**128.2**	**126.8**	**131.4**	**125.8**	**131.6**	**131.3**	**135.4**
	growth in %	2.6	7.9	3.9	0.5	4.7	2.7	3.5	3.1
Fixed capital formation	*average 2015=100*	**111.9**	**112.7**	**116.1**	**118.5**	**119.6**	**121.4**	**124.3**	**126.2**
	growth in %	2.6	2.2	4.5	5.9	6.9	7.7	7.0	6.5
Exports of goods and services	*average 2015=100*	**100.7**	**102.4**	**104.9**	**106.2**	**109.4**	**109.6**	**110.5**	**109.1**
	growth in %	3.0	2.1	6.7	6.3	8.7	7.0	5.3	2.8
Imports of goods and services	*average 2015=100*	**97.3**	**99.2**	**102.9**	**104.9**	**108.2**	**108.7**	**110.5**	**109.2**
	growth in %	0.8	1.4	7.2	8.0	11.2	9.5	7.4	4.1
Terms of trade	*average 2015=100*	**103.5**	**103.2**	**102.0**	**101.2**	**101.1**	**100.8**	**100.0**	**99.9**
	growth in %	2.2	0.7	-0.5	-1.6	-2.3	-2.3	-1.9	-1.3

[1] *The contribution of change in regulated prices and indirect taxes.*

Source: CZSO, Eurostat. Calculations and forecast of the MoF.

3.3 Labour Market

According to the LFS, **employment** rose by 0.8% YoY in Q4 2021 (*vs. 1.0%*), but fell by 0.4% for the full year 2021 (*in line with the estimate*). The number of employees increased by 2.0% (*vs. 1.0%*) at the end of the year, while the total number of self-employed persons decreased by 5.0% (*vs. 0.7% growth*). The number of own-account workers was down by 3.5% YoY, while the number of employers fell by 7.4% (however, this indicator is highly volatile). The number of contributing family workers fell by almost a third. More frequent closures or suspensions due to the epidemic and the transition of some self-employed persons to employees probably played a role in the sharp decline in the number of entrepreneurs.

According to the data on job vacancies (MoLSA), a shortage of employees was evident in most industries and regions at the beginning of this year. In February, more vacancies than registered unemployed were reported in 42 districts, or 9 regions. However, far from all vacancies registered by the labour offices can be considered active. Of the vacancies advertised on the labour office's website, approximately 47% were active at the forecast cut-off date (vacancies for which the last change occurred after 1 October 2021 and the start date was 1 January 2022 or later). Staff shortages remain a major barrier to output growth in the construction sector.

Demand for foreign workers remains very strong. According to data from the Ministry of Labour and Social Affairs, the number of such workers increased by 67,000 YoY to 715,000 in February. In the long term, workers from Slovakia and Ukraine have the highest share.

For methodological reasons, the arrival of refugees from Ukraine is likely to be captured only marginally in the number of economically active persons (whether employed or unemployed) in the LFS. This is due to the fact that the survey is conducted only in dwellings; moreover, high non-response rates can be expected for new arrivals from Ukraine. Thus, employment according to the LFS is likely to significantly underestimate reality.

Employment should be still increasing slightly quarter-on-quarter this year, but should be almost flat in 2023 due to the significantly limited number of additional available workers. Thus, employment could grow by 1.2% in 2022 (*vs. 1.1%*) and by only 0.2% next year.

The **unemployment rate** (LFS) declined to 2.2% (*vs. 2.4%*) in Q4 2021, and reached 2.8% for the full year 2021 (*in line with the estimate*). Although lagged effects of the recession were partly felt last year, the high number of job vacancies and employed foreigners limit the scope for any significant increase in unemployment. The unemployment rate could average 2.5% in 2022 (*vs. 2.3%*), and we forecast a slight increase to 2.6% next year. In addition to the lagged effects of low economic growth, the arrival of refugees from Ukraine could also have a marginal impact on unemployment.

The **share of unemployed persons** (MoLSA) in the labour office registers has been declining year-on-year since the middle of last year. It could fall to 3.3% on average in 2022 (*vs. 3.4%*) and remain at this level in 2023. The legislative treatment of new jobseekers from Ukraine may also have a difficult-to-predict effect on the number of unemployed in this methodology.

The **participation rate** (20–64 years) rose to 82.8% (*vs. 82.5%*) in Q4 2021, and averaged 82.3% (*vs. 82.2%*) for the whole year 2021. The increase in the statutory retirement age and demographic aspects in the form of a growing share of age groups with a naturally high economic activity rate (especially 45–54 years) will play a dominant role over the forecast horizon. However, a decline in the participation of pre-retirement age individuals, who could retire early at an increased rate, could have the opposite effect. The increase in the working-age population caused by the arrival of refugees from Ukraine should also have a negative impact. On the one hand, they will be fully captured by the LFS in the population (i.e. in the calculation of the participation rate in the denominator), but for methodological reasons they are likely to appear only marginally in the labour force (in the numerator). Thus, the participation rate could reach 81.4% in 2022 (*vs. 82.6%*) and fall slightly to 81.2% next year.

Wages and salaries increased by 6.9% YoY in Q4 2021 (*vs. 3.3%*) and by 6.6% for the whole year 2021 (*vs. 5.7%*). The increase in earnings in trade, transport, accommodation and food services was the most pronounced (3.2 pp contribution), probably related to the much weaker – in a year-on-year comparison – restrictive measures. In the macroeconomically most important sector, manufacturing, wages and salaries rose by 4.5%, while the number of employees increased by 2.0%. As expected, earnings growth in public administration, defence, education, health and social care slowed down markedly (0.4% growth).

Monthly data for January suggest that the average wage growth in industry could have exceeded 5% in Q1 of this year. In other major sectors, annual growth was positively affected by the low comparative base. As a result, wages and salaries could have increased by 6.4% in Q1 2022 (*vs. 6.6%*). We expect the labour market frictions, manifesting themselves in the record number of vacancies, to persist through this year. However, a significant influx of refugees from Ukraine is a completely new factor, which should significantly boost growth momentum of wages and salaries through an increase in the number of employees, including in 2023. The 6.6% increase in the minimum and guaranteed wage should also act in the same direction this year. In the public sector, on the other hand, we expect only a marginal increase in earnings, due to the unchanged level of pay scales for a substantial part of employees and the payment of bonuses last year, which increases the comparative base. Over the forecast horizon, earnings growth should be driven by market employers, where wage growth should be supported by staff shortages. In aggregate, wages and salaries could rise by 6.0% in 2022 (*vs. 5.4%*), with growth accelerating slightly to 6.2% in 2023.

The **average wage** (business statistics, full-time equivalent) increased by 4.0% in Q4 2021 (*vs. 3.1%*). The mismatch between supply and demand in the labour market should have a positive effect on average wage growth over the forecast horizon, but the immigration wave should have a slightly negative impact. According to data from the Average Earnings Information System, the average wage of employees from Ukraine was about a quarter lower than the overall average in the first half of 2021 (see Box 3). At the same time, an even lower effective average wage can be expected for newly arrived workers, also taking into account the need to adapt to the new environment and the relatively low wages offered in the vacancy database (see Box 1). In 2023, once this effect wears off, average wage growth could be stronger, but a slight increase in the unemployment rate will act in the opposite direction. Thus, the average wage could increase by 4.6% this year (*vs. 4.9%*), while the growth rate could slow slightly to 4.4% in 2023.

Box 3: Ukrainians in the Czech Labour Market

Employees and entrepreneurs from abroad are playing an increasingly important role in the Czech labour market. As of 31 December 2021, the MoLSA registered 702k foreign employees, while the statistics of the Ministry of Industry and Trade showed 104k foreigners with valid trade licenses as of that date. Thus, foreigners accounted for almost 15% of total employment (in the national accounts methodology). In terms of the breakdown by nationality, the most significant share had citizens of Slovakia (231k, 28.7% of foreign employment) and Ukraine (221k, 27.5%). Thus, citizens of Ukraine accounted for more than 4% of total employment in the national economy, with the vast majority (195k) being workers in the status of employees.

Statistics from the MoLSA also provide detailed information on the industries and occupations in which foreign workers are employed. As of the forecast cut-off date, however, these data (published by the CZSO) were only available as of 30 June 2021. As of that date, employees from Ukraine were most often working in manufacturing, administrative and support service activities and construction (Table 1). Meanwhile, administrative and support service activities include, among others, employment agencies, but their "employees" usually actually work in other sectors, most often apparently in manufacturing and construction. The data also show differences in the structure of employment between men and women – while the share of employees in construction was much higher for men, women were more represented in trade and some service sectors (accommodation and food service activities; human health and social work activities).

Table 1: Employees from Ukraine – by industry
data as of 30 June 2021

CZ-NACE		Total	Men	Women	Total	Men	Women
		thousands of persons			*share, in %*		
	Total	**191.6**	**111.3**	**80.3**	**100.0**	**100.0**	**100.0**
A	Agriculture, forestry and fishing	10.2	5.7	4.6	5.3	5.1	5.7
B	Mining and quarrying	0.3	0.2	0.1	0.1	0.2	0.1
C	Manufacturing	54.1	31.3	22.9	28.3	28.1	28.5
D	Electricity, gas, steam and air conditioning supply	0.1	0.0	0.0	0.0	0.0	0.0
E	Water supply; sewerage, waste mgmt. and remediation activities	0.6	0.4	0.2	0.3	0.4	0.3
F	Construction	33.2	27.8	5.4	17.3	25.0	6.8
G	Wholesale and retail trade; repair of motor vehicles, motorcycles	13.7	5.7	7.9	7.1	5.2	9.9
H	Transportation and storage	14.4	9.6	4.8	7.5	8.6	6.0
I	Accommodation and food service activities	6.9	1.6	5.3	3.6	1.5	6.6
J	Information and communication	1.4	0.8	0.6	0.8	0.8	0.8
K	Financial and insurance activities	0.4	0.1	0.2	0.2	0.1	0.3
L	Real estate activities	4.0	1.9	2.1	2.1	1.7	2.6
M	Professional, scientific and technical activities	4.7	2.6	2.2	2.5	2.3	2.7
N	Administrative and support service activities	38.6	19.2	19.4	20.1	17.2	24.1
O	Public administration and defence; compulsory social security	0.1	0.0	0.1	0.1	0.0	0.1
P	Education	0.7	0.2	0.5	0.3	0.2	0.6
Q	Human health and social work activities	2.9	0.8	2.1	1.5	0.7	2.6
R	Arts, entertainment and recreation	0.8	0.3	0.5	0.4	0.3	0.6
S	Other service activities	1.3	0.5	0.8	0.7	0.4	1.0
T	Activities of households as employers	0.0	0.0	0.0	0.0	0.0	0.0
U	Activities of extraterritorial organisations and bodies	0.0	0.0	0.0	0.0	0.0	0.0
	Not identified	3.1	2.4	0.7	1.6	2.2	0.8

Source: CZSO. Calculations of the MoF.

In terms of occupations (Table 2), citizens of Ukraine were most often employed in elementary occupations, as plant and machine operators and assemblers, and craft and related trades workers. For women, the share in the category of service and sales workers was also significant.

Data on the earnings of citizens from selected countries (including Ukraine), also for the first half of last year, are available in the Average Earnings Information System (Table 3). The average monthly earnings of employees from Ukraine in the first half of 2021 reached almost CZK 30,000, which was a quarter less than the national average. The average earnings of Ukrainians in the salary sphere exceeded CZK 45,000, by CZK 2,000 more than in the salary sphere as a whole. However, it should be borne in mind here that earnings in the salary sphere in the first half of last year were significantly affected by extraordinary bonuses paid in some parts of the government sector, especially in health and social care. In addition, employees from Ukraine represent only 0.2% of all salaried employees.

Table 2: Employees from Ukraine – by occupation
data as of 30 June 2021

CZ-ISCO		Total	Men	Women	Total	Men	Women
		thousands of persons			*share, in %*		
	Total	**191.6**	**111.3**	**80.3**	**100.0**	**100.0**	**100.0**
1	Managers	1.5	0.7	0.7	0.8	0.6	0.9
2	Professionals	3.7	1.9	1.8	1.9	1.7	2.2
3	Technicians and associate professionals	3.4	1.3	2.0	1.7	1.2	2.5
4	Clerical support workers	4.2	1.4	2.8	2.2	1.3	3.5
5	Service and sales workers	11.9	2.7	9.1	6.2	2.4	11.4
6	Skilled agricultural, forestry and fishery workers	2.1	1.2	0.9	1.1	1.1	1.1
7	Craft and related trades workers	26.2	20.6	5.7	13.7	18.5	7.1
8	Plant and machine operators and assemblers	61.4	35.6	25.8	32.0	32.0	32.1
9	Elementary occupations	77.2	45.7	31.5	40.3	41.1	39.2
0	Armed forces occupations	0.1	0.0	0.0	0.0	0.0	0.1

Source: CZSO. Calculations of the MoF.

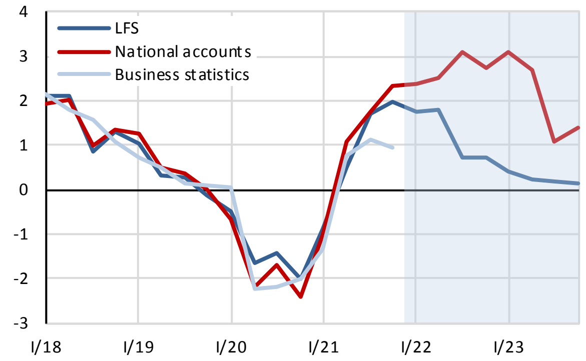
Table 3: Earnings of Employees from Ukraine
data for H1 2021

		Average	1st decile	1st qaurtile	Median	3rd quartile	9th decile
Ukrainians	*CZK/month*	**29 871**	.	.	.	.	.
Wage sphere	*CZK/month*	29 477	16 486	19 395	26 076	34 179	43 051
Salary sphere	*CZK/month*	45 337	20 171	28 867	39 322	55 021	79 076
Czech Republic	*CZK/month*	**40 054**	.	.	.	.	.
Wage sphere	*CZK/month*	39 332	18 974	24 648	32 590	43 943	63 007
Salary sphere	*CZK/month*	43 232	25 078	32 134	39 950	49 346	64 045

Source: Average Earnings Information System. Calculations of the MoF.

Graph 3.3.1: Employees in Different Statistics

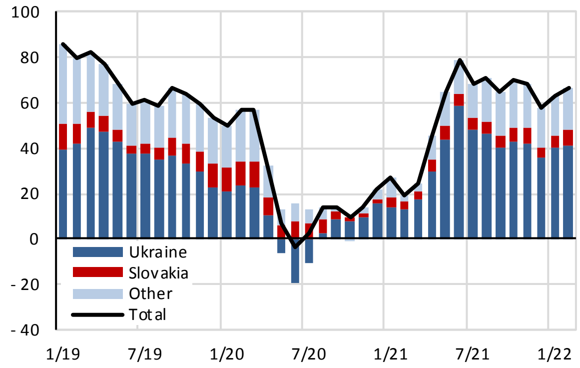
YoY growth rate in%



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.3.2: Number of Foreign Employees in the CR

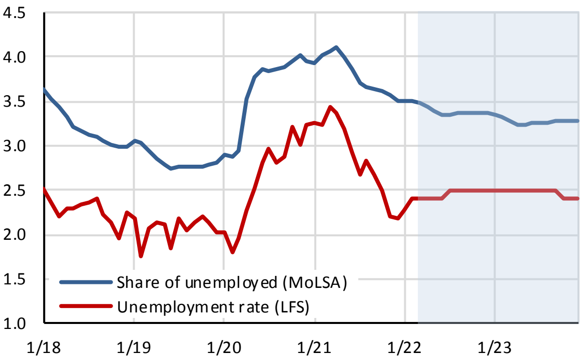
YoY change in thousands of persons



Source: MoLSA. Calculations of the MoF.

Graph 3.3.3: Indicators of Unemployment

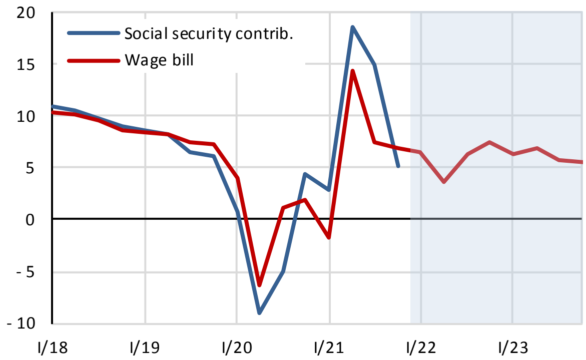
seasonally adjusted data, in%



Source: CZSO, MoLSA. Calculations and forecast of the MoF.

Graph 3.3.4: Social Security Contributions and Earnings

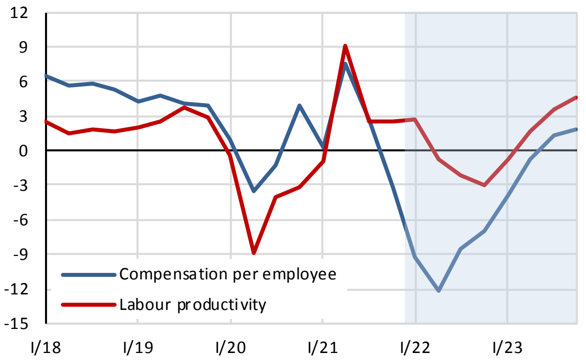
YoY growth rate in%



Source: CZSO, MoF. Calculations and forecast of the MoF.

Graph 3.3.5: Compens. per Employee and Productivity

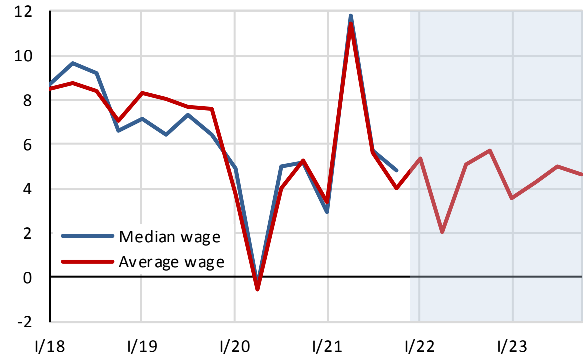
YoY growth rate in %



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.3.6: Nominal Monthly Wages

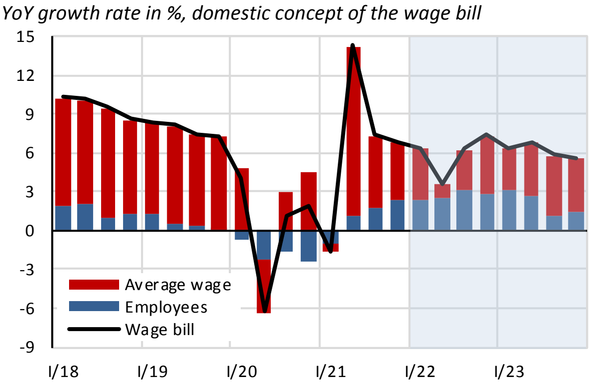
YoY growth rate in%



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.3.7: Nominal Wage Bill

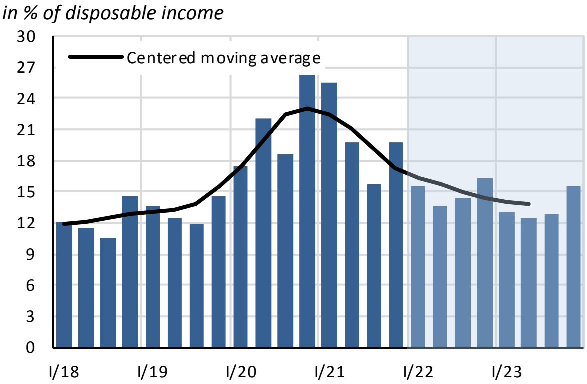
YoY growth rate in %, domestic concept of the wage bill



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.3.8: Gross Savings Rate of Households

in % of disposable income



Source: CZSO. Calculations and forecast of the MoF.

Table 3.3.1: Labour Market – yearly

		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
								Forecast	*Forecast*	*Outlook*	*Outlook*
Labour Force Survey											
Employment	*av. in thous.persons*	**5 139**	**5 222**	**5 294**	**5 303**	**5 235**	**5 213**	**5 276**	**5 287**	**5 291**	**5 299**
	growth in %	1.9	1.6	1.4	0.2	-1.3	-0.4	1.2	0.2	0.1	0.2
Employees	*av. in thous.persons*	4 257	4 327	4 396	4 412	4 351	4 387	4 442	4 452	4 456	4 463
	growth in %	2.1	1.7	1.6	0.4	-1.4	0.8	1.2	0.2	0.1	0.2
Entrepreneurs and	*av. in thous.persons*	882	894	897	891	884	826	834	834	835	836
self-employed	*growth in %*	1.0	1.4	0.4	-0.8	-0.7	-6.5	0.9	0.0	0.0	0.2
Unemployment	*av. in thous.persons*	**211**	**156**	**122**	**109**	**137**	**150**	**137**	**139**	**131**	**125**
Unemployment rate	*average in %*	**4.0**	**2.9**	**2.2**	**2.0**	**2.6**	**2.8**	**2.5**	**2.6**	**2.4**	**2.3**
Long-term unemployment [1)]	*av. in thous.persons*	**89**	**54**	**37**	**33**	**30**	**41**	**.**	**.**	**.**	**.**
Labour force	*av. in thous.persons*	**5 350**	**5 377**	**5 415**	**5 412**	**5 372**	**5 364**	**5 413**	**5 426**	**5 422**	**5 424**
	growth in %	0.8	0.5	0.7	-0.1	-0.7	-0.2	0.9	0.2	-0.1	0.1
Population aged 20–64	*av. in thous.persons*	**6 510**	**6 456**	**6 414**	**6 383**	**6 355**	**6 315**	**6 407**	**6 428**	**6 415**	**6 408**
	growth in %	-0.9	-0.8	-0.7	-0.5	-0.4	-0.6	1.5	0.3	-0.2	-0.1
Employment/Pop. 20–64	*average in %*	**78.9**	**80.9**	**82.5**	**83.1**	**82.4**	**82.6**	**82.3**	**82.2**	**82.5**	**82.7**
Employment rate 20–64 [2)]	*average in %*	**76.7**	**78.5**	**79.9**	**80.3**	**79.7**	**79.9**	**79.4**	**79.2**	**79.3**	**79.4**
Labour force/Pop. 20–64	*average in %*	**82.2**	**83.3**	**84.4**	**84.8**	**84.5**	**84.9**	**84.5**	**84.4**	**84.5**	**84.6**
Participation rate 20–64 [3)]	*average in %*	**79.9**	**80.9**	**81.7**	**82.0**	**81.8**	**82.3**	**81.4**	**81.2**	**81.4**	**81.4**
Participation rate 15–64 [3)]	*average in %*	**75.0**	**75.9**	**76.6**	**76.7**	**76.4**	**76.6**	**75.4**	**74.9**	**74.7**	**74.7**
Registered unemployment											
Unemployment	*av. in thous.persons*	**406**	**318**	**242**	**212**	**259**	**280**	**243**	**243**	**228**	**223**
Share of unemployed [4)]	*average in %*	**5.6**	**4.3**	**3.2**	**2.8**	**3.5**	**3.8**	**3.3**	**3.3**	**3.1**	**3.0**
Wages and salaries											
Average monthly wage [5)]											
Nominal	*CZK monthly*	27 764	29 638	32 051	34 578	35 662	37 839	39 561	41 305	43 056	44 613
	growth in %	4.4	6.7	8.1	7.9	3.1	6.1	4.6	4.4	4.2	3.6
Real	*CZK 2015*	27 571	28 747	30 438	31 928	31 898	32 592	30 366	30 356	31 006	31 491
	growth in %	3.7	4.3	5.9	4.9	-0.1	2.2	-6.8	0.0	2.1	1.6
Median monthly wage	*CZK monthly*	**23 692**	**25 398**	**27 561**	**29 439**	**30 528**	**32 444**	**.**	**.**	**.**	**.**
	growth in %	5.7	7.2	8.5	6.8	3.7	6.3	.	.	.	.
Wage bill	*growth in %*	**5.7**	**9.2**	**9.6**	**7.8**	**0.2**	**6.6**	**6.0**	**6.2**	**3.9**	**4.0**
Labour productivity	*growth in %*	**0.9**	**3.6**	**1.8**	**2.8**	**-4.2**	**3.2**	**-0.9**	**2.3**	**3.0**	**2.3**
Unit labour costs [6)]	*growth in %*	**3.0**	**3.5**	**6.1**	**4.3**	**7.7**	**2.3**	**2.9**	**1.7**	**0.8**	**1.6**
Compens. of employees / GDP	*%*	**41.7**	**42.8**	**44.3**	**44.7**	**46.1**	**45.7**	**44.3**	**43.6**	**42.8**	**42.5**

1) *Persons in unemployment for longer than 12 months.*
2) *The indicator does not include employment over 64 years.*
3) *The indicator does not include labour force over 64 years.*
4) *Share of available job seekers aged 15 to 64 years in the population of the same age.*
5) *Derived from full-time-equivalent employers in the entire economy.*
6) *Ratio of nominal compensation per employee to real productivity of labour.*
Source: CZSO, MoLSA. Calculations and forecast of the MoF.

Table 3.3.2: Labour Market – quarterly

		2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1 Estimate	2022 Q2 Forecast	2022 Q3 Forecast	2022 Q4 Forecast
Labour Force Survey									
Employment	*av. in thous. persons*	**5 166**	**5 171**	**5 257**	**5 259**	**5 253**	**5 261**	**5 293**	**5 295**
	YoY growth in %	-2.1	-0.8	0.5	0.8	1.7	1.7	0.7	0.7
	QoQ growth in %	-0.6	0.2	1.1	0.1	0.4	0.2	0.1	0.1
Employees	*av. in thous. persons*	4 351	4 353	4 422	4 423	4 427	4 431	4 454	4 455
	growth in %	-0.9	0.5	1.7	2.0	1.8	1.8	0.7	0.7
Entrepreneurs and	*av. in thous. persons*	815	819	836	836	826	831	839	840
self-employed	*growth in %*	-8.2	-7.2	-5.7	-5.0	1.4	1.5	0.4	0.4
Unemployment	*av. in thous.persons*	**179**	**159**	**146**	**118**	**138**	**128**	**145**	**138**
Unemployment rate	*average in %*	**3.4**	**3.0**	**2.7**	**2.2**	**2.6**	**2.4**	**2.7**	**2.5**
Long-term unemployment [1)]	*av. in thous.persons*	**40**	**45**	**42**	**38**	**.**	**.**	**.**	**.**
Labour force	*av. in thous. persons*	**5 345**	**5 330**	**5 403**	**5 378**	**5 392**	**5 389**	**5 439**	**5 432**
	growth in %	-0.7	-0.2	0.3	0.0	0.9	1.1	0.7	1.0
Population aged 20–64	*av. in thous. persons*	**6 333**	**6 321**	**6 310**	**6 297**	**6 326**	**6 427**	**6 435**	**6 442**
	growth in %	-0.6	-0.5	-0.7	-0.6	-0.1	1.7	2.0	2.3
Employment/Pop. 20–64	*average in %*	**81.6**	**81.8**	**83.3**	**83.5**	**83.0**	**81.9**	**82.3**	**82.2**
	increase over a year	-1.2	-0.2	1.0	1.2	1.5	0.0	-1.0	-1.3
Employment rate 20–64 [2)]	*average in %*	**79.0**	**79.2**	**80.5**	**80.8**	**80.1**	**79.0**	**79.1**	**79.5**
	increase over a year	-1.0	-0.2	0.8	1.1	1.1	-0.3	-1.4	-1.3
Labour force/Pop. 20–64	*average in %*	**84.4**	**84.3**	**85.6**	**85.4**	**85.2**	**83.8**	**84.5**	**84.3**
	increase over a year	-0.1	0.3	0.9	0.5	0.8	-0.5	-1.1	-1.1
Participation rate 20–64 [3)]	*average in %*	**81.8**	**81.7**	**82.7**	**82.8**	**82.2**	**80.9**	**81.3**	**81.1**
	increase over a year	0.1	0.4	0.7	0.7	0.4	-0.8	-1.4	-1.7
Participation rate 15–64 [3)]	*average in %*	**76.2**	**76.0**	**77.1**	**76.9**	**76.5**	**74.9**	**75.3**	**75.1**
	increase over a year	-0.1	0.1	0.5	0.2	0.3	-1.1	-1.8	-1.8
Registered unemployment									
Unemployment	*av. in thous. persons*	**307**	**291**	**269**	**252**	**262**	**240**	**238**	**233**
Share of unemployed [4)]	*average in %*	**4.2**	**4.0**	**3.7**	**3.4**	**3.5**	**3.3**	**3.3**	**3.2**
Wages and salaries									
Average monthly wage [5)]									
Nominal	*CZK monthly*	35 351	38 329	37 500	40 135	37 264	39 132	39 414	42 433
	growth in %	3.4	11.5	5.7	4.0	5.4	2.1	5.1	5.7
Real	*CZK 2015*	31 119	33 417	32 051	33 755	29 564	30 185	29 878	31 780
	growth in %	1.2	8.4	1.5	-2.0	-5.0	-9.7	-6.8	-5.9
Median monthly wage	*CZK monthly*	**29 981**	**32 453**	**32 980**	**34 360**	**.**	**.**	**.**	**.**
	growth in %	3.0	11.8	5.7	4.9	.	.	.	.
Wage bill	*growth in %*	**-1.6**	**14.3**	**7.4**	**6.9**	**6.4**	**3.6**	**6.4**	**7.4**

1) *Persons in unemployment for longer than 12 months.*
2) *The indicator does not include employment over 64 years.*
3) *The indicator does not include labour force over 64 years.*
4) *Share of available job seekers aged 15 to 64 years in the population of the same age.*
5) *Derived from full-time-equivalent employers in the entire economy.*
Source: CZSO, MoLSA. Calculations and forecast of the MoF.

Table 3.3.3: Income and Expenditures of Households – yearly

		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
										Forecast	*Forecast*
Current income											
Compensation of employees	*bill.CZK*	**1 825**	**1 923**	**2 038**	**2 223**	**2 430**	**2 599**	**2 647**	**2 811**	**2 925**	**3 113**
	growth in %	4.2	5.4	6.0	9.1	9.3	7.0	1.8	6.2	4.1	6.4
Gross operating surplus	*bill.CZK*	**674**	**691**	**703**	**740**	**801**	**845**	**835**	**914**	**969**	**1010**
and mixed income	*growth in %*	3.0	2.4	1.7	5.2	8.3	5.5	-1.1	9.4	6.1	4.2
Property income received	*bill.CZK*	**133**	**127**	**133**	**162**	**162**	**163**	**179**	**169**	**174**	**179**
	growth in %	0.0	-4.3	4.1	21.9	0.2	0.5	10.0	-5.7	2.8	3.3
Social benefits not-in-kind	*bill.CZK*	**596**	**613**	**630**	**650**	**685**	**738**	**881**	**918**	**979**	**1046**
	growth in %	2.2	2.8	2.8	3.2	5.4	7.7	19.3	4.1	6.7	6.9
Other current transfers received	*bill.CZK*	**160**	**181**	**217**	**244**	**281**	**338**	**309**	**303**	**317**	**334**
	growth in %	9.2	13.3	19.4	12.8	15.1	20.4	-8.8	-1.8	4.7	5.3
Current expenditure											
Property income paid	*bill.CZK*	**16**	**14**	**14**	**13**	**19**	**28**	**27**	**24**	**25**	**25**
	growth in %	-24.3	-10.7	0.2	-7.4	43.2	44.8	-3.2	-10.7	3.2	2.9
Curr. taxes on income and property	*bill.CZK*	**197**	**205**	**227**	**264**	**309**	**316**	**308**	**280**	**283**	**300**
	growth in %	6.5	3.9	10.8	16.3	16.9	2.3	-2.4	-9.2	1.2	5.7
Social contributions	*bill.CZK*	**696**	**732**	**775**	**836**	**911**	**976**	**1023**	**1122**	**1 183**	**1 220**
	growth in %	3.8	5.3	5.8	7.9	9.0	7.1	4.8	9.7	5.5	3.1
Other current transfers paid	*bill.CZK*	**150**	**169**	**207**	**238**	**278**	**335**	**300**	**297**	**310**	**326**
	growth in %	7.3	12.5	22.4	15.3	16.5	20.6	-10.5	-1.0	4.4	5.2
Gross disposable income	*bill.CZK*	**2 328**	**2 414**	**2 497**	**2 666**	**2 842**	**3 029**	**3 193**	**3 391**	**3 562**	**3 812**
	growth in %	3.4	3.7	3.4	6.8	6.6	6.6	5.4	6.2	5.0	7.0
Final consumption	*bill.CZK*	**2 072**	**2 152**	**2 241**	**2 383**	**2 524**	**2 663**	**2 545**	**2 737**	**3 069**	**3 342**
	growth in %	2.2	3.9	4.1	6.4	5.9	5.5	-4.4	7.6	12.1	8.9
Change in share in pension funds	*bill.CZK*	**35**	**33**	**31**	**32**	**33**	**37**	**38**	**37**	**50**	**53**
Gross savings	*bill.CZK*	**292**	**295**	**286**	**315**	**350**	**404**	**686**	**691**	**543**	**523**
Capital transfers											
(income (-) / expenditure (+))	*bill.CZK*	**-32**	**-12**	**-14**	**-11**	**-12**	**-13**	**-41**	**-35**	**-28**	**-26**
Gross capital formation	*bill.CZK*	**214**	**220**	**237**	**216**	**261**	**297**	**292**	**327**	**342**	**357**
	growth in %	5.2	2.9	7.9	-9.2	21.2	13.7	-1.7	12.1	4.6	4.3
Change in financial assets and liab.	*bill.CZK*	**108**	**85**	**61**	**110**	**101**	**116**	**435**	**397**	**227**	**191**
Real disposable income	*growth in %*	**2.6**	**3.7**	**3.0**	**4.4**	**4.0**	**3.7**	**2.6**	**3.1**	**-5.9**	**2.7**
Gross savings rate	*%*	**12.4**	**12.1**	**11.3**	**11.7**	**12.2**	**13.2**	**21.2**	**20.1**	**15.0**	**13.5**

Source: CZSO. Calculations of the MoF.

3.4 External Relations

The current account of the balance of payments reached a deficit of 0.8% of GDP in 2021 (*vs. 1.0% of GDP*). The year-on-year deterioration of the balance by 2.8% of GDP was entirely due to a significant decline in the surplus on the balance of goods.

At the same time as the data for Q4 2021 was released, the figures for 2020 and the first three quarters of 2021 were revised. The major change for 2020 was an increase in the primary income balance deficit by 1.5% of GDP to 4.3% of GDP. The current account surplus decreased in the same proportion, reaching 2.0% of GDP.

Annual growth of **export markets** in Q4 2021 reached 5.4% (*vs. 3.8%*). While GDP of the Czech Republic's main trading partners grew in line with estimates (0.1 pp higher), the increase in import intensity (especially in the case of Germany and France) exceeded expectations. For the full year 2021, export market growth reached 10.0% (*vs. 9.3%*). In response to Russia's invasion of Ukraine and the deterioration in our trading partners' GDP forecasts for this year, we expect export markets to grow by 2.9% (*vs. 4.2%*). In 2023, export markets could increase by 3.8% due to the expected improvement in the economic situation abroad.

Export performance fell by 13.5% (*vs. 10.1%*) in Q4 2021, so its deep decline continued. This was driven by persistent production constraints in manufacturing (mainly automotive), caused by shortages of some components (chiefly semiconductors). For the year as a whole, export performance fell by 4.5% (*vs. 3.4%*). This year, we expect a further 2.2% decline in performance (*vs. 0.1%*). The deterioration in the forecast is related to the reduction in the supply of production inputs and raw materials from the war-affected Ukraine. For 2023, we estimate export performance to grow by 1.0%, as the difficulties in supply chains are expected to subside gradually.

Within foreign trade (in the balance of payments methodology), the **balance of good** surplus fell significantly to 1.2% of GDP in Q4 2021[2] (*vs. 2.1% of GDP*). This was driven by a year-on-year deterioration of the balance in the machinery and transport equipment group, which accounts for more than half of total merchandise exports. Within this group, exports of motor vehicles fell by almost a fifth due to production shutdowns in the automotive industry. The deterioration in the balance also reflects strong imports of intermediate goods (stock accumulation) and high mineral prices.

Mineral fuel prices continue to be an important factor influencing the terms of trade in foreign trade with goods. The deficit on the fuel side of the balance was 2.5% of GDP in Q4 2021 (*vs. 2.4% of GDP*). Given the projected crude oil price (see Chapter 1.2), we expect the deficit to widen to 3.3% of GDP this year (*vs. 2.4% of GDP*). For 2023, we estimate a reduction in the deficit to 2.6% of GDP.

We expect the balance of goods to reach a slight surplus of 0.1% of GDP this year (*vs. 1.5% of GDP*). The deterioration in the estimate reflects moderate export dynamics due to weaker economic growth abroad and escalating problems in supply chains (disruption of component supplies from Ukraine). The deterioration in terms of trade will also have a negative impact on the overall balance. For 2023, we project a surplus of 0.2% of GDP, as stronger investment activity and a recovery in household consumption will boost imports.

The **services balance** posted a surplus of 1.8% of GDP in Q4 2021 (*vs. 1.7% of GDP*). In relative terms, the surplus thus remained unchanged from 2020. An increase in revenues in the telecommunication services sector and research and consultancy services was offset by a deterioration in the balance of transport services and tourism. Given the closure of airspace to Russian airlines and the resulting reduction in tourism revenues, we expect the surplus to decline to 1.7% of GDP this year (*unchanged*). However, it could increase to 1.8% of GDP in 2023 due to the projected economic recovery.

The **primary income** deficit narrowed by 1.5% of GDP quarter-on-quarter to 3.3% of GDP (*vs. 4.3% of GDP*) in Q4 2021 due to significantly lower-than-expected outflows of direct investment income in the form of dividends. Given the GDP and gross operating surplus forecasts, we estimate that profits of foreign-controlled firms should rise in relative terms this year. Thus, the primary income deficit could be 3.5% of GDP (*vs. 4.3% of GDP*). We also expect the labour market participation of refugees from Ukraine to worsen the balance of compensation of employees – as immigrants will initially be classified as non-residents. For 2023, we forecast a slight widening of the deficit to 3.6% of GDP. The recovery in economic activity should support profitability growth of non-resident-owned firms, but this is likely to be limited by ongoing supply chains constraints and uncertainty in the markets due to the war in Ukraine. Increases in energy and other input prices may also have a negative impact on corporate earnings growth.

Against this background, we expect the **current account of the balance of payments** to be in deficit over the forecast horizon. This year, the deficit could reach 2.2% of GDP (*vs. 1.3% of GDP*). As a share of GDP, this would be the largest deficit since 2010, in absolute terms since 2007. In 2023, the deficit could decline slightly to 1.9% of GDP.

[2] All *quarterly* data relative to GDP are reported in annual moving totals.

The current external balance (national accounts methodology) reached a deficit of 2.0% of GDP in Q4 2021 (see Graph 3.4.8). While households' savings exceeded their investment by 5.9% of GDP, the relationship between savings and investment was reversed in the general government sector, with gross capital formation exceeding gross savings by 6.0% of GDP. The excess of investment over savings (by 3.1% of GDP) was also recorded for non-financial corporations.

Box 4: The Impact of the War in Ukraine on Foreign Trade and GDP of the Czech Republic

The Russian invasion of Ukraine will affect the Czech Republic's foreign trade through the following channels:

- restrictions on trade with Russia (sanctions, individual company initiatives) and Ukraine;
- interruption of supplies of components from Ukraine to the automotive industry;
- deterioration of economic developments abroad.

In the balance of goods, neither Russia nor Ukraine is a significant market for Czech exporters. Russia accounted for 2.0% of nominal exports of goods last year, of which 21% were motor vehicle parts and accessories and 14% were electrical equipment. Ukraine accounted for 0.7% of total exports.

Last year, imports of goods from Russia (mainly crude oil and natural gas) accounted for 3.5% of total imports of goods, while in the case of Ukraine the share was 1.0% (primarily iron ore). A shortfall in oil and natural gas supplies would have a strong negative impact on the Czech economy, but the macroeconomic forecast does not work with this scenario.

The balance of goods is in deficit in relation to both countries, while the Czech Republic has a surplus in services. The reduction in activities with Russia will lead to a decline in tourism revenues, and a shortfall can also be expected in relation to Ukraine.

The estimates of the impact on foreign trade and GDP of the Czech Republic are based on the following assumptions:

- from March 2022 until the end of the year, exports to Russia and Ukraine will be halted;
- imports of goods from Russia will not be restricted, but imports of goods from Ukraine will be subject to supply disruptions of raw materials and wire harnesses used in the production of motor vehicles from March 2022 onwards;
- from March 2022 until the end of the year, mutual trade in services between the Czech Republic and Russia/Ukraine will be halted;
- economic growth in the euro area will be 1.3 pp slower this year due to the war in Ukraine (this difference corresponds to the change from the January 2022 forecast); the impact on GDP of China and the US will not be significant.

Table 1: Estimate of the Impact on Czech GDP Growth
in percentage points

	2022
Direct goods exports from the CR to Russia and Ukraine	-0.54
Trade in services between the CR, Russia and Ukraine	-0.18
Disruptions to supply chains	-0.12
Worse economic developments abroad	-0.42
Lower imports for domestic demand	0.47
Total impact on GDP growth	**-0.79**

Source: Calculations of the MoF.

Estimates of the impacts resulting from the reduction in exports of goods to Russia and Ukraine and from the halt in mutual trade in services are based on model-estimated elasticities of the Czech Republic's foreign trade and import intensity of expenditure components of GDP, and thus already include the effect of a reduction in imports due to weaker exports. The effects of the deterioration in the external environment and the reduction in the supply of automotive components are simulated using the OECD's international symmetric input-output tables for 2018[3] .

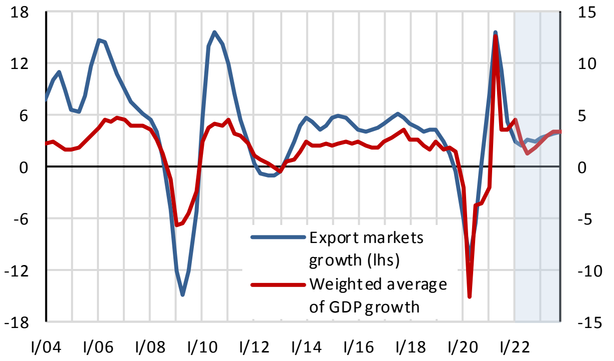
The above-mentioned economic shocks would, in aggregate, slow down Czech GDP growth by 1.3 pp this year. However, a fall in imports for consumption and investment would dampen the impact on GDP growth by around 0.5 pp.

Overall, therefore, growth of the Czech economy could slow by 0.8 pp this year if the considered shocks were to fully materialise. At the turn of 2021 and 2022, the Czech economy was close to potential output, in a situation characterised by high factor utilisation (low unemployment and industrial capacity utilisation at the long-term average). In some sectors, firms were not keeping up with demand and there were long waiting times for their products (e.g. for some car models, even longer than 12 months). Thus, the demand effect of a shortfall in exports to Russia could be offset by shorter waiting times in other markets, given the surplus of new orders in industry. The negative impact of foreign trade on GDP should be further cushioned by consumer spending by refugees from Ukraine, which will initially be reported under exports of goods and services in the national accounts methodology (see Box 1).

[3] OECD (2021): OECD Inter-Country Input-Output (ICIO) Tables. Paris, Organisation for Economic Co-operation and Development, November 2021, [accessed on 22 March 2022], < https://www.oecd.org/sti/ind/inter-country-input-output-tables.htm>.

Graph 3.4.1: GDP and Goods Imports of Partner Countries

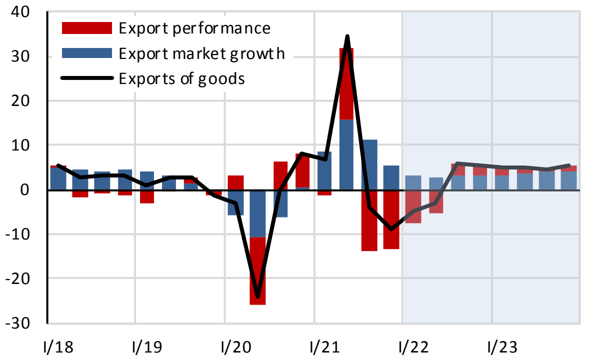
YoY growth rate in %, seasonally adjusted



Source: Eurostat. Calculations and forecast of the MoF.

Graph 3.4.2: Real Exports of Goods

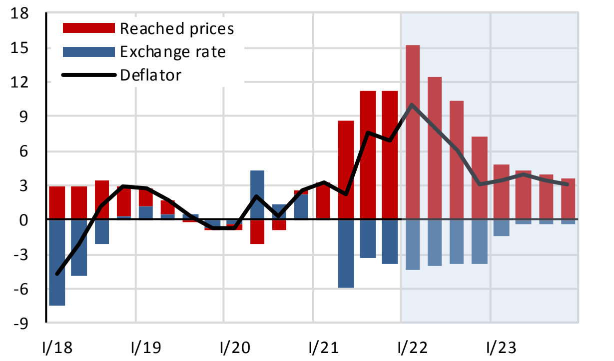
YoY growth in %, contributions in pp, seasonally adjusted



Source: CZSO, Eurostat. Calculations and forecast of the MoF.

Graph 3.4.3: Deflator of Exports of Goods

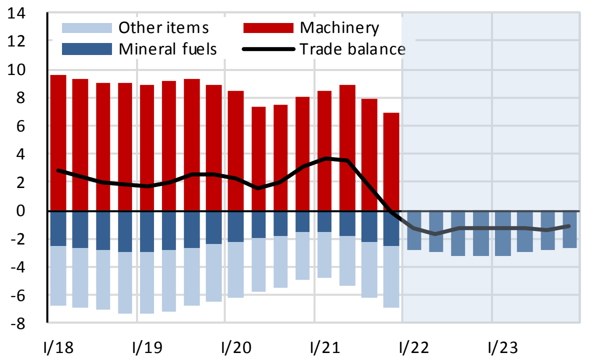
YoY growth in %, contributions in percentage points



Source: CNB, CZSO. Calculations and forecast of the MoF.

Graph 3.4.4: Balance of Trade

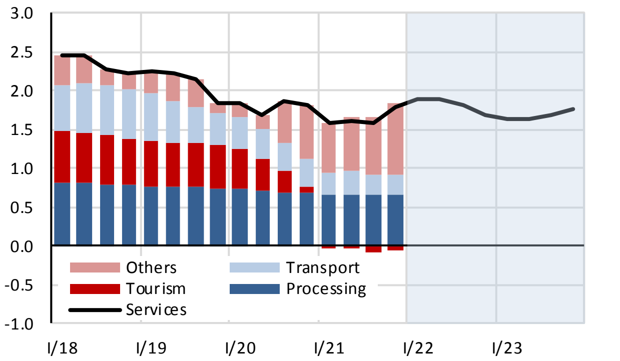
four-quarter moving totals, in % of GDP, change of ownership concept



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.4.5: Balance of Services

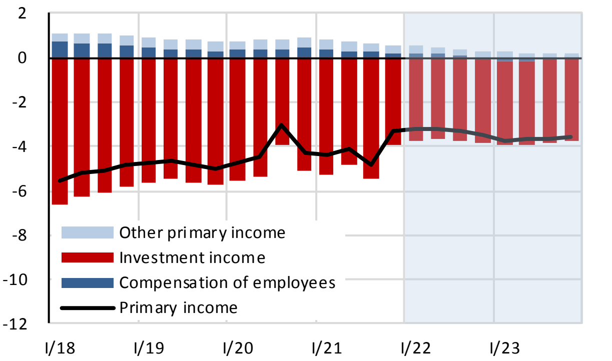
four-quarter moving totals, in % of GDP



Source: CNB, CZSO. Calculations and forecast of the MoF.

Graph 3.4.6: Balance of Primary Income

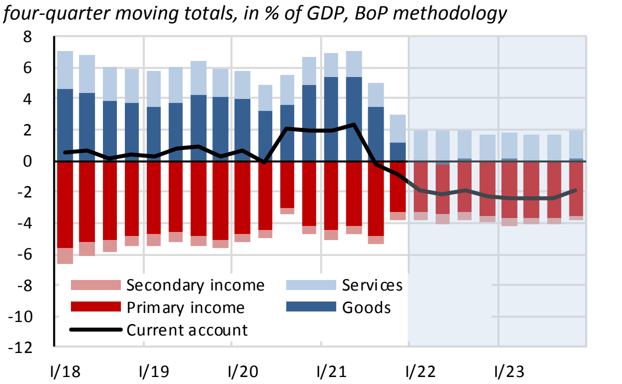
four-quarter moving totals, in % of GDP



Source: CNB, CZSO. Calculations and forecast of the MoF.

Graph 3.4.7: Current Account

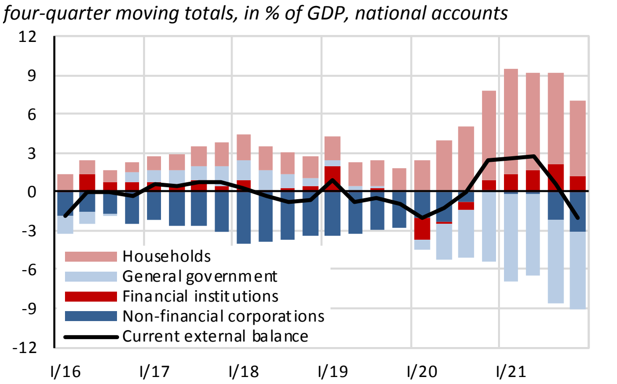
four-quarter moving totals, in % of GDP, BoP methodology



Source: CNB, CZSO. Calculations and forecast of the MoF.

Graph 3.4.8: Current External Balance

four-quarter moving totals, in % of GDP, national accounts



Source: CZSO. Calculations of the MoF.

Table 3.4.1: Decomposition of Exports of Goods (National Accounts Methodology) – yearly
seasonally adjusted

		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
										Forecast	*Forecast*
GDP [1]	*average of 2010=100*	**106.8**	**109.2**	**111.5**	**114.8**	**117.3**	**119.6**	**113.1**	**118.0**	**121**	**125**
	growth in %	2.2	2.2	2.1	3.0	2.2	1.9	-5.4	4.3	2.6	3.1
Import intensity [2]	*average of 2010=100*	**106.8**	**110.3**	**112.8**	**115.8**	**118.4**	**118.6**	**118.2**	**124.7**	**125**	**126**
	growth in %	2.8	3.3	2.2	2.6	2.2	0.2	-0.3	5.5	0.3	0.7
Export markets [3]	*average of 2010=100*	**114.1**	**120.5**	**125.7**	**132.9**	**138.9**	**141.8**	**133.8**	**147.2**	**151**	**157**
	growth in %	5.0	5.6	4.4	5.7	4.5	2.0	-5.6	10.0	2.9	3.8
Export performance	*average of 2010=100*	**110.9**	**110.7**	**110.5**	**112.4**	**111.4**	**110.4**	**111.1**	**106.1**	**104**	**105**
	growth in %	4.1	-0.2	-0.2	1.8	-0.9	-0.8	0.6	-4.5	-2.2	1.0
Real exports	*average of 2010=100*	**126.5**	**133.3**	**138.9**	**149.4**	**154.7**	**156.6**	**148.7**	**156.2**	**157**	**165**
	growth in %	9.3	5.4	4.2	7.6	3.5	1.2	-5.0	5.1	0.7	4.9
1 / NEER	*average of 2010=100*	**108.6**	**109.9**	**106.9**	**103.9**	**100.2**	**100.5**	**102.4**	**99.1**	**95**	**95**
	growth in %	5.5	1.2	-2.8	-2.8	-3.6	0.4	1.9	-3.2	-4.0	-0.6
Prices on foreign markets	*average of 2010=100*	**100.8**	**98.2**	**98.2**	**100.2**	**103.2**	**103.9**	**103.0**	**111.8**	**124**	**130**
	growth in %	-1.7	-2.6	-0.1	2.1	3.0	0.6	-0.8	8.5	11.2	4.2
Exports deflator	*average of 2010=100*	**109.5**	**108.0**	**104.9**	**104.1**	**103.4**	**104.4**	**105.5**	**110.8**	**118**	**122**
	growth in %	3.7	-1.4	-2.8	-0.8	-0.7	1.0	1.1	5.0	6.8	3.5
Nominal exports	*average of 2010=100*	**138.5**	**143.9**	**145.7**	**155.6**	**159.9**	**163.4**	**156.8**	**173.0**	**186**	**202**
	growth in %	13.4	3.9	1.2	6.8	2.8	2.2	-4.1	10.3	7.6	8.5

[1] *Weighted average of GDP of eight most important partners – Germany, Slovakia, Austria, the United Kingdom, Poland, France, Italy and Hungary.*
[2] *Index of ratio of real imports of goods to real GDP.*
[3] *Weighted average of imports of goods of main partners.*
Source: CNB, CZSO, Eurostat. Calculations and forecast of the MoF.

Table 3.4.2: Decomposition of Exports of Goods (National Accounts Methodology) – quarterly
seasonally adjusted

		2021				2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
						Estimate	*Forecast*	*Forecast*	*Forecast*
GDP [1]	*average of 2010=100*	**114.9**	**117.6**	**119.6**	**119.9**	**120**	**120**	**121**	**122**
	growth in %	-1.8	12.7	3.6	3.5	4.6	2.5	1.4	2.0
Import intensity [2]	*average of 2010=100*	**126.5**	**124.9**	**123.3**	**124.3**	**125**	**125**	**125**	**126**
	growth in %	10.4	2.6	7.3	1.8	-1.5	0.1	1.7	1.0
Export markets [3]	*average of 2010=100*	**145.3**	**146.9**	**147.5**	**149.0**	**150**	**151**	**152**	**153**
	growth in %	8.5	15.6	11.1	5.4	3.0	2.6	3.1	3.0
Export performance	*average of 2010=100*	**111.3**	**109.6**	**101.8**	**102.0**	**103**	**104**	**104**	**104**
	growth in %	-1.5	16.3	-13.8	-13.5	-7.6	-5.6	2.6	2.4
Real exports	*average of 2010=100*	**161.8**	**161.0**	**150.1**	**151.9**	**154**	**156**	**159**	**160**
	growth in %	6.8	34.4	-4.2	-8.9	-4.8	-3.1	5.8	5.4
1 / NEER	*average of 2010=100*	**100.4**	**98.9**	**98.6**	**98.6**	**96**	**95**	**95**	**95**
	growth in %	0.2	-5.9	-3.3	-3.9	-4.4	-4.0	-3.8	-3.9
Prices on foreign markets	*average of 2010=100*	**106.9**	**110.7**	**114.2**	**115.4**	**123**	**125**	**126**	**124**
	growth in %	3.2	8.5	11.2	11.3	15.1	12.5	10.3	7.3
Exports deflator	*average of 2010=100*	**107.3**	**109.5**	**112.6**	**113.8**	**118**	**118**	**119**	**117**
	growth in %	3.3	2.2	7.6	7.0	10.1	8.0	6.1	3.1
Nominal exports	*average of 2010=100*	**173.6**	**176.3**	**169.1**	**172.9**	**182**	**185**	**190**	**188**
	growth in %	10.4	37.3	3.0	-2.5	4.7	4.7	12.3	8.7

[1] *Weighted average of GDP of eight most important partners – Germany, Slovakia, Austria, the United Kingdom, Poland, France, Italy and Hungary.*
[2] *Index of ratio of real imports of goods to real GDP.*
[3] *Weighted average of imports of goods of main partners.*
Source: CNB, CZSO, Eurostat. Calculations and forecast of the MoF.

Table 3.4.3: Balance of Payments – yearly

international investment position and gross external debt – end of period

		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
										Forecast	*Forecast*
Goods and services	*bill.CZK*	**276**	**274**	**365**	**384**	**321**	**346**	**384**	**183**	**116**	**137**
	% GDP	6.3	5.9	7.6	7.5	5.9	6.0	6.7	3.0	1.7	1.9
Goods	*bill.CZK*	220	188	259	259	201	240	280	73	4	12
	% GDP	5.1	4.1	5.4	5.1	3.7	4.1	4.9	1.2	0.1	0.2
Services	*bill.CZK*	56	87	107	125	120	106	104	110	112	126
	% GDP	1.3	1.9	2.2	2.4	2.2	1.8	1.8	1.8	1.7	1.8
Primary income	*bill.CZK*	**-261**	**-255**	**-253**	**-255**	**-260**	**-292**	**-242**	**-204**	**-234**	**-254**
	% GDP	-6.0	-5.5	-5.3	-5.0	-4.8	-5.0	-4.3	-3.3	-3.5	-3.6
Secondary income	*bill.CZK*	**-7**	**1**	**-27**	**-50**	**-37**	**-34**	**-28**	**-31**	**-30**	**-23**
	% GDP	-0.2	0.0	-0.6	-1.0	-0.7	-0.6	-0.5	-0.5	-0.4	-0.3
Current account	*bill.CZK*	**8**	**21**	**85**	**79**	**24**	**19**	**114**	**-51**	**-148**	**-139**
	% GDP	0.2	0.4	1.8	1.5	0.4	0.3	2.0	-0.8	-2.2	-1.9
Capital account	*bill.CZK*	**32**	**99**	**52**	**45**	**13**	**24**	**67**	**95**	**121**	**145**
	% GDP	0.7	2.1	1.1	0.9	0.2	0.4	1.2	1.6	1.8	2.0
Net lending/borrowing	*bill.CZK*	**40**	**120**	**137**	**124**	**37**	**44**	**180**	**44**	**-26**	**6**
	% GDP	0.9	2.6	2.9	2.4	0.7	0.8	3.2	0.7	-0.4	0.1
Financial account	*bill.CZK*	**64**	**173**	**122**	**116**	**61**	**8**	**163**	**11**	**.**	**.**
Direct investments	*bill.CZK*	-80	50	-187	-46	-51	-137	-149	-5	.	.
Portfolio investments	*bill.CZK*	90	-164	-170	-268	30	-105	-136	75	.	.
Financial derivatives	*bill.CZK*	-6	-5	11	-14	-15	1	11	-58	.	.
Other investments	*bill.CZK*	-13	-59	-97	-802	47	139	389	-297	.	.
Reserve assets	*bill.CZK*	73	351	564	1 246	50	110	48	296	.	.
International investment position	*bill.CZK*	**-1 577**	**-1 523**	**-1 304**	**-1 273**	**-1 320**	**-1 147**	**-929**	**-952**	**.**	**.**
	% GDP	-36.3	-32.9	-27.2	-24.9	-24.4	-19.8	-16.3	-15.6	.	.
Gross external debt	*bill.CZK*	**2 947**	**3 119**	**3 499**	**4 370**	**4 413**	**4 384**	**4 321**	**4 471**	**.**	**.**
	% GDP	67.8	67.4	72.9	85.5	81.6	75.7	75.9	73.1	.	.

Source: CNB, CZSO. Calculations and forecast of the MoF.

Table 3.4.4: Balance of Payments – quarterly

four-quarter moving totals, international investment position and gross external debt – end of period

		2021				2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
						Estimate	*Forecast*	*Forecast*	*Forecast*
Goods and services	*bill.CZK*	**398**	**415**	**306**	**183**	**121**	**104**	**124**	**116**
	% GDP	7.0	7.0	5.1	3.0	1.9	1.6	1.9	1.7
Goods	*bill.CZK*	307	319	210	73	2	-17	6	4
	% GDP	5.4	5.4	3.5	1.2	0.0	-0.3	0.1	0.1
Services	*bill.CZK*	90	95	96	110	119	121	118	112
	% GDP	1.6	1.6	1.6	1.8	1.9	1.9	1.8	1.7
Primary income	*bill.CZK*	**-253**	**-245**	**-292**	**-204**	**-203**	**-206**	**-217**	**-234**
	% GDP	-4.4	-4.1	-4.9	-3.3	-3.2	-3.2	-3.3	-3.5
Secondary income	*bill.CZK*	**-35**	**-30**	**-28**	**-31**	**-33**	**-34**	**-32**	**-30**
	% GDP	-0.6	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.4
Current account	*bill.CZK*	**110**	**140**	**-14**	**-51**	**-115**	**-136**	**-125**	**-148**
	% GDP	1.9	2.4	-0.2	-0.8	-1.8	-2.1	-1.9	-2.2
Capital account	*bill.CZK*	**46**	**51**	**72**	**95**	**103**	**111**	**116**	**121**
	% GDP	0.8	0.9	1.2	1.6	1.6	1.7	1.8	1.8
Net lending/borrowing	*bill.CZK*	**157**	**191**	**58**	**44**	**-12**	**-25**	**-9**	**-26**
	% GDP	2.7	3.2	1.0	0.7	-0.2	-0.4	-0.1	-0.4
Financial account	*bill.CZK*	**142**	**177**	**1**	**11**	**.**	**.**	**.**	**.**
Direct investments	*bill.CZK*	-103	-81	-95	-4.8	.	.	.	.
Portfolio investments	*bill.CZK*	-33	58	112	75	.	.	.	.
Financial derivatives	*bill.CZK*	-14	-33	-40	-58	.	.	.	.
Other investments	*bill.CZK*	205	157	-150	-297	.	.	.	.
Reserve assets	*bill.CZK*	86	76	173	296	.	.	.	.
International investment position	*stock in bill.CZK*	**-733**	**-849**	**-956**	**-952**	**.**	**.**	**.**	**.**
	% GDP	-12.8	-14.4	-15.9	-15.6	.	.	.	.
Gross external debt	*stock in bill.CZK*	**4 314**	**4 229**	**4 366**	**4 471**	**.**	**.**	**.**	**.**
	% GDP	75.5	71.6	72.5	73.1	.	.	.	.

Source: CNB, CZSO. Calculations and forecast of the MoF.

4 Survey of Other Institutions' Forecasts

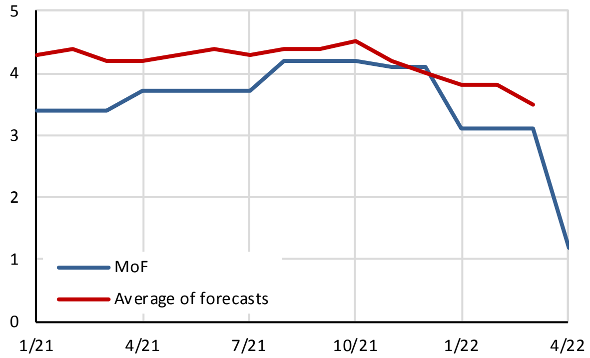
On average, the institutions surveyed expect real GDP to grow by 3.5% this year and 3.6% in 2023. The average inflation rate is expected to accelerate further to 7.5% in 2022, but to slow to 2.6% in 2023. Average wage growth could exceed 6% this year, before slowing to 5.0% next year. The current account of the balance of payments is expected to reach a deficit of 0.7% of GDP this year and to be balanced in 2023.

When assessing the differences between the current macroeconomic forecast of the MoF and the average of the forecasts of individual institutions, it is necessary to take into account the date of preparation of individual forecasts and the information available to their authors.

The MoF expects the Czech economy to grow significantly slower in 2022 compared to the average of other institutions' forecasts due to the impact of the war in Ukraine on the Czech economy and an exceptionally strong increase in the cost of living, which will significantly dampen household consumption. For 2023, the MoF's forecast is in line with the average of the forecasts of the surveyed institutions. The inflation rate forecast for 2022 and 2023 is significantly higher than the average of the monitored forecasts and is even outside their range. This is mainly due to the extreme acceleration in price growth in recent months and the consideration of new information on the possible development of inflationary factors, including increases in administered prices and commodity prices (see Chapter 1.2). Consumer price inflation could slow in 2023, but the average inflation rate should exceed the upper boundary of the tolerance band around the CNB's inflation target. Average nominal wage growth could be around 4.5% this year and next. The forecast of a larger current account deficit is based mainly on the current and expected evolution of the balance of goods, which is affected by the problems of export-oriented industry.

Graph 4.1: Forecasts for Real GDP Growth in 2022

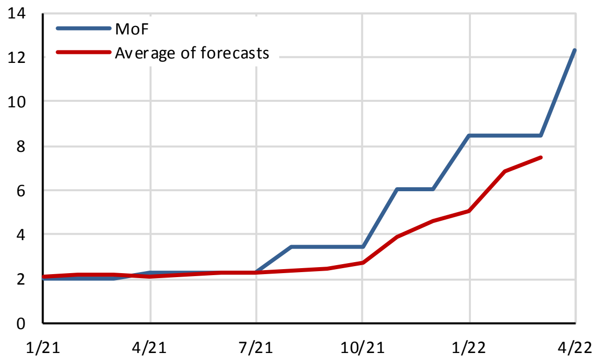
in %; the month, in which the survey was made on the horizontal axis



Source: Forecasts of individual institutions. Calculations of the MoF.

Graph 4.2: Forecasts for Average Inflation Rate in 2022

in %; the month, in which the survey was made on the horizontal axis



Source: Forecasts of individual institutions. Calculations of the MoF.

Table 4.1: Summary of the Surveyed Forecasts

		March 2022			April 2022
		min.	*max.*	*average*	*MoF forecast*
Gross domestic product (2022)	*growth in %, const.pr.*	0.6	4.9	3.5	1.2
Gross domestic product (2023)	*growth in %, const.pr.*	2.7	4.2	3.6	3.6
Average inflation rate (2022)		2.3	10.7	7.5	12.3
Average inflation rate (2023)	*%*	1.9	4.1	2.6	4.4
Average monthly wage (2022)	*growth in %*	4.5	7.5	6.2	4.6
Average monthly wage (2023)	*growth in %*	3.9	6.0	5.0	4.4
Current account / GDP (2022)	*%*	-3.5	0.9	-0.7	-2.2
Current account / GDP (2023)	*%*	-1.9	1.2	0.0	-1.9

Note: The survey is based on publicly available forecasts of 12 institutions, of which 7 institutions are domestic (CNB, Ministry of Labour and Social Affairs, domestic banks and investment companies) and the remaining are foreign entities (European Commission, OECD, IMF etc.). In the case of GDP, no difference is being made between working-day adjusted and unadjusted forecasts.
Source: Forecasts of individual institutions. Calculations and forecast of the MoF.

5 Evaluation of the 2021 State Budget Forecast

The macroeconomic framework of the 2021 State Budget was prepared on the basis of the Macroeconomic Forecast of September 2020. Table 5.1 shows a comparison of the main indicators of the framework with the data published until 31 March 2022. However, for most indicators, these data cannot be considered final, as they will be further revised.

The Czech economy went through an extremely deep recession in the first half of 2020, during which real GDP fell by 12%. The economic downturn was caused by very strict anti-epidemic measures to limit the spread of COVID-19, such as the closure of some shops and establishments, the switch to distance schooling, restrictions on the free movement of people and other measures limiting social contacts.

The macroeconomic framework was based on the scenario that no further significant restrictive measures would be needed in the context of the epidemic situation. Economic activity was expected to recover gradually, and the shock to aggregate supply and demand was thus expected to be temporary and one-off.

However, after calming down during the summer of 2020, the epidemic situation deteriorated sharply again in autumn and the unfavourable situation persisted until May 2021. In response to this development, the government again adopted a series of restrictive measures, which were gradually phased out only during Q2 2021. However, unlike the first wave of the epidemic in spring 2020, there were no disruptions in industrial production, so GDP fell only in Q1 2021, by 0.3% QoQ.

In the following quarters, the economic recovery was limited by other unfavourable factors. The very open Czech economy, with a high share of automotive production in value added, proved highly sensitive to problems in global supply chains and shortages of some specific production inputs, such as semiconductors. This has been compounded by steep price increases of energy and some other commodities. However, the macroeconomic impact of the next wave of the epidemic in autumn 2021 was not very significant.

Economic growth in 2021 was 3.3%, only 0.6 pp lower than in the framework, though there were more significant differences in the structure of use. There has been a very dynamic recovery in household consumption that reflected in particular both the surprisingly high wage dynamics and the sharp reduction in effective personal income taxation. On the contrary, increased uncertainty about future developments weighed on investments in fixed capital. Problems in global supply chains hit export firms hardest, especially car manufacturers. The result was a deeply negative contribution of foreign trade to GDP growth. However, these difficulties led to an exceptionally strong accumulation of inventories.

Due to the epidemic, consumer prices were affected by a supply shock with a pro-inflationary effect in the first half of the year. In the second half of the year, annual inflation then rose above the upper bound of the tolerance band around the Czech National Bank's inflation target. Inflation accelerated as a result of rapid price increases in housing, energy and other goods and services. The remission of VAT on electricity and natural gas in November and December 2021 had only a marginal impact. For the whole of 2021, the average inflation rate was 3.8%. This was the fastest increase in the price level since 2008.

The labour market has shown considerable resilience to adverse conditions. During the epidemic, the impact was significantly cushioned by government measures (Antivirus programmes, compensation bonuses). As a result, the seasonally adjusted unemployment rate peaked at just 3.4% in March 2021. From Q2 onwards, labour demand has recovered despite the withdrawal of support measures, resulting in an increase in employment and a fall in unemployment. Growth of the volume of wages and salaries has also been well above the expectations of the macroeconomic framework. This was due not only to higher employment and average hours worked, but also salary increases and exceptional bonuses in the government sector.

Disruptions in global production and supply chains, together with rising prices of imported energy and other commodities, have led to an unprecedented fall in the surplus of the goods balance. The current account of the balance of payments thus ended in deficit for the first time since 2013.

In conclusion, the environment in which the economy was operating in 2021 was radically different from the macroeconomic scenario of the State Budget framework. Therefore, drawing conclusions from comparing the actual performance of the economy with the macroeconomic framework would be misleading. In summary, however, it can be stated that the economic bases for deriving tax revenues (volume of wages and salaries, household consumption, average inflation rate) were significantly more favourable from a budgetary perspective compared to the macroeconomic framework.

Table 5.1: Comparison of the 2021 State Budget Macroeconomic Framework with Actual Outcome

		Outcome (April 2022)				State Budget 2021 (September 2020)				Difference (outcome - forecast)			
		2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Gross domestic product	*bill. CZK*	**5 410**	**5 790**	**5 694**	**6 121**	**5 409**	**5 749**	**5 561**	**5 860**	**1**	**41**	**133**	**261**
Gross domestic product	*growth in %, curr.pr.*	5.8	7.0	-1.7	7.5	5.8	6.3	-3.3	5.4	0.0	0.7	1.6	2.1
Gross domestic product	*growth in %, const.pr.*	**3.2**	**3.0**	**-5.8**	**3.3**	**3.2**	**2.3**	**-6.6**	**3.9**	**0.0**	**0.7**	**0.8**	**-0.6**
Consumption of households	*growth in %, const.pr.*	3.5	2.7	-6.8	4.4	3.5	3.1	-5.0	2.2	0.0	-0.4	-1.8	2.2
Consumption of government	*growth in %, const.pr.*	3.8	2.5	3.4	3.0	3.8	2.3	3.8	2.9	0.0	0.2	-0.4	0.1
Gross fixed capital formation	*growth in %, const.pr.*	10.0	5.9	-7.5	0.6	10.0	2.2	-7.5	3.0	0.0	3.7	0.0	-2.4
Net exports	*contribution, pp*	-1.2	0.0	-0.5	-3.8	-1.2	0.0	-1.7	0.9	0.0	0.0	1.2	-4.7
GDP deflator	*growth in %*	**2.6**	**3.9**	**4.4**	**4.0**	**2.6**	**3.9**	**3.6**	**1.4**	**0.0**	**0.0**	**0.8**	**2.6**
Average inflation rate	*%*	**2.1**	**2.8**	**3.2**	**3.8**	**2.1**	**2.8**	**3.2**	**1.9**	**0.0**	**0.0**	**0.0**	**1.9**
Employment (LFS)	*growth in %*	**1.4**	**0.2**	**-1.3**	**-0.4**	**1.4**	**0.2**	**-1.2**	**-0.7**	**0.0**	**0.0**	**-0.1**	**0.3**
Unemployment rate (LFS)	*average in %*	**2.2**	**2.0**	**2.6**	**2.8**	**2.2**	**2.0**	**2.6**	**3.4**	**0.0**	**0.0**	**0.0**	**-0.6**
Wage bill (domestic concept)	*growth in %, curr.pr.*	**9.6**	**7.8**	**0.2**	**6.6**	**9.6**	**6.6**	**-1.9**	**0.8**	**0.0**	**1.2**	**2.1**	**5.8**
Current account balance	*% of GDP*	**0.4**	**0.3**	**2.0**	**-0.8**	**0.4**	**-0.3**	**0.3**	**0.4**	**0.0**	**0.6**	**1.7**	**-1.2**
Assumptions:													
Exchange rate CZK/EUR		**25.6**	**25.7**	**26.4**	**25.6**	**25.6**	**25.7**	**26.3**	**25.8**	**0.0**	**0.0**	**0.1**	**-0.2**
Long-term interest rates	*% p.a.*	**2.0**	**1.5**	**1.1**	**1.9**	**2.0**	**1.5**	**1.1**	**0.9**	**0.0**	**0.0**	**0.0**	**1.0**
Crude oil Brent	*USD/barrel*	**71**	**64**	**42**	**71**	**71**	**64**	**42**	**48**	**0**	**0**	**0**	**23**
GDP of the euro area	*growth in %, const.pr.*	**1.8**	**1.6**	**-6.5**	**5.3**	**1.8**	**1.3**	**-9.0**	**5.4**	**0.0**	**0.3**	**2.5**	**-0.1**

Source: CNB, CZSO, Eurostat, U. S. Energy Information Administration. Calculations and forecast of the MoF.

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