Ministry of Finance

of the Czech Republic

Macroeconomic Forecast of the Czech Republic

September 2020

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The Macroeconomic Forecast is prepared by the Economic Policy Department of the Czech Ministry of Finance. It contains a forecast for the current and the following year (i.e. until 2021) and for certain indicators an outlook for the two following years (i.e. until 2023). It is published on a quarterly basis (usually in January, April, July and November) and is also available on the website of the Ministry of Finance at:

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List of Abbreviations

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

cal reasons.

Cut-off Date for Data Sources

The forecast was made on the basis of data known as of **9 September 2020**, the cut-off date for selected forecast assumptions was 31 August 2020.

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 (April 2020) are indicated by italics. Data relating to the years 2022 and 2023 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

The coronavirus pandemic, the anti-epidemic measures taken, and their knock-on effects have caused a deep and synchronous downturn in the global economy. Its depth is unprecedented in the post-World War II period. Economic policy in all the countries affected has responded with drastic easing and the adoption of massive fiscal and monetary stimuli, which should help minimise the pandemic's impact on long-term growth.

However, in most countries the upswing in economic activity we are now witnessing is unlikely to be strong enough in 2021 to fully offset the economic slump they suffered in the first half of this year. The forecast for next year is subject to huge uncertainties. The greatest ones include how the pandemic will continue to unfold, carrying with it the risk of further restrictions on activity, how flexible the labour market is when it comes to absorbing the fallout of inevitable cyclical and structural changes associated with the slump or, conversely, expansion of certain sectors, and how global production chains will be transformed and what effect this will have on labour productivity.

In Q2 2020, the Czech economy suffered the deepest decline in economic performance in the history of the independent Czech Republic. Seasonally and calendar adjusted **real gross domestic product** tumbled by 8.7% QoQ and 11.0% YoY. Compared internationally, this is actually a relatively good result, as GDP in the euro area fell by 14.7% YoY.

On the use side, the most significant factor behind the decline was the **external trade** contribution of –5.1 pp. Exports of goods and services, down by 23.1%, were exposed to interruptions in supply chains, weak demand from key trading partners, and a slump in export performance. Imports, which declined by 18.4%, were constrained by domestic demand and demand among exporters for inputs.

Within domestic use, the steepest fall was recorded in **household consumption**, which contracted by 7.3%. The main culprits here were the downturn in real wages, perhaps compounded by certain other components of disposable income, and the impossibility of spending on certain types of goods and, especially, services while the restrictive measures were in place.

General government consumption was the only component of domestic use to grow, rising by 2.1%.

The decline in **fixed capital investments** was a surprisingly low 4.6%. While investments in non-residential buildings and structures climbed by 6.7%, investments in housing more or less stagnated. Investments in machinery, including motor vehicles, suffered a deep slump.

In the macroeconomic forecast, we assume a scenario in which no further significantly restrictive measures will be taken in response to the epidemic. Economic activity should gradually recover, meaning that the shock to aggregate demand and supply ought to be only a temporary and one-off affair.

Overall, we are expecting economic performance to fall by **6.6% in 2020**. There should be a steep decline in all

areas of use other than general government consumption. With economic activity projected to recover from mid-2020 onwards, economic **growth** in **2021** could reach **3.9%**.

In November 2019, the year-on-year growth of **consumer prices** exceeded the 3% upper bound of the tolerance band around the Czech National Bank's inflation target for the first time since October 2012. With the exception of May 2020, inflation did not drop below this level even in the face of slumping consumer demand. This situation can probably be attributed to shortfalls on the supply side of the economy, combined with rapidly rising food prices. We leave our forecast for the average **inflation rate** in 2020 unchanged at 3.2%. No significant proinflationary factors are expected to emerge in 2021, and, in the wake of falling unit labour costs and the ongoing negative output gap, inflation should ease to 1.9%.

According to the Labour Force Survey, **employment** has been decreasing since Q2 2019. This downturn should intensify in both 2020 and 2021 on account of the delayed effect of the economic slump and the associated drop in labour demand. Likewise, the **unemployment rate** is projected to rise on average to 2.6% in 2020 and then 3.4% in 2021. Government measures are acting in tandem with the high number of vacancies and employed foreign nationals to keep the recession from having a greater impact on unemployment.

In 2020, the **general government balance** has largely been influenced by the coronavirus pandemic because the slump in economic activity has been accompanied by declining or stalled tax revenues in a situation where spending has been increased to combat the spread of the epidemic and to mitigate its economic and social impacts. Consequently, we expect the general government sector to report a deficit equal to 6.4% of GDP. From the perspective of the structural balance, expansionary fiscal policy should result in a deficit of 2.7% of GDP. The forecast projects that debt will rise to 39.4% of GDP.

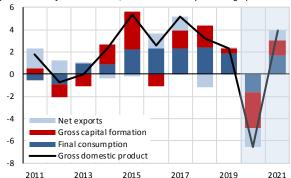
Table: Main Macroeconomic Indicators

		2015	2016	2017	2018	2019	2020	2021	2020	2021
							Current f	orecast	Previous f	orecast
Nominal GDP	bill. CZK	4 625	4 797	5 111	5 409	5 749	5 561	5 860	5 5 3 0	5 781
	nominal growth in %	6.4	3.7	6.5	5.8	6.3	-3.3	5.4	-2.2	4.5
Gross domestic product	real growth in %	5.4	2.5	5.2	3.2	2.3	-6.6	3.9	-5.6	3.1
Consumption of households	real growth in %	3.9	3.8	4.0	3.5	3.1	-5.0	2.2	-1.5	0.8
Consumption of government	real growth in %	1.8	2.5	1.8	3.8	2.3	3.8	2.9	2.6	2.0
Gross fixed capital formation	real growth in %	9.7	-3.0	4.9	10.0	2.2	-7.5	3.0	-13.6	3.2
Contribution of net exports	рр	-0.2	1.4	1.2	-1.2	0.0	-1.7	0.9	-1.2	0.7
Contrib. of change in inventories	рр	0.9	-0.3	0.5	-0.5	-0.2	-1.3	0.6	-0.8	0.8
GDP deflator	growth in %	1.0	1.1	1.3	2.6	3.9	3.6	1.4	3.7	1.4
Average inflation rate	%	0.3	0.7	2.5	2.1	2.8	3.2	1.9	3.2	1.6
Employment (LFS)	growth in %	1.4	1.9	1.6	1.4	0.2	-1.2	-0.7	-1.2	0.2
Unemployment rate (LFS)	average in %	5.1	4.0	2.9	2.2	2.0	2.6	3.4	3.3	3.5
Wage bill (domestic concept)	growth in %	5.0	5.7	9.2	9.6	6.6	-1.9	0.8	2.6	0.8
Current account balance	% of GDP	0.4	1.8	1.5	0.4	-0.3	0.3	0.4	0.2	0.3
General government balance	% of GDP	-0.6	0.7	1.5	0.9	0.3	-6.4		-4.1	
Assumptions:										
Exchange rate CZK/EUR		27.3	27.0	26.3	25.6	25.7	26.3	25.8	26.5	26.2
Long-term interest rates	% p.a.	0.6	0.4	1.0	2.0	1.5	1.1	0.9	1.5	1.5
Crude oil Brent	USD/barrel	52	44	54	71	64	42	48	38	40
GDP in the euro area	real growth in %	1.9	1.8	2.8	1.8	1.3	-9.0	5.4	-5.7	2.9

 $Source: \textit{CNB, CZSO, Eurostat, U. S. Energy Information Administration. Calculations and forecast of the \textit{MoF.}\\$

The biggest economic decline in the history of the CR

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



Source: CZSO. Calculations and forecast of the MoF.

The rise in inflation above 3% should be only temporary

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



Source: CZSO. Calculations and forecast of the MoF.

Average wage should decrease in real terms

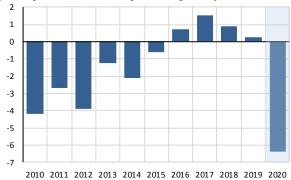
average gross monthly wage, YoY growth rate, in %



Source: CZSO. Calculations and forecast of the MoF.

Public finances are in deficit

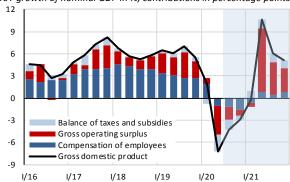
general government net lending/borrowing, in % of GDP



Source: CZSO. Calculations and forecast of the MoF.

Profits should fall significantly in 2020

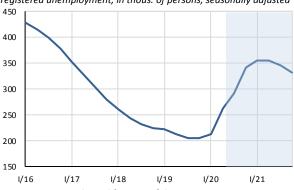
YoY growth of nominal GDP in %, contributions in percentage points



Source: CZSO. Calculations and forecast of the MoF.

Unemployment should increase this year

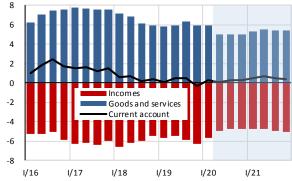
registered unemployment, in thous. of persons, seasonally adjusted



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

Current account should be roughly balanced

in % of GDP (yearly moving sums)



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

Forecast risks are significantly skewed to the downside

QoQ growth of real GDP in %



Note: Past probability distribution determined by data revisions. Source: CZSO. Calculations and forecast of the MoF.

Forecast Risks and Uncertainty

The macroeconomic forecast is saddled with numerous risks that we consider, on balance, to be **significantly tilted to the downside**.

We believe that further developments in the pandemic of a **new type of coronavirus** pose the biggest risk. Some countries, including the Czech Republic, are witnessing rapidly rising numbers of newly confirmed cases. Against this backdrop, there has been a significant rise in the importance of "smart quarantine" systems.

In the macroeconomic forecast, we assume the spread of the coronavirus can be limited without blanket measures that would have a strongly negative impact on economic activity. As a result, the gradual recovery of economic growth should continue.

On 31 January 2020, the **United Kingdom** left the **European Union** with a deal. During the transition period up to the end of this year, the aim is for both sides to reach agreement on what their future relations will look like, including in the realm of international trade. The negotiations have to be brought to a close much earlier than the year's end so that the various countries can complete their ratification process. The macroeconomic forecast assumes that the new relations will retain, as fully as possible, the free movement of goods and services. Even so, we believe that there is a distinct risk of a "hard Brexit", triggering a rise in both tariff and nontariff barriers in external trade, at the end of the year. For more details on the fallout from a no-deal, see Box 3.1 of the Macroeconomic Forecast from January 2019.

Another negative factor is the **tension in trade relations** between the US and China, and potentially the EU. Although the coronavirus pandemic has sidelined the issue of trade relations, the disputes could well re-escalate (e.g. as part of efforts to "shield" US industry from foreign competition, thereby helping the economy to ride out the repercussions of the pandemic). The macroeconomic consequences of trade disputes are discussed in section 5 of the Macroeconomic Forecast from November 2019.

Until recently, the Czech labour market was showing clear signs of overheating. In the macroeconomic forecast, we expect the recession's impact on employment to be cushioned not only by high numbers of vacancies and foreign nationals employed here, but also by economic policy measures. However, these measures should be set up in such a way that they don't prevent necessary structural changes in the economy. Taking into account demographic trends, it will remain crucial, in the medium and long term, to increase labour productivity.

The cyclical development of the economy, combined with low interest rates, resulted in high momentum of mortgage lending. Along with factors that limit the supply of residential property (some Prague-centric), this contributed to a strong increase in the prices of flats and their overvaluation. The combination of debt financing of residential properties and the rapid rise in their prices is a macroeconomic risk. This risk could materialise if a price correction were to follow the slump in economic activity. With many households losing some or all of their income, at least temporarily, because of the coronavirus pandemic, they were given the opportunity of a holiday on mortgage payments, consumer credit, and business loans. Even so, any impairment of the quality of banks' loan portfolios once the moratorium comes to an end should not threaten financial stability.

As the **automotive industry** is so important for the Czech economy, the highly cyclical nature of this sector, its focus on exports and its dependence on supply chains pose a risk (for more details, see section 5 of the Macroeconomic Forecast from July 2019). In the medium to long term, risks are compounded by the structural changes that the automotive industry will go through as emission standards are progressively tightened. However, the switch to alternative drives requires enormous investment in technological development, in machinery and equipment, and in infrastructure. Effects on employment, supply-and-demand relations, and energy prices are also anticipated.

1 Forecast Assumptions

1.1 External Environment

The anti-epidemic measures taken in response to the coronavirus pandemic prompted a deep slump in global economic activity. Despite the fact that fiscal and monetary policies are highly accommodative, the recovery of economic performance is likely to be slow. The downside risks associated with the further course of the pandemic, the future organisation of trade relations, and structural changes in the automotive industry still persist. With this in mind, we estimate that the global economy will contract by 5.6% (*versus 2.0%*) this year, before rising again in 2021 by 4.8% (*versus 4.5%*).

GDP in the **United States** shrank by 9.1% QoQ in Q2 2020 (*versus 5.1%*). Reduced household consumption weighed most heavily on the downturn, as households' economic situation deteriorated and they were unable to carry out certain types of expenditure. General government consumption had a marginally positive impact.

The purchasing managers' indices in industry and services returned to expansionary zones and hovered around levels close to the start of this year. After a strong surge in April, the unemployment rate initially fell back towards 10%, the same level witnessed in late 2009 after the economic recession, and then went down further to 8.4% in August. In defiance of stubbornly low consumer confidence, retail sales growth accelerated to 2.7% in July. At its July session, the Fed kept the key interest rate within a target band of 0.00–0.25%, which had been expected, and will continue its asset purchase programme on the current scale in order to meet monetary-policy targets. Towards the end of August, the Fed updated its Statement on Longer-Run Goals and Monetary Policy Strategy (for more details, see section 5).

Looking at the numbers of new infections, the US may have made slight improvements but, in relative terms, it remains the worst afflicted economic superpower. The uncertainty is intensified by the fact that trade talks with China have only just been resumed and by the presidential election coming up in the autumn. We forecast that the US economy will shrink by 4.7% (*versus 2.7%*) in 2020 and will then grow by 4.1% (*versus 3.1%*) next year.

China's economy expanded by 11.5% (versus 3.2%) in Q2 2020. Besides the resumption of manufacturing, growth factors include the expansionary economic policy and demand for medical products abroad. Business expectations may be steadily improving, but consumer confidence is at its lowest ebb in three years. GDP could grow by 1.1% (versus a 0.2% downturn) this year and speed up further to 8.9% (versus 9.6%) next year.

In the **European Union**, GDP sank by 11.4 % QoQ (*versus 6.3 %*) in Q2 2020, while in the EA19 it was down by

11.8% (*versus 6.5*%). All expenditure components contributed to the fall. As forecast, the key factors were lower household consumption expenditure and subdued investment activity.

The inflation rate in the euro area continues to be well below the ECB's inflation target, standing at a mere 0.4% in July. In the EU27, furloughing schemes have slowed the rise in the unemployment rate, which was 7.2% in July. Retail sales returned to modest growth in June. However, countries in the southern wing of the euro area reported a continuing decline following the resumption of certain restrictive measures. Leading indicators show that business activity has stalled in services, but that manufacturing output expanded in August. Businesses remain highly cautious about recruiting staff, a negative signal that can be attributed not only to heightened uncertainty, but also to rampant growth in input prices.

The Brexit transition period will run until the end of the year, but cannot then be extended. The negotiations have to be brought to a close much earlier than the year's end so that the various countries can complete their ratification process. At the cut-off date for this forecast, no further details about a deal were known. Future trade relations with the US, especially customs tariffs on cars, are another risk. This year, the EU27's economic output could fall by 8.2% (*versus 5.5%*), before growing by 5.3% (*versus 2.8%*) next year.

The economic decline in **Germany** came to 9.7% (*versus 6.4%*) in Q2 2020, driven down in particular by ebbing household consumption. There were also clear negative contributions from external trade and investment activity. On the other hand, the slump was cushioned by general government consumption.

The mood among German businesses, measured by the Ifo indicator, has markedly improved since July. The manufacturing purchasing managers' index suggests the same trend. However, the consumer mood and the sentiment among purchasing managers in services are verging on contraction. Having been eroded in the second quarter, the labour market is showing signs of stabilisation, with seasonally adjusted employment rising slightly in July. Economic recovery has been fuelled by a sweeping government package aimed at propping up the economy, the overall amount of which is projected in 2020–2021 to exceed 13% of 2019 GDP. The German economy could decline by 6.1% (versus 5.4%) in 2020, followed by growth of 5.2% (versus 3.2%) next year.

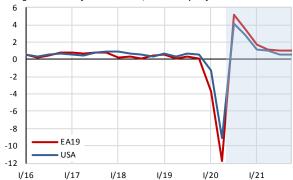
The **Slovak** economy contracted by 8.3% (*versus 6.7%*) in Q2 2020. The structure of the economic downturn was

much different from that seen in other EU economies. While the prevailing negative contributions were made by lower household consumption, the same level of negativity could also be found in general government consumption and gross fixed capital formation. Conversely, the external balance had a positive effect on economic growth.

The economy's heightened sensitivity to external demand was reflected in a steep 28% decline in industrial production in the second quarter of this year. The weak-

Graph 1.1.1: GDP Developments in the EA19 and USA

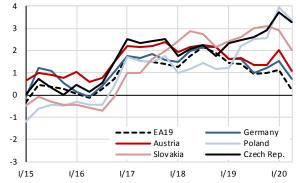
QoQ growth rate of real GDP in%, seasonally adjusted



Source: Eurostat. Calculations and forecast of the MoF.

Graph 1.1.3: HICP

quarterly averages, YoY growth in %



Source: Eurostat. Calculations of the MoF.

quarterly averages, long-run average = 100

Graph 1.1.5: Economic Sentiment Indicator

120 110 100 90 80 EA19 70 Germany Austria 60 Poland 50 Slovakia

1/17

1/19

1/20

Source: Eurostat, Calculations of the MoF.

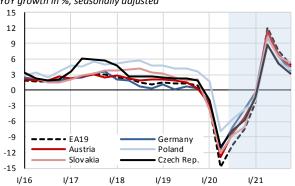
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Czech Rep

er economic performance then had a knock-on effect on the unemployment rate, which shot up to 6.8% in July. With households in worsening financial shape and establishments closing down, retail sales suffered an 8.3% dive in the second quarter. On the other hand, the forecast revival in demand among foreign trading partners over the rest of the year could slowly warm up economic activity. Slovakia's GDP could decline by 7.9% (versus 5.2%) this year, before growing by 5.3% (versus 3.2%) in 2021.

Graph 1.1.2: Real Gross Domestic Product

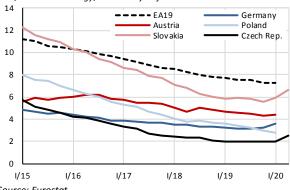
YoY growth in %, seasonally adjusted



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

Graph 1.1.4: Unemployment Rate

in %, LFS methodology, seasonally adjusted



Source: Eurostat.

Graph 1.1.6: Purchasing Managers' Index

manufacturing, quarterly averages



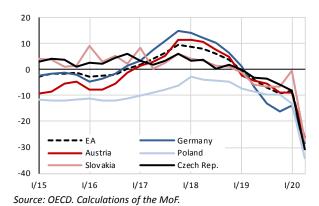
Source: Markit. Calculations of the MoF.

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Graph 1.1.7: Business Tendency

manufacturing, quarterly averages



Graph 1.1.8: Ifo and Czech manufacturing production

balances (Ifo); seasonally adjusted index of 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 %

growth rate of real GDP in 9		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
										Forecast	
World	seasonally adjusted	3.5	3.5	3.6	3.5	3.4	3.9	3.6	2.9	-5.6	4.8
USA	seasonally adjusted	2.2	1.8	2.5	3.1	1.7	2.3	3.0	2.2	-4.7	4.1
China	seasonally adjusted	7.9	7.8	7.3	6.9	6.7	7.0	6.8	6.1	1.1	8.9
United Kingdom	seasonally adjusted	1.5	2.1	2.6	2.4	1.9	1.9	1.3	1.5	-12.3	5.4
EU27	seasonally adjusted	-0.7	0.0	1.6	2.2	2.0	2.9	2.1	1.5	-8.2	5.3
	unadjusted	-0.7	0.0	1.6	2.3	2.0	2.8	2.1	1.7		
EA19	seasonally adjusted	-0.8	-0.2	1.4	1.9	1.8	2.8	1.8	1.3	-9.0	5.4
	unadjusted	-0.9	-0.2	1.4	2.0	1.9	2.6	1.8	1.3		
Germany	seasonally adjusted	0.6	0.6	2.2	1.2	2.1	2.9	1.3	0.6	-6.1	5.2
	unadjusted	0.4	0.4	2.2	1.5	2.2	2.6	1.3	0.6	-5.6	5.2
France	seasonally adjusted	0.4	0.6	1.0	1.0	1.0	2.4	1.8	1.5	-12.3	5.6
	unadjusted	0.3	0.6	1.0	1.1	1.1	2.3	1.8	1.4	-12.2	5.7
Italy	seasonally adjusted	-3.0	-1.9	0.1	0.7	1.4	1.7	0.7	0.3	-11.5	5.3
	unadjusted	-3.0	-1.8	0.0	0.8	1.3	1.7	0.8	0.3	-11.4	5.3
Austria	seasonally adjusted	0.6	0.0	0.8	1.0	2.1	2.6	2.3	1.5	-7.3	5.2
	unadjusted	0.7	0.0	0.7	1.0	2.1	2.5	2.4	1.3	-7.2	5.1
Hungary	seasonally adjusted	-1.3	2.0	4.1	3.8	2.1	4.5	5.1	4.9	-6.4	5.7
	unadjusted	-1.5	2.0	4.2	3.8	2.2	4.3	5.1	5.0	-6.2	5.7
Poland	seasonally adjusted	1.7	1.3	3.3	3.8	3.1	5.0	5.4	4.2	-3.9	3.9
	unadjusted	1.6	1.4	3.3	3.8	3.1	4.9	5.3	4.2	-3.8	3.9
Slovakia	seasonally adjusted	1.9	0.7	2.8	4.8	2.1	3.0	3.9	2.4	-7.9	5.3
Czech Republic	seasonally adjusted	-0.7	0.0	2.3	5.5	2.4	5.4	3.2	2.3	-6.6	3.8
	unadjusted	-0.8	0.0	2.3	5.4	2.5	5.2	3.2	2.3	-6.6	3.9

Note: Data are also adjusted for calendar effects (except for Slovakia). Source: CZSO, Eurostat, IMF, NBS China, OECD. Calculations of the MoF.

Table 1.1.2: Gross Domestic Product – quarterly

growth rate of real GDP in %, seasonally adjusted data

growth rate of real dar in 20, seasonally dayast			201	9			20	20	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
			•••••					Forecast	Forecast
USA	QoQ	0.7	0.4	0.6	0.6	-1.3	-9.1	4.1	2.9
	YoY	2.3	2.0	2.1	2.3	0.3	-9.1	-6.0	-3.8
China	QoQ	2.0	1.2	1.4	1.3	-10.0	11.5	2.4	1.7
	YoY	6.4	6.2	6.0	6.0	-6.8	3.2	4.1	4.5
United Kingdom	QoQ	0.7	-0.1	0.5	0.0	-2.2	-20.4	9.8	3.8
	YoY	2.0	1.4	1.3	1.1	-1.7	-21.7	-14.5	-11.2
EU27	QoQ	0.6	0.2	0.4	0.1	-3.3	-11.4	5.3	3.4
	YoY	1.7	1.5	1.6	1.2	-2.7	-13.9	-9.7	-6.7
EA19	QoQ	0.5	0.1	0.3	0.1	-3.7	-11.8	5.2	3.6
	YoY	1.5	1.2	1.4	1.0	-3.2	-14.7	-10.6	-7.5
Germany	QoQ	0.6	-0.5	0.3	0.0	-2.0	-9.7	5.0	3.6
	YoY	1.1	0.1	0.8	0.4	-2.2	-11.3	-7.1	-3.7
France	QoQ	0.5	0.2	0.2	-0.2	-5.9	-13.8	6.2	3.9
	YoY	1.8	1.8	1.6	0.8	-5.7	-18.9	-14.0	-10.5
Italy	QoQ	0.2	0.1	0.0	-0.2	-5.5	-12.8	5.6	3.7
	YoY	0.3	0.4	0.5	0.1	-5.6	-17.7	-13.1	-9.7
Austria	QoQ	0.9	0.1	-0.2	-0.2	-2.4	-10.4	5.1	3.0
	YoY	2.2	1.9	1.4	0.4	-2.8	-12.9	-8.3	-5.3
Hungary	QoQ	1.9	0.8	0.9	0.7	-0.4	-14.5	7.0	3.5
	YoY	5.5	5.2	4.7	4.4	2.0	-13.5	-8.3	-5.7
Poland	QoQ	1.4	0.7	1.2	0.2	-0.4	-8.9	3.7	2.4
	YoY	4.9	4.2	4.1	3.5	1.7	-7.9	-5.7	-3.6
Slovakia	QoQ	0.6	0.4	0.4	0.6	-5.2	-8.3	4.5	2.2
	YoY	3.2	2.5	1.9	2.0	-3.8	-12.2	-8.6	-7.1
Czech Republic	QoQ	0.5	0.5	0.5	0.4	-3.3	-8.7	4.2	2.5
	YoY	2.4	2.4	2.3	2.0	-1.9	-11.0	-7.6	-5.7

Note: Data are also adjusted for calendar effects (except for Slovakia).

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

1.2 Commodity Prices

The price of **Brent crude oil** slumped by 57% YoY (almost 54% in CZK terms) in Q2 2020 to average USD 29.7 per barrel (*as forecast*). The current estimate of the price in the third quarter, USD 44 per barrel (*versus USD 34 per barrel*), shows that the risks described in the April forecast, i.e. that a very low oil price would not be sustainable in the long run and that oil would probably become a lot more expensive than the April forecast (based on the futures market) had anticipated, are materialising.

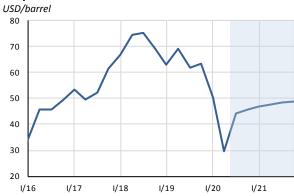
Declining demand, associated with weakening global economic activity due to the spread of the coronavirus, played a central role in the slump of oil prices in Q2 2020. A key factor on the supply side was that the Organisation of the Petroleum Exporting Countries reached agreement with Russia and other countries to limit production considerably (initially on a scale equivalent to approximately one tenth of the world's oil extraction). Although this restriction is to be gradually relaxed, it is set to remain in place until April 2022. The US Energy Information Administration estimates that global oil

production easily outstripped consumption in H1 2020. However, it should be the other way round in the second half of the year and in 2021.

The Brent crude oil price outlook reflects the growing curve of futures prices, which is positioned higher compared to the April forecast. In 2020, the average price of a barrel of oil should be 34% lower than in 2019, i.e. USD 42 (*versus USD 38*), before rising to USD 48 in 2021 (*versus USD 40*). As we now expect the Czech koruna to be stronger against the US dollar (see section 1.4.3) than it had been assumed in the April forecast, the upward revision in the predicted CZK price of oil is more moderate.

The price of **natural gas** was very low in Q2 2020. Translated into CZK, it tumbled by almost 55%, though this has yet to be reflected in consumer prices. Despite the fact that we are expecting the price of natural gas to be cut for consumers in October, we continue to view the price of natural gas as an anti-inflationary risk.

Graph 1.2.1: Dollar Price of Brent Crude Oil



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 80 60 40 20 -20

CZK/USD exch. rate

I/19

1/20

1/21

Price in USD

Price in CZK

I/18 Source: CNB, U. S. EIA. Calculations and forecast of the MoF.

I/17

Table 1.2.1: Prices of Selected Commodities – yearly

spot prices											
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
										Forecast	Forecast
Crude oil Brent	USD/barrel	111.5	108.6	99.0	52.4	43.6	54.2	71.4	64.3	42	48
	growth in %	0.2	-2.6	-8.8	-47.1	-16.9	24.3	31.7	-9.9	-34.0	12.9
Crude oil Brent index (in CZK)	2010=100	143.8	139.9	134.6	85.0	70.1	83.1	102.2	97.1	64	69
	growth in %	11.0	-2.7	-3.8	-36.9	-17.4	18.5	23.0	-5.0	-34.1	7.4
Natural gas (Europe)	USD/MMBtu	11.5	11.8	10.1	6.8	4.6	5.7	7.7	4.8		•
	growth in %	9.1	2.7	-14.7	-32.1	-33.1	25.3	34.4	-37.5		
Natural gas (Europe) index (in CZK)	2010=100	142.2	145.9	131.7	106.2	70.7	84.2	106.0	69.6		
	growth in %	20.6	2.6	-9.8	-19.4	-33.4	19.2	25.8	-34.3		•

-40

-60

I/16

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

Table 1.2.2: Prices of Selected Commodities - quarterly

			2019	9			20	20	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
								Forecast	Forecast
Crude oil Brent	USD/barrel	63.1	69.0	61.9	63.3	50.3	29.7	44	46
	growth in %	-5.7	-7.4	-17.6	-8.3	-20.3	-57.0	-28.8	-27.8
Crude oil Brent index (in CZK)	2010=100	94.0	103.9	94.4	96.3	77.0	48.0	64	67
	growth in %	3.2	-1.6	-13.7	-6.4	-18.0	-53.8	-31.7	-30.9
Natural gas (Europe)	USD/MMBtu	6.1	4.3	3.8	4.9	3.1	1.8	•	•
	growth in %	-8.1	-41.2	-54.4	-40.8	-49.8	-57.6		•
Natural gas (Europe) index (in CZK)	2010=100	88.0	62.0	56.2	72.3	45.4	28.2		
	growth in %	0.5	-37.5	-52.2	-39.6	-48.4	-54.5		

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

1.3 Fiscal Policy

For 2020, we forecast a general government sector deficit of 6.4% of GDP (*versus 4.1% of GDP*), borne in particular by the state budget, which plays a stabilising role for public finances. For the first time since 2015, social security funds (health insurance companies) can also be expected to report a negative balance. In contrast, local governments are still forecast to report a surplus. From the perspective of the structural balance, expansionary fiscal policy should result in a balance equal to −2.7% of GDP (*versus −2.0% of GDP*).

On the revenue side, the deep economic recession triggered by the COVID-19 epidemic and related measures has created a big tax receipt hole. Tax revenues, including social security contributions, are projected to fall by 3.8% YoY, with the largest drop expected in corporate income tax revenues (-21.3%). On the other hand, we forecast that personal income tax, partly thanks to the government's action to stabilise employment (for details, see sections 1.5 and 3.3), will report modest year-onyear growth (0.5%). The same macroeconomic factors, together with an increase in state payments for stateinsured persons (by CZK 26.1 billion) and an emergency waiver of the minimum advance payments on social and health insurance for self-employed persons (CZK 14.4 billion), along with a waiver of social security contributions and the state employment policy contribution paid by employers (CZK 13.5 billion), have a bearing on the social security contributions that will be collected (-1.2%).

Considering the developments forecast in nominal household consumption and the relevant section of general government expenditure, we also expect a 3.1% YoY decline in value added tax. Receipts are further stifled by lower rates on scheduled public transport since February last year, on heat and cooling since January 2020, and on catering services and other services and goods since May and July this year. Excise duties (excluding renewable energy subsidies) should dip by 1.6%. Duty on mineral oils will be affected by a decrease in diesel and petrol consumption due to the real decline in the economy. Duties on manufactured tobacco rely heavily on the volume of cross-border purchases and tourism, which have been hit hard this year. By contrast, a change in rates on tobacco products and alcohol should have a positive discretionary effect, as will the introduction of excise duty on heated tobacco, with the total expected effect of CZK 10.7 billion. However, this should be offset by the abolition of the tax on the acquisition of immovable property, where the proceeds would be projected to be about the same.

The expenditure side is heavily influenced by measures taken to combat COVID-19 and schemes to mitigate its economic and social impacts. The forecast for general government final consumption expenditure, which already incorporates the figures for the first two quarters of this year (7.6%), anticipates year-on-year growth by

8.1%. This result should reflect the compensation of employees (7.8%) prompted by the 10% growth in resources for salaries in the education sector, along with an increase in funds for the remuneration of workers staff in health care, social services and others in connection with the pandemic. Intermediate consumption (7.7%) should grow at a slightly slower pace, both due to real consumption (mainly higher expenditure on medical supplies and protective equipment) and the inflation rate, which is higher year-on-year. The forecast of a rise by more than 7% in social transfers in kind anticipates higher spending on health care as a result of the prevailing situation.

We expect a significant rise in social cash benefits, reflecting already approved measures for pension benefits and state social support benefits (an increase in the parental allowance), on the one hand, and economic developments, on the other. In addition, cash social benefits have been swelled by the carer's allowance for the parents of children up to 13 years of age who have been unable to work because they needed to look after their children while schools were shut during the coronavirus epidemic (approx. CZK 12 billion). A one-off CZK 5,000 allowance for pensioners, intended as financial assistance to cover their growing cost of living, will be paid at the end of the year and will entail additional expenditure totalling approximately CZK 15 billion.

Higher government borrowing needs required to cover the increasing state budget deficit and to boost the liquid reserves of the state treasury will see interest expense rise by an estimated 4% to 0.8% of GDP.

After double-digit growth in capital expenditure in the previous three years, we expect to see the momentum slip to nearly 6% this year. In this respect, investments should be nationally sourced to the tune of more than 80% (this includes the Czech financing of European projects).

The forecast includes an almost 35% rise in subsidies, comprising resources to support various groups of economic entities affected by the coronavirus pandemic and measures taken to prevent its spread. For the most part, this funding covers wage compensation in cases where quarantine measures or other measures directly related to COVID-19 prevent employees from working or employers from operating (regimes A and B of the Antivirus programme), and is forecast to come to approximately CZK 21.3 billion.

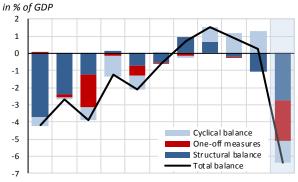
Other measures will be reflected in transfers that are higher by almost 43%, primarily the "compensation bonus" paid to eligible self-employed persons, small private limited companies, and employees working on the basis of an "agreement on work activity" or an "agreement on the performance of work", with a total projected cost of CZK 22.2 billion. The forecast anticipates a fiscal impact

of approximately CZK 20 billion this year in connection with the introduction of the concept of loss carryback, which may be used both by individuals and by legal entities. Other potential projects and support schemes, as well as measures to counter the spread of coronavirus and mitigate its impacts, are budgeted within the framework of the government budget reserve.

Besides the quarterly national accounts, the fiscal forecast is based on developments in the cash receipts of the state budget, local governments, and the budgets of health insurance companies. According to these cash data, the state budget posted a deficit of CZK 230.3 billion at the end of August 2020. After adjusting revenue and expenditure for income transfers and expenditure associated with EU funds and financial mechanisms, the deficit amounted to CZK 234.6 billion. Conversely, local governments ended up in the black at the end of June this year, having reported a cash surplus of CZK 21.4 billion. Health insurance companies also had a slight surplus, in cash terms, over the first seven months of the year.

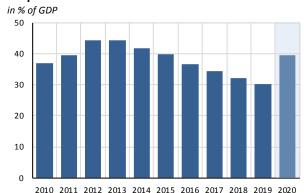
This year, the heavy general government deficit, especially that of the state budget, will also be reflected in the amount of debt, which is projected to rise to 39.4% of GDP.

Graph 1.3.1: General Government Balance



2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 Source: CZSO. Calculations and forecast of the MoF.

Graph 1.3.2: General Government Debt



Source: CZSO. Calculations and forecast of the MoF.

Table 1.3.1: Net Lending/Borrowing and Debt

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
			***************************************								Forecast
General government balance	% GDP	-2.7	-3.9	-1.2	-2.1	-0.6	0.7	1.5	0.9	0.3	-6.4
	bill. CZK	-110	-160	-51	-91	-28	34	77	49	15	-355
Cyclical balance	% GDP	-0.2	-0.8	-1.2	-0.8	0.0	-0.1	0.9	1.2	1.3	-1.3
Cyclically adjusted balance	% GDP	-2.5	-3.1	0.0	-1.3	-0.6	0.8	0.6	-0.3	-1.1	-5.1
One-off measures 1)	% GDP	-0.1	-1.9	-0.1	-0.5	-0.1	-0.1	0.0	-0.1	0.0	-2.4
Structural balance	% GDP	-2.4	-1.2	0.1	-0.7	-0.5	1.0	0.6	-0.2	-1.1	-2.7
Fiscal effort ²⁾	рр	1.3	1.2	1.4	-0.9	0.2	1.5	-0.3	-0.9	-0.8	-1.7
Interest expenditure	% GDP	1.3	1.4	1.3	1.3	1.1	0.9	0.7	0.7	0.7	0.8
Primary balance	% GDP	-1.4	-2.5	0.1	-0.8	0.4	1.6	2.2	1.7	1.0	-5.6
Cyclically adjusted primary balance	% GDP	-1.2	-1.7	1.3	0.0	0.4	1.7	1.4	0.5	-0.3	-4.3
General government debt	% GDP	39.5	44.2	44.4	41.9	39.7	36.6	34.2	32.1	30.2	39.4
	bill. CZK	1 606	1 805	1840	1819	1836	1 755	1 750	1 735	1 739	2 190
Change in debt-to-GDP ratio	рр	2.5	4.6	0.3	-2.6	-2.2	-3.1	-2.4	-2.2	-1.8	9.1

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.

Source: CZSO. Calculations and forecast of the MoF.

²⁾ Change in structural balance.

1.4 Monetary Policy, Financial Sector and Exchange Rates

1.4.1 Monetary Policy

In May 2020, the CNB cut the two-week repo rate by a further 0.75 pp to 0.25%. This was a reaction not only to the effects that measures to combat the spread of the pandemic have had on the domestic economy, but also to the worsening foreign outlook.

In the second quarter, monetary conditions eased significantly in both the interest and the exchange rate components. Considering the outlook for short-term interest rates and inflation, real interest rates will remain relaxed throughout the forecast horizon. The exchange rate component made a significant contribution to the easing in the second quarter, but should be more or less neutral in the period to come. As such, monetary conditions have had — and should continue to have — a stimulating effect on the economy in the negative output gap.

1.4.2 Financial Sector and Interest Rates

In Q2 2020, the three-month PRIBOR rate averaged 0.6% (*versus 0.7%*). If monetary policy is in line with our expectations, it should be on average 0.3% in both Q3 and Q4 2020 (*versus 0.2% in both cases*) and 0.9% (*versus 0.8%*) for the full year 2020. In 2021, building on the assumed path of the CNB's prime interest rate, the three-month PRIBOR could average 0.4% (*versus 0.3%*).

The yield to maturity on 10-year government bonds for convergence purposes decreased to 1.0% (*versus 1.5%*) on average in Q2 2020. The government bonds' yield curve has been increasing since April. Taking into account the monetary policy we expect the CNB and ECB to pursue, developments in inflation, and the growing yield curve, we believe that long-term interest rates will stagnate at 0.9% (*versus 1.5%*) over the forecast horizon.

In Q1 and Q2 2020, total **loans to households** grew by 6.3% YoY and 6.1% YoY, respectively, i.e. at a slower pace than in the previous four years. Over the course of 2020, the growth in lending for consumption purposes has slowed. Other loans (including lending to self-employed persons) have continued to decline. The growth in housing-related lending picked up pace a little when the CNB relaxed its recommendation on the management of risks associated with the provision of retail loans secured by residential property. Since June 2020, the only active recommendation is for the loan-to-value ratio, which should not exceed 90%. Average customer interest rates on the overall volume of loans to households went down from 3.6% in January to 3.5% in July.

The year-on-year growth in total **loans to non-financial corporations**, which was 3.6% in Q1 2020 and 5.7% in the second quarter, was driven solely by loans repayable in more than five years and by foreign-currency loans. In 2020, the volume of loans for up to one year has decreased on average by 1.7%, while loans ranging in maturity from one to five years have gone down by 1.0%. Average customer interest rates on the overall volume of loans to non-financial corporations have gradually fallen over the year, going down from 3.8% in January to 2.5% in July.

The non-performing loans ratio virtually stalled in Q1 and Q2 2020, standing at 1.6% in the case of loans to households and 3.1% for loans to non-financial corporations. Measures to combat the spread of the coronavirus have included a holiday on loan repayments for households and non-financial corporations since May. By law, these deferrals may last for up to six months. As at 21 August, the option of deferring repayments had been taken up for 14.0% of the total volume of household loans and 16.3% of loans to non-financial corporations.

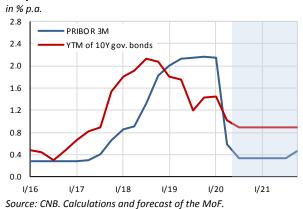
1.4.3 Exchange Rates

In Q2 2020, the koruna was at its weakest levels against the euro for the last five years. The average exchange rate was CZK 27.05/EUR (as forecast), which translates into 5.1% YoY depreciation. The koruna's appreciation in May probably reflected the gradual waning of global uncertainty linked to the coronavirus pandemic and, as a result, there was a correction in the Czech currency's overly weak values.

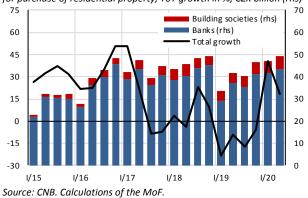
In H2 2020, we predict that the koruna will continue to follow a trajectory of gradual appreciation, but it will still remain weaker in the year-on-year comparison. In the third quarter, the koruna's exchange rate should average CZK 26.3/EUR (*versus CZK 26.8/EUR*). Taking 2020 as a whole, we expect the average exchange rate to be CZK 26.3/EUR (*versus CZK 26.5/EUR*). This would mean a year-on-year depreciation of the koruna by 2.4%. In 2021, the koruna should continue the trend of a gradual appreciation.

The CZK/USD exchange rate is determined by the USD/EUR exchange rate, for which an assumption of stability at USD 1.18/EUR (*versus USD 1.09/EUR*), i.e. at the average of the 10 days preceding the cut-off date for selected forecast assumptions, was adopted.

Graph 1.4.1: Interest Rates

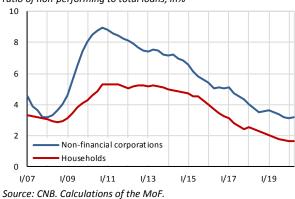


Graph 1.4.3: New Mortgage Loans for purchase of residential property, YoY growth in %, CZK billion (rhs)



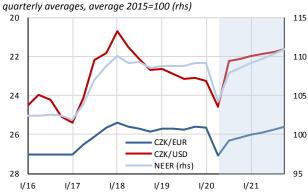
Graph 1.4.5: Non-performing Loans

ratio of non-performing to total loans, in%



-

Graph 1.4.7: Nominal Exchange Rates



Source: CNB. Calculations and forecast of the MoF.

Graph 1.4.2: Loans to Households

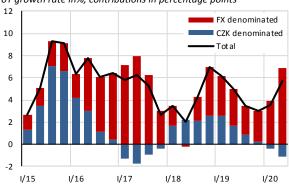
YoY growth rate in%, contributions in percentage points



Source: CNB. Calculations of the MoF.

Graph 1.4.4: Loans to Non-financial Corporations

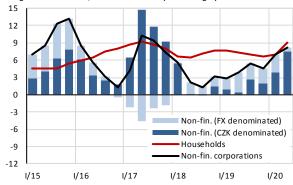
YoY growth rate in%, contributions in percentage points



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 1.4.8: 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

		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
										Forecast	Forecast
Repo 2W rate CNB (end of period)	in % p.a.	0.05	0.05	0.05	0.05	0.05	0.50	1.75	2.00		
Main refinancing rate ECB (end of period)	in % p.a.	0.75	0.25	0.05	0.05	0.05	0.00	0.00	0.00		
Federal funds rate (end of period)	in % p.a.	0.25	0.25	0.25	0.50	0.75	1.50	2.50	1.75		
PRIBOR 3M	in % p.a.	1.00	0.46	0.36	0.31	0.29	0.41	1.23	2.12	0.9	0.4
YTM of 10Y government bonds	in % p.a.	2.78	2.11	1.58	0.58	0.43	0.98	1.98	1.55	1.1	0.9
Client interest rates											
Loans to households	in % p.a.	6.47	6.05	5.59	5.15	4.65	4.10	3.76	3.66		
Loans to non-financial corporations	in % p.a.	3.72	3.20	3.01	2.78	2.59	2.57	3.05	3.75		
Deposits of households	in % p.a.	1.18	1.02	0.85	0.65	0.47	0.36	0.33	0.39		
Deposits of non-financial corporations	in % p.a.	0.56	0.41	0.29	0.19	0.10	0.05	0.11	0.37		

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

Table 1.4.2: Interest Rates – quarterly

average of period, unless stated otherwise

			2019				20	20	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
								Forecast	Forecast
Repo 2W rate CNB (end of period)	in % p.a.	1.75	2.00	2.00	2.00	1.00	0.25		
Main refinancing rate ECB (end of period)	in % p.a.	0.00	0.00	0.00	0.00	0.00	0.00		
Federal funds rate (end of period)	in % p.a.	2.50	2.50	2.00	1.75	0.25	0.25	•	
PRIBOR 3 M	in % p.a.	2.01	2.13	2.15	2.17	2.15	0.59	0.3	0.3
YTM of 10Y government bonds	in % p.a.	1.81	1.75	1.20	1.43	1.46	1.02	0.9	0.9
Client interest rates									
Loans to households	in % p.a.	3.67	3.66	3.66	3.65	3.62	3.53		
Loans to non-financial corporations	in % p.a.	3.67	3.74	3.80	3.80	3.76	2.97		
Deposits of households	in % p.a.	0.36	0.37	0.40	0.43	0.44	0.38		
Deposits of non-financial corporations	in % p.a.	0.27	0.35	0.42	0.43	0.43	0.22		

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

Table 1.4.3: Loans and Deposits – yearly averages

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Households											
Loans	growth in %	8.9	6.6	5.0	4.0	3.4	4.8	7.2	7.8	7.6	6.6
For consumption	growth in %	7.3	4.2	-1.0	-0.1	-0.9	3.4	6.0	4.3	5.4	6.4
For house purchase	growth in %	8.9	6.5	6.4	5.5	4.5	5.6	8.1	9.0	8.5	7.4
Otherlending	growth in %	11.6	11.1	6.0	1.2	2.9	1.0	3.0	4.2	4.3	1.1
CZK denominated	growth in %	8.8	6.6	4.9	4.0	3.4	4.7	7.2	7.7	7.6	6.6
FX denominated	growth in %	31.0	2.4	30.8	-1.3	0.0	12.7	8.5	36.3	1.7	9.0
Deposits	growth in %	5.1	5.0	4.5	3.3	2.9	4.8	7.0	8.7	7.0	7.2
CZK denominated	growth in %	5.6	5.4	4.7	3.3	2.7	4.1	6.9	9.7	7.1	6.9
FX denominated	growth in %	-6.8	-4.0	-2.1	2.3	8.5	22.5	7.3	-13.9	3.5	15.2
Non-performing loans (banking statistics)	share, in %	4.8	5.3	5.2	5.2	4.9	4.5	3.6	2.7	2.4	1.9
Loans to deposits ratio	in %	61	62	63	63	63	63	63	63	63	63
Non-financial corporations											
Loans	growth in %	-5.2	4.7	3.5	1.3	1.9	6.5	6.6	5.0	4.2	4.3
CZK denominated	growth in %	-5.2	4.9	2.6	0.3	-1.0	5.9	2.8	-1.4	3.0	1.9
FX denominated	growth in %	-5.4	3.7	7.8	5.7	13.7	9.0	20.5	24.4	6.9	10.0
Deposits	growth in %	5.5	0.4	8.9	4.9	7.6	10.3	4.6	7.8	3.0	4.2
CZK denominated	growth in %	6.9	2.0	8.2	4.2	5.6	6.7	4.5	13.9	2.1	1.9
FX denominated	growth in %	0.2	-6.1	11.8	8.0	15.2	23.2	4.8	-11.1	6.6	13.0
Non-performing loans (banking statistics)	share, in %	8.6	8.5	7.8	7.4	7.0	6.0	5.2	4.7	3.7	3.4
Loans to deposits ratio	in %	121	126	120	116	110	106	108	105	106	106

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

		2018			2019			2020	
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Households									
Loans	growth in %	7.5	7.7	7.2	6.8	6.4	6.0	6.3	6.1
For consumption	growth in %	5.8	6.5	6.0	6.1	6.4	7.0	7.6	5.2
For house purchase	growth in %	8.3	8.5	8.0	7.6	7.2	6.7	6.9	7.1
Otherlending	growth in %	4.3	3.7	2.7	2.1	0.4	-0.7	-0.4	-0.7
CZK denominated	growth in %	7.5	7.7	7.2	6.8	6.4	6.0	6.3	6.1
FX denominated	growth in %	-0.9	10.9	23.2	13.3	0.6	0.9	-2.7	4.9
Deposits	growth in %	7.2	7.7	7.6	7.3	7.1	6.7	6.9	9.1
CZK denominated	growth in %	7.2	7.7	7.5	7.0	6.7	6.3	6.4	8.9
FX denominated	growth in %	6.9	7.5	11.3	13.6	18.2	17.4	21.0	14.7
Non-performing loans (banking statistics)	share, in %	2.3	2.2	2.0	1.9	1.8	1.7	1.7	1.7
Loans to deposits ratio	in %	63	64	63	63	63	63	63	61
Non-financial corporations									
Loans	growth in %	4.2	7.0	6.1	5.0	3.4	3.0	3.6	5.7
CZK denominated	growth in %	3.0	3.6	3.7	2.4	1.2	0.4	-0.5	-1.6
FX denominated	growth in %	7.2	15.3	12.1	11.1	8.4	8.7	12.7	21.8
Deposits	growth in %	1.3	3.1	2.9	3.9	5.4	4.5	6.9	8.2
CZK denominated	growth in %	-0.1	1.8	1.1	0.6	3.3	2.5	5.0	9.7
FX denominated	growth in %	6.9	8.3	9.7	16.9	13.2	12.2	13.9	2.8
Non-performing loans (banking statistics)	share, in %	3.5	3.5	3.7	3.5	3.4	3.2	3.1	3.2
Loans to deposits ratio	in %	109	108	107	105	107	107	103	103

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

		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
								Forecast	Outlook	Outlook	Outlook
Nominal exchange	e rates										
CZK / EUR	average	27.53	27.28	27.03	26.33	25.65	25.67	26.3	25.8	25.3	24.7
	appreciation in %	-5.7	0.9	0.9	2.7	2.7	-0.1	-2.4	1.9	2.2	2.2
CZK / USD	average	20.75	24.60	24.43	23.39	21.74	22.94	23.0	21.8	21.3	20.9
	appreciation in %	-5.7	-15.7	0.7	4.5	7.6	-5.2	-0.4	5.7	2.2	2.2
NEER	average of 2015=100	100.8	100.0	102.4	105.4	109.3	108.9	108	110	113	115
	appreciation in %	-5.2	-0.8	2.4	2.9	3.7	-0.3	-1.3	5.6	2.2	2.2
Real exchange rate to EA19 1)	average of 2015=100	99.5	100.0	101.1	104.0	108.1	110.2	110	112	115	118
	appreciation in %	-4.1	0.5	1.1	2.9	3.9	2.0	-0.6	2.0	2.9	2.9
REER 2)	average of 2015=100	100.9	100.0	102.6	106.6	111.1	111.5				
	appreciation in %	-5.2	-0.9	2.6	3.9	4.3	0.3				

¹⁾ Deflated by GDP deflators.

Table 1.4.6: Exchange Rates - quarterly

			201	9			20	20	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
								Forecast	Forecast
Nominal exchang	e rates								
CZK / EUR	average	25.68	25.68	25.74	25.58	25.63	27.05	26.3	26.2
	appreciation in %	-1.1	-0.3	-0.1	1.1	0.2	-5.1	-2.2	-2.2
CZK / USD	average	22.61	22.86	23.15	23.11	23.25	24.55	22.2	22.1
	appreciation in %	-8.6	-5.9	-4.5	-1.9	-2.7	-6.9	4.2	4.6
NEER	average of 2015=100	108.8	108.8	108.9	109.2	109.2	104.2	108	109
	appreciation in %	-1.1	-0.4	-0.5	0.6	0.4	-4.2	-0.8	-0.6
Real exchange rate to EA19 1)	average of 2015=100	109.7	110.0	110.3	110.9	111.7	106.2	111	110
	appreciation in %	1.0	1.8	2.1	3.1	1.9	-3.5	0.3	-0.8
REER 2)	average of 2015=100	111.8	111.1	111.3	111.8	114.0	109.1		
	appreciation in %	-0.5	0.0	0.2	1.7	2.0	-1.8		

¹⁾ Deflated by GDP deflators.

1.5 Structural Policies

Wide-ranging stimulus measures were introduced to mitigate macroeconomic and social impacts of the recession in H1 2020 and to support the subsequent recovery.

Above all, these have been **bold fiscal measures** limited in scope to the approved increase in the state budget deficit to CZK 500 billion, i.e. approximately 9% of GDP. The measures have encompassed both the revenue side (e.g. compensation bonus for the self-employed, waiver of advance payments on health insurance and social security contributions, etc.) and the expenditure side (compensation of wage costs, extension and an increase in the carer's allowance, exceptional bonuses in the health sector, one-off contribution to pensions, etc.) of public budgets.

From the perspective of the **labour market**, the **Antivirus** programme has been particularly important. Regimes A and B of this scheme provide partial coverage of payroll costs for employers who have found themselves

in economic difficulty, have been forced to shutter their operations, or who have had to quarantine their employees. The scheme has kept unemployment growth much lower than would be the norm for a deep economic recession. The programme is due to end on 31 October.

It should be followed by a permanent "partial employment support" mechanism (kurzarbeit), the structure of which is currently under discussion. Considering the parameters that are being proposed for kurzarbeit, we expect it to have less of an impact than Antivirus on the labour market in terms of maintaining employment levels. Another factor is that, before kurzarbeit is launched, some employers are likely to restore full operations as demand picks up again, while others will close down for economic reasons and lay off their staff because their operations will prove to have no future despite all of the support mechanisms that have been made available.

²⁾ Eurostat calculations, deflated by CPI, versus 42 countries. Source: CNB, Eurostat. Calculations and forecast of the MoF.

²⁾ Eurostat calculations, deflated by CPI, versus 42 countries. Source: CNB, Eurostat. Calculations and forecast of the MoF.

1.6 Demographic Trends

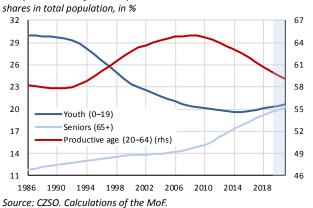
From the long-run perspective, there has been a steady moderate increase in the population of the Czech Republic, although this growth slowed down in Q1 2020. At the end of March 2020, 10,694,000 people were living in the Czech Republic. The number of inhabitants went up by 38,500 YoY, i.e. 0.4%, but by just 400 people in the first quarter.

The difference between the number of births and deaths led to a decline in the population by 3,800 persons. There was a slight year-on-year drop in both the number of live births (26,200) and the number of deaths (30,000). In Q1 2020, 31 deaths resulting from COVID-19 were recorded. This had no effect on mortality statistics.

The closure of borders, on the other hand, affected the migration balance. There was positive net migration of 4,200 persons, a drop by 5,100 YoY. During the first quarter, 16,100 people moved to the Czech Republic from abroad, while 11,900 left. A noticeable positive net migration rate was identified only among Ukrainians (4,700). In contrast, a small-scale negative net migration rate was recorded among citizens of the United Kingdom, Germany, Poland and Slovakia.

In addition, the Czech Statistical Office published a **detailed age structure** of the population at the beginning of 2020. In 2019, the Czech population rose by 44,000 people. Population ageing was reflected in a rise in the number of seniors (65+) by 45,000 people. The number of females born in the late 1970s and in the 1980s and the relatively high birth rate resulted in an increase in the number of children and young people up to 19 years by 28,000. On the other hand, the population aged 20–64 plummeted by 29,000.

Graph 1.6.1: Age Groups

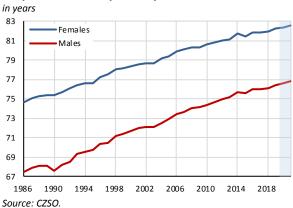


Nevertheless, developments in this category are not homogeneous on account of how the birth rate fluctuated in the past. The decline was concentrated in the 20–44 age group, where the number of people went down by 73,000. In contrast, there was a marked increase in the population aged 45–59 by 72,000. Among people of this age, employment and participation rates are high, which has so far helped to eliminate the impacts of population ageing on the supply side of the economy. On the other hand, the drop in the number of people aged 60–64 by 27,000 has temporarily slowed down the strain on the pension system.

The preceding economic boom has also meant that the number of **old-age pensioners** is not as high as demographic trends and the gradual hike in the statutory retirement age would suggest. At the end of June 2020, there was only a slight year-on-year increase in the number of old-age pensioners by 3,900, i.e. by 0.2%. We do not expect the coronavirus epidemic to have a significant impact in this area, so the stagnation should continue in the next few years.

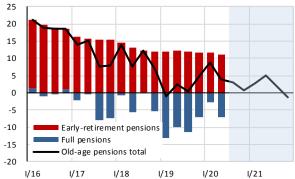
At the end of June 2020, there were 2,410,000 old-age pensioners (22.6% of the Czech population) in the pension system. In 2012–2018, the increase in their number lagged behind the dynamic growth in employment, and therefore there was a visible decrease in the effective dependency ratio by 2.7 pp. This was one of the factors behind the improvement in the pension account balance. The effective dependency ratio increased for the first time in eight years at the beginning of 2020 as a result of the decline in employment during 2019. Owing to the deep economic downturn in H1 2020, followed by a decline in employment, the dependency ratio will continue to increase in 2021.

Graph 1.6.2: Life Expectancy at Birth



Graph 1.6.3: Old-Age Pensioners

absolute increase over a year in thousands of persons



Source: Czech Social Security Administration, CZSO. Calculations of the MoF.

Table 1.6.1: Demographics

		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
								Forecast	Forecast	Outlook	Outlook
Population (as of 1 January)	thous. persons	10 512	10 538	10 554	10 579	10 610	10 650	10 694	10 717	10 737	10 754
	growth in %	0.0	0.2	0.1	0.2	0.3	0.4	0.4	0.2	0.2	0.2
0–19 years	thous. persons	2 057	2 064	2 082	2 106	2 133	2 160	2 188	2 210	2 228	2 244
	growth in %	-0.6	0.3	0.9	1.2	1.3	1.3	1.3	1.0	0.9	0.7
20–64 years	thous. persons	6 630	6 594	6 540	6 484	6 437	6 403	6 3 7 4	6 329	6 289	6 257
	growth in %	-0.7	-0.5	-0.8	-0.9	-0.7	-0.5	-0.4	-0.7	-0.6	-0.5
65 and more years	thous. persons	1826	1880	1932	1 989	2 040	2 087	2 132	2 178	2 2 1 9	2 254
	growth in %	3.3	3.0	2.8	2.9	2.6	2.3	2.2	2.2	1.9	1.6
Old-age pensioners (as of 1 January) 1)	thous. persons	2 340	2 355	2 377	2 395	2 403	2 410	2 415	2 415	2 414	2 408
	growth in %	0.0	0.6	0.9	0.8	0.3	0.3	0.2	0.0	0.0	-0.3
Old-age dependency ratios (as of 1 Jan	uary)										
Demographic ²⁾	%	27.5	28.5	29.5	30.7	31.7	32.6	33.4	34.4	35.3	36.0
Under current legislation 3)	%	38.8	39.3	39.8	40.1	40.4	40.4	40.5	40.7	40.7	40.5
Effective 4)	%	47.2	46.9	46.8	46.2	45.7	45.2	45.5	46.1	46.3	46.0
Fertility rate	children	1.528	1.570	1.630	1.687	1.708	1.715	1.70	1.70	1.70	1.70
Population increase	thous. persons	26	16	25	31	40	44	23	20	17	15
Natural increase	thous. persons	4	0	5	3	1	0	-3	-6	-9	-11
Live births	thous. persons	110	111	113	114	114	112	109	107	105	103
Deaths	thous. persons	106	111	108	111	113	112	112	113	114	114
Net migration	thous. persons	22	16	20	28	39	44	26	26	26	26
Immigration	thous. persons	42	35	38	46	58	67				
Emigration	thous. persons	20	19	17	18	20	21				

¹⁾ In 2010 disability pensions of pensioners over 64 were transferred into old-age pensions.

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

²⁾ Demographic dependency: ratio of people in senior ages (65 and more) to people in productive age (20–64).

Dependency under current legislation: ratio of people above the official retirement age to the people over 19 below the official retirement age.

Effective dependency: ratio of old-age pensioners to working people (LFS methodology).

Economic Cycle 2

2.1 Position within the Economic Cycle

After its economic cycle peaked in 2019, the Czech economy plunged into a deeply negative output gap. With the onset of the coronavirus epidemic and measures to combat the spread of contagion, real gross value added lagged roughly 8% behind its potential in Q2 2020. Looking at the forecast of economic recovery in the period ahead, we can assume that the negative output gap will be closing and that in 2022 the economy should be close to an equilibrium.

The economic recession has also highlighted the tendency towards the slowing year-on-year growth of potential output. Current estimates place its growth at 1.2% in Q2 2020. After the recession has ended, potential output growth should gradually increase to roughly 1.5% in 2023.

Potential growth is profoundly influenced by the trend component of total factor productivity. In the second quarter, it contributed 0.8 pp.

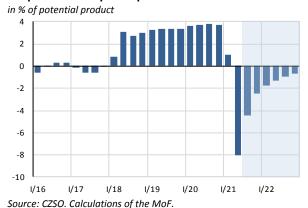
Labour supply is affected by population ageing (see section 1.6), a process that is being expressed, among other things, by a long-term decline in the working age (20-64) population, which shaved 0.3 pp from the yearon-year growth in potential output in Q2 2020. A similar result is projected in the period ahead.

The negative impact that demographic trends are having on labour supply was cushioned for a long time by a dynamic increase in the participation rate, which swelled the size of the labour force in the economy. However, since Q2 2019, the year-on-year growth of participation has been a lot slower, and there has even been a decline in the size of the labout force. Despite the measures taken to protect the labour market, the economic recession probably scaled up this tendency temporarily in Q2 2020. The contribution of the participation rate to potential output growth was therefore zero.

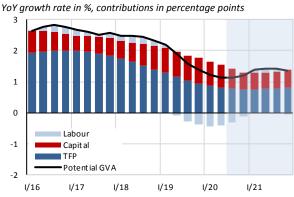
In the Czech Republic, we are witnessing a steady longterm decline in the number of hours usually worked. In the second quarter, this factor slowed potential output growth by 0.1 pp.

The decline in gross fixed capital formation in 2020 has slowed down increases in capital stock in the Czech economy. Capital stock contributed 0.7 pp to the increase in potential in Q2 2020 and it is likely that this contribution will contract in the period ahead.

Graph 2.1.1: Output Gap

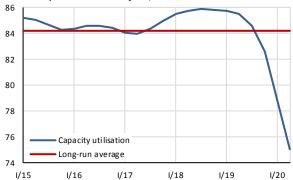


Graph 2.1.2: Potential Product



Graph 2.1.3: Capacity Utilisation in Industry

smoothed by Hodrick-Prescott filter, in %



Source: CZSO.

Table 2.1.1: Output Gap and Potential Product

		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
								Forecast	Forecast	Outlook	Outlook
Output gap	%	-2.3	0.0	-0.3	2.4	3.3	3.7	-3.5	-1.2	-0.4	0.3
Potential product 1)	growth in %	1.6	2.5	2.7	2.6	2.4	1.8	1.2	1.4	1.4	1.5
Contributions											
Trend total factor productivity	рр	1.3	1.8	2.0	1.9	1.6	1.1	0.8	0.8	0.9	0.9
Fixed assets	рр	0.5	0.7	0.6	0.5	0.7	0.8	0.7	0.5	0.6	0.6
Population 20–64 yers	рр	-0.4	-0.3	-0.5	-0.5	-0.4	-0.3	-0.3	-0.4	-0.3	-0.2
Participation rate	рр	0.4	0.5	0.8	0.7	0.7	0.2	0.1	0.4	0.3	0.2
Usually worked hours	рр	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.0

¹⁾ Based on gross value added.

Source: CZSO. Calculations of the MoF.

2.2 Business Cycle Indicators

In Q2 2020, the economic impact of restrictive measures to prevent the spread of the coronavirus hit the confidence of economic entities very hard.

Confidence was being restored in Q3 2020, most obviously in industry, trade and services. Even so, indicators continue to suggest there will be a year-on-year decline in gross value added in these sectors. Confidence in construction was affected relatively the least and came close to stagnation in the third quarter. Nevertheless, the correlation between the trends in confidence and gross value added in construction is very low.

The composite indicator of goods exports, compiled by the Ministry of Finance from questions used in the Czech Statistical Office's business cycle survey and also drawing on business confidence in Germany, stopped sliding and gained ground, indicating that exports probably shrank by less in year-on-year terms in Q3 2020.

The Czech Statistical Office's consumer confidence indicator recovered some of the previous losses in Q3 2020. Considering the confidence levels, this suggests stalling household final consumption expenditure in H2 2020 because the confidence indicator has a lead of one to two quarters. The consumer confidence indicator com-

piled by the Ministry of Finance from questions used in the European Commission's consumer survey continued to decline, so much so that the two indicators converged in Q3 2020. The lower consumer confidence can be attributed to a greater preference towards saving, the fraught financial situation faced by households and, most of all, to a much worse assessment of the economic situation.

With most components on the up, the composite confidence indicator is signalling a marked slowdown in the year-on-year decline of gross value added in Q3 2020. Because of the data cut-off date for this forecast, the composite indicator's values and its components for Q3 2020 are averages of July and August values.

The composite leading indicator points to a deepening of the negative output gap in Q3 2020, which could start to close slowly at the end of the year. Considering the hefty slump in economic activity in the first half of the year, we view information from the composite leading indicator from a qualitative perspective and believe that the output gap will remain deeply negative in the third quarter.

Graph 2.2.1: Confidence and GVA in Industry

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



Graph 2.2.3: Confidence and GVA in Trade and Services



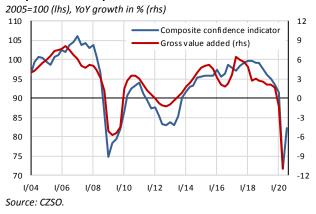
Source: CZSO. Calculations of the MoF.

Graph 2.2.5: Consumer Confidence and Consumption



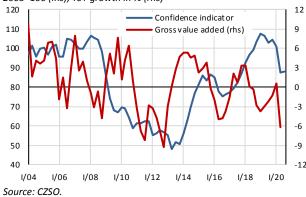
Source: CZSO, European Commission. Calculations of the MoF.

Graph 2.2.7: Composite Confidence Indicator and GVA

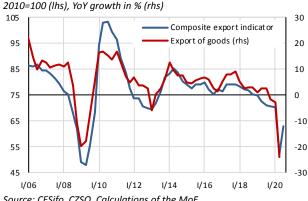


Graph 2.2.2: Confidence and GVA in Construction

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



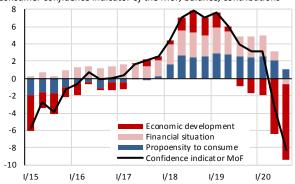
Graph 2.2.4: Composite Export Indicator



Source: CESifo, CZSO. Calculations of the MoF.

Graph 2.2.6: Decomposition of Consumer Sentiment

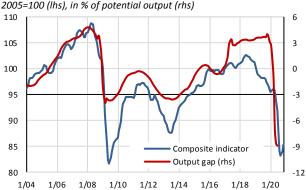
consumer confidence indicator of the MoF, balance, contributions



Source: European Commission. Calculations of the MoF.

Graph 2.2.8: 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

3.1.1 GDP in the Second Quarter of 2020

The Czech Republic has experienced an exceptionally deep recession. Economic output measured by real GDP plunged by 10.9% YoY (*versus 8.0%*) in the second quarter; seasonally adjusted GDP fell by 8.7% QoQ (*versus 6.8%*). The quarter-on-quarter decline was driven by manufacturing and most services sectors. The Czech Statistical Office revised the year-on-year real GDP growth in Q1 2020 upwards by 0.1 pp. There were significant changes in gross fixed capital formation, the decline of which was reduced by 2.9 pp. In contrast, the growth in household and general government final consumption expenditures was revised down by 0.2 pp.

Domestic and, especially, foreign demand contributed to the downturn in real GDP. This decline was softened only by a rise in general government final consumption expenditure.

Household consumption slumped year on year in the face of anti-epidemic measures, pessimistic expectations and falling earnings. In relative terms, expenditure on semi-durables and durables, along with services, was hit hardest. Spending on non-durables was also down slightly. In real terms, household final consumption expenditure decreased by 7.3% (*versus 2.1%*). General government consumption went up by 2.1% (*versus 3.4%*), mainly on account of the momentum exhibited by employment, social benefits in kind and intermediate consumption.

Gross fixed capital formation fell by 4.6% (*versus 17.8%*). In particular, investments in vehicles, machinery and equipment led to the decrease. Investments in housing more or less stagnated year on year. Non-residential buildings and structures, on the other hand, were the only investment component to register growth. With the change in inventories making a highly negative contribution, gross capital formation decreased more than fixed capital investment, by 10.6% (*versus 23.5%*).

With export performance and export markets clearly falling, there was a slump in exports of goods and services compared to the same quarter of the previous year. Exports thus fell by 23.1% (*versus 24.2%*) in Q2 2020. Imports of goods and services went down by 18.4% (*versus 24.6%*) as a result of weakening exports. However, the relatively moderate drop in import-intensive investment demand cushioned their decline.

With export prices rising and import prices dipping, terms of trade improved by 2.0% (*versus 1.1%*). Consequently, real gross domestic income was down by 9.6% YoY (*versus 7.4%*).

Gross operating surplus fell by 8.5% (*versus 7.6%*), compensation of employees slipped by 2.3% (*versus growth of 1.2%*), and net taxes on production were down 24.3% YoY (*versus 8.2%*). As a result, nominal GDP posted a 7.2% drop (*versus 3.8%*).

3.1.2 Forecast for the Years 2020 and 2021

In the course of Q2 2020, most restrictive measures to combat the spread of the coronavirus were gradually lifted. This was reflected in monthly indicators (industrial output, sales in retail and services, external trade), which show that economic activity, having slumped in April, was returning to pre-crisis levels in May and June. The economic recovery should continue in the second half of the year. For the third quarter, this is confirmed by confidence indicators and hard data on economic developments in July. This means that in the third quarter real GDP could increase by 4.2% QoQ (versus 1.1%), which would translate into a year-on-year decline of 7.8% (versus 7.7%).

In 2020, domestic and foreign demand should both contribute to the decline in GDP. We forecast that real GDP will drop by 6.6% (*versus 5.6%*) this year and will grow by 3.9% (*versus 3.0%*) in 2021. This prediction is based on the assumption that blanket anti-epidemic measures – which could have a fundamentally negative impact on economic activity – will not be deployed. Likewise, it does not anticipate that the coronavirus pandemic will have a long-term effect on global supply chains.

Household final consumption expenditure will be negatively affected by a decline in real disposable income in 2020, despite the fact that numerous socially-related discretionary changes will be positively reflected in its momentum. Measures related to the declaration of the state of emergency should affect expenditure on services in particular. Taking into account the forecast year-on-year increase in the savings rate for precautionary reasons, real household consumption should decline by 5.0% (*versus* 1.5%). Stagnating disposable income and a drop in the savings rate could push consumption up by 2.2% (*versus* 0.8%) in 2021.

We forecast that general government consumption will increase by 3.8% (*versus 2.6%*) this year and by 2.9% (*versus 2.0%*) in 2021. Key factors will include growth in social benefits in kind, intermediate consumption and employment in the public sector. Owing to an agreement reached in late 2019, health expenditure has already benefited from the partial deployment of health insurance companies' reserves, which has primarily been reflected in the compensation of employees. Additional healthcare spending is related to the handling of the

coronavirus pandemic. Despite savings at central bodies of state administration, an increase in the numbers of workers in education and armed forces is envisaged. The momentum will also benefit from increased expenditure on purchases of goods and services, with contributions from current EU subsidies.

Gross fixed capital formation should sag in 2020 under the weight of the global recession and the escalating uncertainty. By contrast, monetary conditions should have a positive impact on the momentum of investment activity. In 2021, this factor should be compounded by renewed economic growth abroad, which is expected to see private investment rise again following the slump in 2020. However, the expected investment revival in 2021 faces significant external risks (see the section Forecast Risks and Uncertainty). In the case of general government investments, we expect nationally financed capital expenditures to increase. Government investment will also be underpinned by the implementation of projects co-financed by EU funds. The outlook for 2023 includes a purchase of military helicopters from the US (at a cost of CZK 17.5 billion, inclusive of value added tax), which

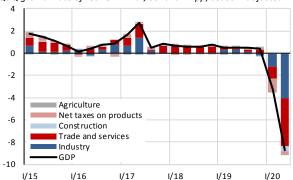
will also be reflected in imports of goods. Consequently, gross fixed capital formation could fall by 7.5% (*versus 13.6%*) in 2020; we are predicting growth by 3.0% (*versus 3.2%*) in 2021.

We assume that inventories will shrink in 2020 due to a downturn in economic activity, but in 2021 they should increase again. In this respect, total gross capital formation should slide by 12.1% (*versus 16.3%*) in 2020 and rise by 5.5% (*versus 6.7%*) next year.

We forecast that exports of goods and services will sink by 11.9% (*versus 17.0%*) in 2020 and grow by 7.3% (*versus 6.8%*) in 2021. The downturn in exports in 2020 reflects shrinking export markets and lower export performance (see section 3.4). The dynamism of exports and import-intensive investment demand will be reflected in a lower growth rate of goods and services imports. This year, imports should go down by 10.4% (*versus 16.8%*). In 2021, they could increase by 6.5% (*versus 6.3%*).

Graph 3.1.1: Resources of Gross Domestic Product

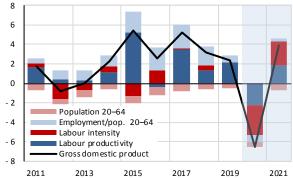
QoQ growth rate of real GDP in %, contrib. in pp, season. adjusted



Source: CZSO. Calculations of the MoF.

Graph 3.1.3: Real Gross Domestic Product

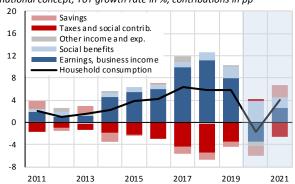
growth in %, contributions in percentage points



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

Graph 3.1.5: Nominal Consumption of Households

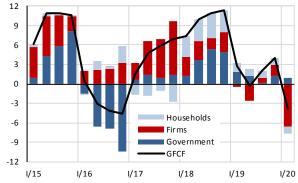
national concept, YoY growth rate in %, contributions in pp



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.1.7: Investment by Sector

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



Source: CZSO. Calculations of the MoF.

Graph 3.1.2: GDP by Type of Expenditure

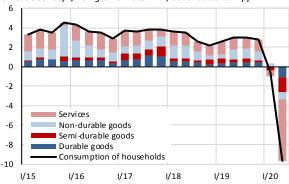
YoY growth rate of real GDP in %, contributions in pp



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.1.4: Real Consumption of Households

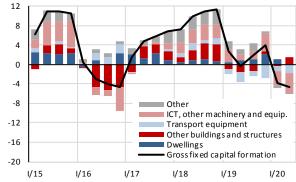
domestic concept, YoY growth rate in %, contributions in pp



Source: CZSO. Calculations of the MoF.

Graph 3.1.6: Investment by Type of Expenditure

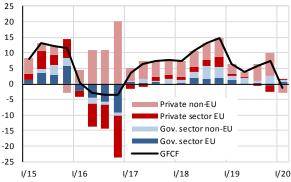
YoY growth rate of real GFCF in %, contributions in pp



Source: CZSO. Calculations of the MoF.

Graph 3.1.8: 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

		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
								Forecast	Forecast	Outlook	Outlook
Gross domestic product	bill. CZK 2015	4 389	4 625	4 743	4 988	5 147	5 267	4 920	5 112	5 224	5 335
	growth in %	2.3	5.4	2.5	5.2	3.2	2.3	-6.6	3.9	2.2	2.1
	growth in % ¹⁾	2.3	5.5	2.4	5.4	3.2	2.3	-6.6	3.8	2.2	2.3
Private consumption expenditure 2)	bill. CZK 2015	2 100	2 181	2 264	2 355	2 437	2 512	2 387	2 439	2 485	2 545
	growth in %	1.4	3.9	3.8	4.0	3.5	3.1	-5.0	2.2	1.9	2.4
Government consumption exp.	bill. CZK 2015	860	875	897	913	948	970	1 007	1 036	1 057	1 079
	growth in %	1.0	1.8	2.5	1.8	3.8	2.3	3.8	2.9	2.0	2.0
Gross capital formation	bill. CZK 2015	1 144	1 294	1 243	1 323	1 425	1 446	1 272	1 342	1 386	1 435
	growth in %	7.1	13.1	-4.0	6.5	7.7	1.5	-12.1	5.5	3.3	3.5
Gross fixed capital formation	bill. CZK 2015	1 119	1 227	1 190	1 248	1 374	1 403	1 298	1 3 3 7	1 381	1 431
	growth in %	3.3	9.7	-3.0	4.9	10.0	2.2	-7.5	3.0	3.3	3.6
Change in stocks and valuables	bill. CZK 2015	26	67	53	75	51	43	-26	5	5	5
Exports of goods and services	bill. CZK 2015	3 5 1 4	3 726	3 888	4 168	4 322	4 379	3 856	4 136	4 332	4 462
	growth in %	8.7	6.0	4.3	7.2	3.7	1.3	-11.9	7.3	4.7	3.0
Imports of goods and services	bill. CZK 2015	3 230	3 451	3 549	3 771	3 989	4 044	3 622	3 857	4 053	4 209
	growth in %	10.0	6.8	2.8	6.3	5.8	1.4	-10.4	6.5	5.1	3.8
Gross domestic expenditure	bill. CZK 2015	4 104	4 351	4 404	4 592	4 810	4 928	4 673	4 824	4 935	5 065
	growth in %	2.8	6.0	1.2	4.3	4.7	2.5	-5.2	3.2	2.3	2.6
Methodological discrepancy 3)	bill. CZK 2015	1	0	0	-1	3	4	19	16	18	23
Real gross domestic income	bill. CZK 2015	4 3 7 5	4 625	4 780	4 988	5 148	5 286	4 971	5 160	5 285	5 408
	growth in %	3.4	5.7	3.4	4.3	3.2	2.7	-6.0	3.8	2.4	2.3
Contributions to GDP grow	th ⁴⁾										
Gross domestic expenditure	рр	2.7	5.6	1.2	3.9	4.4	2.3	-4.8	3.1	2.2	2.5
Consumption	рр	0.9	2.2	2.3	2.3	2.4	1.9	-1.6	1.7	1.3	1.6
Household expenditure	рр	0.7	1.9	1.8	1.9	1.6	1.5	-2.4	1.0	0.9	1.2
Government expenditure	рр	0.2	0.3	0.5	0.3	0.7	0.4	0.8	0.6	0.4	0.4
Gross capital formation	рр	1.8	3.4	-1.1	1.7	2.0	0.4	-3.2	1.4	0.8	0.9
Gross fixed capital formation	рр	0.8	2.5	-0.8	1.2	2.5	0.6	-2.0	0.8	0.8	0.9
Change in stocks	рр	1.0	0.9	-0.3	0.5	-0.5	-0.2	-1.3	0.6	0.0	0.0
Foreign balance	рр	-0.4	-0.2	1.4	1.2	-1.2	0.0	-1.7	0.9	0.0	-0.4
External balance of goods	рр	0.0	-1.0	1.0	0.9	-1.0	0.5	-1.4	0.7	0.0	-0.4
External balance of services	рр	-0.4	0.8	0.4	0.3	-0.2	-0.5	-0.3	0.1	0.1	0.0
Gross value added	bill. CZK 2015	3 974	4 165	4 269	4 491	4 643	4 745	•		•	
	growth in %	2.9	4.8	2.5	5.2	3.4	2.2				
Net taxes and subsidies on products	bill. CZK 2015	416	460	474	497	504	522				

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

			201	9			20:	20	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
								Forecast	Forecast
Gross domestic product	bill. CZK 2015	1 236	1 327	1 346	1 357	1 215	1 183	1 241	1 281
	growth in %	2.5	2.1	3.0	1.7	-1.6	-10.9	-7.8	-5.6
	growth in % ¹⁾	2.4	2.4	2.3	2.0	-1.9	-11.0	-7.6	-5.7
	QoQ in % ¹⁾	0.5	0.5	0.5	0.4	-3.3	-8.7	4.2	2.5
Private consumption expenditure 2)	bill. CZK 2015	598	628	636	650	598	582	594	612
	growth in %	2.8	3.2	3.3	3.0	0.0	-7.3	-6.5	-5.8
Government consumption exp.	bill. CZK 2015	226	237	239	268	236	242	249	280
	growth in %	1.9	2.7	3.2	1.5	4.4	2.1	4.2	4.6
Gross capital formation	bill. CZK 2015	309	349	398	390	282	312	333	345
	growth in %	5.7	-2.5	-2.3	6.3	-8.8	-10.6	-16.3	-11.6
Gross fixed capital formation	bill. CZK 2015	301	329	365	408	290	314	328	366
	growth in %	2.8	-0.3	1.9	4.0	-3.8	-4.6	-10.2	-10.2
Change in stocks and valuables	bill. CZK 2015	8	20	33	-18	-7	-2	5	-21
Exports of goods and services	bill. CZK 2015	1 088	1 117	1 066	1 108	1 071	859	922	1 004
	growth in %	1.1	1.8	4.3	-1.7	-1.5	-23.1	-13.5	-9.4
Imports of goods and services	bill. CZK 2015	985	1 003	992	1 063	973	818	861	969
	growth in %	1.9	0.7	2.2	0.7	-1.3	-18.4	-13.2	-8.8
Gross domestic expenditure	bill. CZK 2015	1 134	1 214	1 271	1 308	1 118	1 138	1 177	1 240
	growth in %	3.4	1.4	1.4	3.6	-1.4	-6.3	-7.4	-5.2
Methodological discrepancy 3)	bill. CZK 2015	-1	-2	1	5	1	6	4	9
Real gross domestic income	bill. CZK 2015	1 243	1 332	1 347	1 364	1 226	1 202	1 250	1 293
	growth in %	2.6	2.4	3.5	2.2	-1.4	-9.8	-7.2	-5.2
Gross value added	bill. CZK 2015	1 121	1 198	1 211	1 2 1 6	1 109	1 069	•	•
	growth in %	2.5	2.1	2.8	1.4	-1.0	-10.8		
	growth in % ¹⁾	2.5	2.2	2.1	1.7	-1.3	-10.9		
	QoQ in % 1)	0.6	0.4	0.4	0.3	-2.4	-9.4		
Net taxes and subsidies on products	bill. CZK 2015	115	130	136	142	106	114		

Source: CZSO. Calculations and forecast of the MoF.

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.

Table 3.1.3: Nominal GDP by Type of Expenditure – yearly

		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
								Forecast	Forecast	Outlook	Outlook
Gross domestic product	bill. CZK	4 346	4 625	4 797	5 111	5 409	5 749	5 561	5 860	6 105	6 3 6 0
	growth in %	4.9	6.4	3.7	6.5	5.8	6.3	-3.3	5.4	4.2	4.2
Private consumption expenditure 1)	bill. CZK	2 100	2 181	2 273	2 420	2 567	2 720	2 670	2 780	2 890	3 019
	growth in %	2.3	3.9	4.2	6.5	6.1	6.0	-1.8	4.1	4.0	4.5
Government consumption exp.	bill. CZK	840	875	910	959	1 049	1 135	1 227	1 282	1 330	1 379
	growth in %	2.8	4.1	4.0	5.4	9.4	8.2	8.1	4.5	3.8	3.7
Gross capital formation	bill. CZK	1 130	1 294	1 248	1 348	1 471	1 547	1 383	1 476	1 549	1 635
	growth in %	9.1	14.5	-3.6	8.0	9.2	5.2	-10.7	6.8	5.0	5.5
Gross fixed capital formation	bill. CZK	1 104	1 227	1 196	1 273	1 423	1507	1 415	1 477	1 5 5 1	1 636
	growth in %	5.1	11.2	-2.5	6.4	11.7	5.9	-6.1	4.4	5.0	5.5
Change in stocks and valuables	bill. CZK	26	67	52	74	48	41	-32	-1	-2	-1
External balance	bill. CZK	275	275	366	384	321	346	282	323	336	326
Exports of goods and services	bill. CZK	3 562	3 726	3 795	4 039	4 163	4 2 7 6	3 788	4 043	4 2 3 4	4 3 7 8
	growth in %	13.0	4.6	1.8	6.4	3.1	2.7	-11.4	6.7	4.7	3.4
Imports of goods and services	bill. CZK	3 286	3 451	3 429	3 654	3 842	3 930	3 506	3 720	3 898	4 052
	growth in %	12.7	5.0	-0.7	6.6	5.1	2.3	-10.8	6.1	4.8	4.0
Gross national income	bill. CZK	4 047	4 308	4 473	4 821	5 102	5 395	5 241	5 504	5 733	5 971
	growth in %	4.3	6.4	3.8	7.8	5.8	5.7	-2.9	5.0	4.2	4.2
Primary income balance	bill. CZK	-298	-317	-324	-289	-306	-353	-320	-356	-372	-388

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

			201	9			20:	20	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
								Forecast	Forecast
Gross domestic product	bill. CZK	1 328	1 441	1 470	1510	1 354	1 336	1 407	1 465
	growth in %	6.4	6.1	7.0	5.6	1.9	-7.2	-4.3	-3.0
Private consumption expenditure ¹	bill. CZK	640	677	692	711	664	648	669	689
	growth in %	5.9	6.0	6.1	5.8	3.8	-4.4	-3.2	-3.1
Government consumption exp.	bill. CZK	254	274	280	327	278	290	307	352
	growth in %	7.6	9.1	9.2	7.0	9.7	5.7	9.5	7.8
Gross capital formation	bill. CZK	326	373	426	422	305	339	362	377
	growth in %	9.7	1.3	1.1	9.9	-6.6	-9.0	-15.2	-10.7
Gross fixed capital formation	bill. CZK	318	353	394	443	314	343	357	401
	growth in %	6.3	3.7	5.7	7.5	-1.3	-2.8	-9.4	-9.3
Change in stocks and valuables	bill. CZK	9	20	33	-21	-9	-4	5	-24
External balance	bill. CZK	108	117	72	49	106	60	69	47
Exports of goods and services	bill. CZK	1 064	1 094	1 041	1 078	1 038	853	911	985
	growth in %	4.2	3.9	5.2	-1.9	-2.4	-22.0	-12.5	-8.6
Imports of goods and services	bill. CZK	956	977	969	1 028	932	794	842	939
	growth in %	4.9	2.5	2.4	-0.3	-2.5	-18.8	-13.1	-8.7

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

		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
								Forecast	Forecast	Outlook	Outlook
GDP	bill. CZK	4 3 4 6	4 625	4 797	5 111	5 409	5 749	5 561	5 860	6 105	6 360
	growth in %	4.9	6.4	3.7	6.5	5.8	6.3	-3.3	5.4	4.2	4.2
Balance of taxes and subsidies	bill. CZK	384	434	454	493	504	535	461	521	532	555
	% of GDP	8.8	9.4	9.5	9.7	9.3	9.3	8.3	8.9	8.7	8.7
	growth in %	-4.3	13.0	4.8	8.6	2.2	6.1	-13.8	12.9	2.2	4.3
Taxes on production and imports	bill. CZK	521	570	595	635	656	698				
	growth in %	-1.2	9.6	4.4	6.6	3.3	6.5				
Subsidies on production	bill. CZK	137	137	141	142	152	164				
	growth in %	8.5	-0.1	3.2	0.4	7.2	7.7		•		•
Compensation of employees	bill. CZK	1 800	1 891	2 003	2 185	2 399	2 561	2 530	2 5 5 0	2 619	2 706
(domestic concept)	% of GDP	41.4	40.9	41.7	42.8	44.4	44.6	45.5	43.5	42.9	42.5
	growth in %	3.7	5.1	5.9	9.1	9.8	6.7	-1.2	0.8	2.7	3.3
Wages and salaries	bill. CZK	1 386	1 455	1538	1 680	1842	1964	1926	1941	1 994	2 059
	growth in %	3.9	5.0	5.7	9.2	9.6	6.6	-1.9	0.8	2.7	3.3
Social security contributions	bill. CZK	414	437	464	505	557	597	604	609	625	646
	growth in %	3.1	5.5	6.4	8.7	10.3	7.2	1.1	0.9	2.7	3.3
Gross operating surplus	bill. CZK	2 162	2 300	2 340	2 432	2 505	2 653	2 570	2 790	2 954	3 099
	% of GDP	49.8	49.7	48.8	47.6	46.3	46.1	46.2	47.6	48.4	48.7
	growth in %	7.8	6.4	1.7	4.0	3.0	5.9	-3.1	8.5	5.9	4.9
Consumption of capital	bill. CZK	923	957	988	1 022	1 074	1 141	1 159	1 2 1 3	1 263	1 306
	growth in %	3.7	3.8	3.2	3.5	5.0	6.3	1.6	4.6	4.2	3.4
Net operating surplus	bill. CZK	1 240	1 343	1 352	1 410	1 432	1512	1 411	1577	1 691	1 793
	growth in %	11.0	8.3	0.6	4.3	1.6	5.6	-6.6	11.7	7.2	6.0

Source: CZSO. Calculations and forecast of the MoF.

Table 3.1.6: GDP by Type of Income – quarterly

		2019				2020			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
								Forecast	Forecast
GDP	bill. CZK	1 328	1 441	1 470	1 5 1 0	1 354	1 336	1 407	1 465
	growth in %	6.4	6.1	7.0	5.6	1.9	-7.2	-4.3	-3.0
Balance of taxes and subsidies	bill. CZK	111	138	148	139	100	104	127	130
	growth in %	3.6	6.0	8.0	6.2	-9.7	-24.3	-14.3	-6.0
Compensation of employees	bill. CZK	612	640	632	677	638	626	614	652
(domestic concept)	growth in %	7.4	7.2	6.3	6.2	4.1	-2.3	-2.7	-3.7
Wages and salaries	bill. CZK	468	490	486	521	489	464	471	503
	growth in %	7.2	6.9	6.3	6.2	4.4	-5.3	-3.1	-3.4
Social security contributions	bill. CZK	144	151	146	156	149	162	143	149
	growth in %	8.2	7.9	6.5	6.3	3.3	7.5	-1.7	-4.4
Gross operating surplus	bill. CZK	605	663	691	694	616	606	666	683
	growth in %	6.0	5.2	7.5	4.9	1.8	-8.5	-3.6	-1.7

 ${\it Source: CZSO. \ Calculations \ and \ forecast \ of \ the \ MoF.}$

3.2 Prices

The year-on-year growth in **consumer prices** in July 2020 was 3.4% (*versus 3.1%*). With the exception of May, it has been above the upper bound of the tolerance band of the Czech National Bank's inflation target since November last year.

This year, there have been several adjustments to indirect taxes (a hike in the excise duty on alcohol and to-bacco, and a cut in the value added tax charged on a whole range of goods and services). However, their overall contribution to the year-on-year inflation in July was zero. Regulated prices contributed 0.6 pp, of which electricity prices made the biggest contribution (0.3 pp). Of the divisions of the consumer basket, the largest contribution to the year-on-year inflation was made by alcoholic beverages and tobacco (0.9 pp). The rise in the prices of alcohol and, especially, tobacco products was fuelled by the above-mentioned increase in excise duty. Food and non-alcoholic beverages (0.8 pp) and housing (0.7 pp) also made significant contributions.

While the impact of the coronavirus pandemic, or more specifically the measures to prevent the spread of the disease, on economic growth is plainly negative, the effect is ambiguous in the case of inflation. This is because there were restrictions both on aggregate supply, which has pro-inflationary effects, and aggregate demand, which has an anti-inflationary effect. For the time being, the supply-side effects seem to be prevailing, and the demand effects are likely to make themselves felt with a lag.

Within assumptions of the macroeconomic forecast determining price developments, there were no significant changes in the case of exchange rates. However, the projected higher crude oil price, in particular in 2021, means that the inflation forecast is being revised up.

We can expect heightened inflation in 2020. We expect administrative measures to contribute just 0.5 pp (versus 0.7 pp). The only change of any significance in regulated prices in the remainder of this year should be the October reduction in the price of natural gas (-0.1 pp). This year, inflation should therefore be driven primarily by market factors, where a pro-inflationary effect of robust growth of unit labour costs should be essential. The depreciation of the Czech koruna is also exerting pressure on inflation growth this year. Falling household consumption expenditure should act as a counterweight to those factors. The broad-based demand-pull inflation factor in the form of the output gap points to significant downward pressure on prices (see section 2.1). The decline in the price of oil is another major anti-inflationary factor

In H2 2020, the year-on-year inflation should hover above the Czech National Bank's inflation target. **In 2020**, the **inflation rate** should **average** 3.2% (*unchanged*).

In 2021, there should be evident disinflation. This is because there is likely to be a lack of substantial proinflationary factors. Renewed household consumption growth amid an enduring negative output gap should not have any significant inflationary effects. The fall in unit labour costs should slow down inflation considerably. The appreciation of the Czech koruna against both of the world's main currencies should also inhibit inflation somewhat.

The rise in regulated prices should continue to slow down in 2021. In relation to indirect taxes, we assume another – not particularly big – increase in cigarette excise duty. The contribution made by administrative measures to the average inflation rate could therefore shrink a little further to 0.4 pp (*versus 0.5 pp*).

In view of the above, we expect the **average inflation** rate in 2021 to slow down to 1.9% (*versus* 1.6%). We view the delayed or weakened anti-inflationary effect of a decrease in demand as an upside risk. Any further decline in the price of natural gas would be a downside risk (see section 1.2).

In Q2 2020, **GDP deflator** increased by 4.1% (*versus* 4.5%), with gross domestic expenditure deflator growing by 2.9% (*versus* 3.8%) and terms of trade improving by 2.0% (*versus* 1.1%). Developments in the gross domestic expenditure deflator reflected the growth of deflators of the general government and household consumption and of gross fixed capital formation.

In 2020, the GDP deflator should increase by 3.6% (*versus 3.7%*), and in 2021 its growth could slow to 1.4% (*unchanged*). The changes projected in the momentum of the GDP deflator stem from the vanishing positive contribution of terms of trade in 2021 and developments in the gross domestic expenditure deflator, where the household consumption and general government consumption deflator will contribute most to the slowdown in the next year (see graph 3.2.4).

The forecast developments in both export and import prices will be affected in particular by the sharp fall in oil prices in 2020 and by renewed appreciation of the exchange rate in 2021. As a result, terms of trade could improve by 1.0% (*versus 0.8%*) in 2020 and deteriorate by 0.1% (*versus growth of 0.1%*) in 2021.

Graph 3.2.1: Consumer Prices

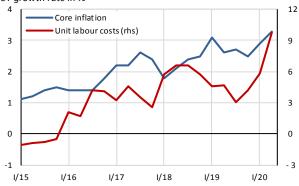
YoY growth rate in %



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

Graph 3.2.3: Core Inflation and Unit Labour Costs

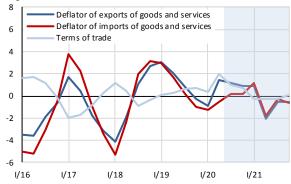
YoY growth rate in %



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.2.5: Terms of Trade

YoY growth rate in %



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.2.7: Prices of Flats Relative to Average Wage

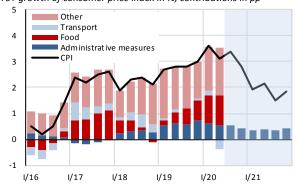
ratio of index of offering prices of flats to index of average wage, annual moving totals, Q4 2010=100



Source: CZSO. Calculations of the MoF.

Graph 3.2.2: Consumer Prices in Main Divisions

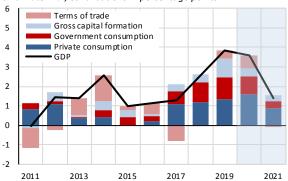
YoY growth of consumer price index in %, contributions in pp



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.2.4: Gross Domestic Product Deflator

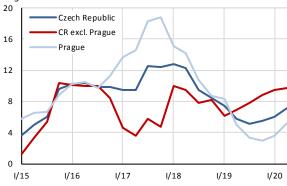
growth rate in %, contributions in percentage points



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.2.6: Offering Prices of Flats

YoY growth rate in %



Source: CZSO.

Table 3.2.1: Prices – yearly

rubic 3.2.1. Trices yearly		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
								Forecast	Forecast	Outlook	Outlook
Consumer Price In	dex										
Level	average 2015=100	99.7	100.0	100.7	103.1	105.3	108.3	111.9	113.9	116.2	118.6
Average inflation rate	%	0.4	0.3	0.7	2.5	2.1	2.8	3.2	1.9	2.0	2.0
Administrative measures 1)	percentage points	-0.4	0.2	0.2	-0.1	0.3	0.6	0.5	0.4	0.5	0.4
Market increase	percentage points	0.8	0.1	0.5	2.6	1.8	2.2	2.7	1.5	1.5	1.5
Level in December	average 2015=100	99.5	99.5	101.5	103.9	106.0	109.4	112.3	114.5	116.8	119.1
Annual inflation in December	%	0.1	0.1	2.0	2.4	2.0	3.2	2.7	2.0	2.0	2.0
Harmonized index of cons	umer prices										
Level	average 2015=100	99.8	100.0	100.7	103.1	105.1	107.8	111.5	113.5	115.7	117.9
Average inflation rate	growth in %	0.4	0.3	0.6	2.4	2.0	2.6	3.4	1.8	1.9	1.9
Deflators											
GDP	average 2015=100	99.0	100.0	101.1	102.5	105.1	109.2	113.0	114.6	116.9	119.2
	growth in %	2.6	1.0	1.1	1.3	2.6	3.9	3.6	1.4	1.9	2.0
Domestic final use	average 2015=100	99.2	100.0	100.6	102.9	105.8	109.6	113.0	114.8	116.9	119.1
	growth in %	1.3	0.8	0.6	2.3	2.8	3.6	3.0	1.6	1.8	1.9
Consumption of households	average 2015=100	100.0	100.0	100.4	102.7	105.3	108.3	111.9	114.0	116.3	118.6
	growth in %	8.0	0.0	0.4	2.3	2.5	2.8	3.3	1.9	2.0	2.0
Consumption of government	average 2015=100	97.7	100.0	101.4	105.0	110.6	117.0	121.8	123.7	125.8	127.8
	growth in %	1.8	2.3	1.4	3.5	5.4	5.7	4.1	1.5	1.7	1.6
Fixed capital formation	average 2015=100	98.7	100.0	100.5	102.0	103.6	107.4	109.0	110.5	112.3	114.4
	growth in %	1.8	1.3	0.5	1.5	1.6	3.7	1.5	1.4	1.6	1.8
Exports of goods and services	average 2015=100	101.3	100.0	97.6	96.9	96.3	97.7	98.2	97.7	97.7	98.1
	growth in %	4.0	-1.3	-2.4	-0.7	-0.6	1.4	0.6	-0.5	0.0	0.4
Imports of goods and services	average 2015=100	101.7	100.0	96.6	96.9	96.3	97.2	96.8	96.5	96.2	96.3
	growth in %	2.5	-1.7	-3.4	0.3	-0.6	0.9	-0.4	-0.4	-0.3	0.1
Terms of trade	average 2015=100	99.6	100.0	101.0	100.0	100.0	100.5	101.5	101.3	101.6	101.9
	growth in %	1.5	0.4	1.0	-1.0	0.0	0.5	1.0	-0.1	0.3	0.3

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

			201	9			20	20	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
								Forecast	Forecast
Consumer Price Index	average 2015=100	107.3	108.1	108.8	109.2	111.2	111.5	112.5	112.3
	growth in %	2.7	2.8	2.8	3.0	3.6	3.1	3.4	2.8
Of which the contribution of:									
Administrative measures 1)	percentage points	0.5	0.6	0.6	0.7	0.6	0.5	0.5	0.4
Market increase	percentage points	2.2	2.2	2.2	2.3	3.0	2.6	2.8	2.4
Harmonized index of consumer	average 2015=100	106.8	107.6	108.3	108.6	110.7	111.1	112.2	111.9
prices	growth in %	2.3	2.4	2.6	3.0	3.7	3.3	3.6	3.0
Deflators									
GDP	average 2015=100	107.5	108.6	109.2	111.2	111.4	113.0	113.4	114.4
	growth in %	3.8	3.9	3.9	3.9	3.6	4.1	3.8	2.8
Domestic final use	average 2015=100	107.6	109.0	110.0	111.6	111.6	112.2	113.6	114.4
	growth in %	3.7	3.8	3.6	3.5	3.7	2.9	3.3	2.5
Consumption of households	average 2015=100	106.9	107.9	108.8	109.4	111.0	111.4	112.6	112.5
	growth in %	3.1	2.7	2.7	2.8	3.8	3.2	3.5	2.9
Consumption of government	average 2015=100	112.3	115.4	117.4	121.9	118.0	119.5	123.5	125.6
	growth in %	5.6	6.2	5.8	5.4	5.1	3.5	5.1	3.0
Fixed capital formation	average 2015=100	105.6	107.1	107.8	108.6	108.4	109.1	108.8	109.7
	growth in %	3.4	4.1	3.7	3.4	2.7	1.8	0.9	1.0
Exports of goods and services	average 2015=100	97.8	97.9	97.6	97.3	96.9	99.4	98.8	98.2
	growth in %	3.0	2.0	0.8	-0.2	-0.9	1.5	1.2	0.9
Imports of goods and services	average 2015=100	97.0	97.5	97.6	96.7	95.8	97.0	97.8	96.8
	growth in %	3.0	1.7	0.2	-1.0	-1.3	-0.5	0.1	0.2
Terms of trade	average 2015=100	100.8	100.5	100.0	100.6	101.2	102.5	101.0	101.4
	growth in %	0.1	0.3	0.7	0.7	0.4	2.0	1.0	0.7

The contribution of change in regulated prices and indirect taxes. Source: CZSO, Eurostat. Calculations and forecast of the MoF.

3.3 Labour Market

So far in 2020, the labour market has not yet fully reflected the fallout from the deep economic recession triggered by the COVID-19 pandemic and the antiepidemic measures that have been adopted. Owing to government programmes, it has developed along much better lines than would be the norm for a deep economic downturn. The internationally comparable unemployment rate has so far grown only very slightly, as has the registered unemployment. All available statistics show that employment has fallen year on year. The number of vacancies has not fallen much and remains above 300,000 (though this begs the question how much these statistics truly reflect the situation in the labour market).

According to the Labour Force Survey, **employment** dipped by 1.6% YoY (*versus 2.3%*) in Q2 2020. The number of employees went down by 1.7% (*versus 1.3%*) and the number of entrepreneurs fell by 1.1% (*versus 7.3%*). While the number of entrepreneurs without employees (i.e. sole traders) reported surprising stagnation, the number of entrepreneurs with employees slumped by 8.6% (however, this is a highly volatile indicator). From the perspective of employees and sole traders, a worse situation has evidently been staved off by government measures (the Antivirus programme and compensation bonuses for sole traders).

From the sectoral perspective, the biggest contributors to the decline in the number of employees (business statistics, full-time equivalent) in absolute terms were manufacturing (almost 50,000 people), accommodation and food service activities and also administrative and support service activities (this sector includes agency staff, a large proportion of whom actually work in industry).

In 2020, according to formal figures on vacancies a scarcity of labour was still evident in virtually all sectors and in almost all regions (in August 2020, the number of vacancies surpassed the number of unemployed in 6 regions and 38 districts). The labour shortage was singled out as the main barrier to production growth by more than a third of construction companies, but only by 13% of industrial enterprises and 10 % of services companies in Q3 2020.

Despite the major deterioration in the economic situation, available data indicate that companies have not yet laid off foreign workers en masse. In July 2020, there were 615,000 such workers, 2,000 more than a year ago.

Government measures have inhibited the impact of the severe economic downturn on the labour market. The headline scheme is the Antivirus programme, under which employers are given contributions to cover wages. We expect government measures (either the Antivirus programme or the upcoming kurzarbeit scheme that is to follow on from it) to keep suppressing the delayed effects of the economic slump on the labour market.

Bearing these factors in mind, we forecast that employment will go down by 1.2% (*unchanged*) this year and by a further 0.7% (*versus 0.2% growth*) in 2021. Due to the government measures, the fallout from the recession should be felt on the labour with a greater lag

In Q2 2020, the unemployment rate (Labour Force Survey) was 2.4% (versus 3.6%). The government measures discussed above kept unemployment from growing at a faster pace. Even so, the effects of the COVID-19 pandemic will continue to dilute labour demand. As a result, the unemployment rate is expected to average 2.6% (versus 3.5%) this year and increase further to 3.4% (versus 3.5%) in 2021. The revised forecast for 2020 primarily reflects the better-than-expected developments in the second quarter, while also reflecting the extension to the Antivirus programme. There are plans to follow up this scheme with support for partial employment (kurzarbeit). The number of vacancies remains extremely high and there are also significant numbers of foreign employees, who will likely be laid off first if the economic situation gets any worse.

The **share of unemployed persons** (Ministry of Labour and Social Affairs) also expanded slightly. The highest growth was evident in regions that are more geared towards tourism (such as Prague and Karlovy Vary). In the second quarter, the share of unemployed persons was 3.5% (*versus 3.6%*). We expect it to average 3.6% (*versus 3.7%*) in 2020, followed by a further rise to 4.6% (*versus 4.1%*) in 2021.

We estimate that the **participation rate** (20–64 years) reached 81.3% (*versus 81.5%*) in Q2 2020 in connection with the drop in employment.

The main role in the further development of the participation rate will be played by demographic aspects in the form of the large share of age groups with a naturally high level of economic activity (especially those aged 45–54) and the rise in the retirement age. We forecast that the participation rate in 2020, on account of these factors, will come to 82.0% (*versus 82.3%*). Bearing in mind the forecast for employment, unemployment and the declining working-age population, the participation rate could grow further to 82.6% (*versus 83.1%*) in 2021. This development will reflect, to some degree, the poorer prospects faced by graduates on the labour market (i.e. the flow from inactivity to unemployment).

The wage bill fell by 5.3% (versus 1.3% growth) in Q2 2020, with the number of employees going down by 1.9%. The slump in earnings was driven in particular by falling wages in manufacturing (by 11.5%) and in trade, transportation, accommodation and food service (by 11.2%). Conversely, wages and salaries went up by 4.1% in public administration, defence, education, health care and social work.

The declining demand in Q2 2020 combined with restrictive measures resulted in the average number of hours worked contracting by 9%. We believe that the extension to the government's support schemes, along with the gradual economic recovery, could soften the blow to wages and salaries in the second half of this year. The forecast acceleration in the growth momentum of earnings in the general government sector will have the same sort of effect. We estimate that the wage bill could shrink by 3.1% (versus 2.1% growth) in Q3 2020.

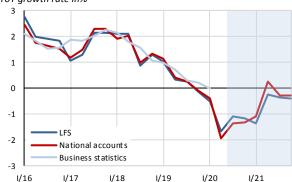
At the end of this year, we predict that the momentum of the decline in wages and salaries will pick up pace as the delayed reaction of the labour market – reflected in growing unemployment – comes to the fore. What is more, we believe that worsening financial condition of businesses will see the bonuses usually paid at the end of the year slashed in the year-on-year comparison. On balance, then, the wage bill could fall by 1.9% (*versus*

growth of 2.6 %) in 2020, before growing by 0.8% (unchanged) next year.

In Q2 2020, the **average wage** (business statistics, full-time equivalent) grew by 0.5% YoY (*versus 3.0%*). The median wage in the same period was down by 0.2%. Besides the adverse effects of the economic recession, the structure of redundancies is also reflected in the way the average wage is developing. Laying off of worse-paid and less-skilled workers, which in all likelihood is happening on a greater scale at the moment, is softening the drop in the average wage. The year-on-year increase in earnings in industries in which the general government sector plays a dominant role should support a rise in the average wage. We forecast that the average nominal wage could increase by 1.0% (*versus 3.4%*) in Q3 2020, rising by 1.7% (*versus 3.7%*) in 2020 as a whole. Next year, it could go up by 0.9% (*versus 0.6%*).

Graph 3.3.1: Employees in Different Statistics

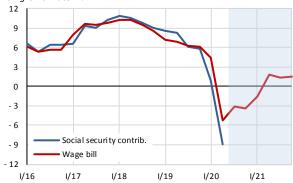
YoY growth rate in%



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.3.3: Collection of Social Security Contributions and Earnings

YoY growth rate in%



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

Graph 3.3.5: Nominal Monthly Wage

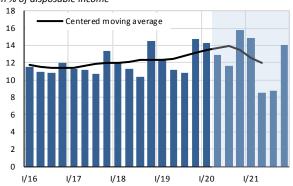
YoY growth rate in%



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.3.7: Gross Savings Rate of Households

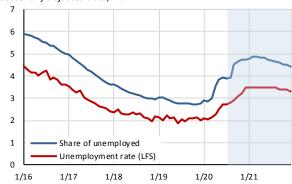
in % of disposable income



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.3.2: Indicators of Unemployment

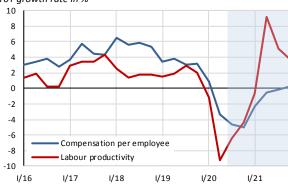
seasonally adjusted data, in%



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

Graph 3.3.4: Compensation per Employee and Real Productivity of Labour

YoY growth rate in %



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.3.6: Nominal Wage Bill

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



Source: CZSO. Calculations and forecast of the MoF.

Table 3.3.1: Labour Market - vearly

		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
								Forecast	Forecast	Outlook	Outlook
Labour Force Su	rvey										
Employment	av. in thous.persons	4 974	5 042	5 139	5 222	5 294	5 303	5 242	5 207	5 212	5 216
	growth in %	0.8	1.4	1.9	1.6	1.4	0.2	-1.2	-0.7	0.1	0.1
Employees	av. in thous.persons	4 079	4 168	4 257	4 3 2 7	4 3 9 6	4 412	4 3 6 4	4 338	4 3 4 5	4 3 4 9
	growth in %	0.6	2.2	2.1	1.7	1.6	0.4	-1.1	-0.6	0.1	0.1
Entrepreneurs and	av. in thous.persons	895	874	882	894	897	891	878	869	867	867
self-employed	growth in %	1.5	-2.4	1.0	1.4	0.4	-0.7	-1.4	-1.0	-0.2	-0.1
Unemployment	av. in thous.persons	324	268	211	156	122	109	141	185	175	172
Unemployment rate	average in %	6.1	5.1	4.0	2.9	2.2	2.0	2.6	3.4	3.3	3.2
Long-term unemployment 1)	av. in thous.persons	141	127	89	54	37	33				
Labour force	av. in thous.persons	5 298	5 3 1 0	5 350	5 377	5 415	5 412	5 383	5 393	5 387	5 388
	growth in %	-0.2	0.2	0.8	0.5	0.7	-0.1	-0.5	0.2	-0.1	0.0
Population aged 20–64	av. in thous.persons	6 6 1 0	6 5 6 6	6 5 1 0	6 456	6 414	6 383	6 345	6 299	6 264	6 238
	growth in %	-0.7	-0.7	-0.9	-0.8	-0.7	-0.5	-0.6	-0.7	-0.6	-0.4
Employment/Pop. 20-64	average in %	75.3	76.8	78.9	80.9	82.5	83.1	82.6	82.7	83.2	83.6
Employment rate 20–64 2)	average in %	73.6	74.8	76.7	78.5	79.9	80.3	79.8	79.9	80.3	80.5
Labour force/Pop. 20-64	average in %	80.1	80.9	82.2	83.3	84.4	84.8	84.8	85.6	86.0	86.4
Participation rate 20–64 3)	average in %	78.2	78.7	79.9	80.9	81.7	81.9	82.0	82.6	82.8	82.9
Participation rate 15–64 3)	average in %	73.5	74.0	75.0	75.9	76.6	76.7	76.8	77.2	77.1	77.0
Registered unempl	oyment										
Unemployment	av. in thous.persons	561	479	406	318	242	212	266	338	324	303
Share of unemployed 4)	average in %	7.7	6.6	5.6	4.3	3.2	2.8	3.6	4.6	4.4	4.1
Wages and sala	ries										
Average monthly wage 5)											
Nominal	CZK monthly	25 768	26 591	27 764	29 638	32 051	34 111	34 682	35 006	35 846	36 958
	growth in %	2.9	3.2	4.4	6.7	8.1	6.4	1.7	0.9	2.4	3.1
Real	CZK 2010	24 036	24 730	25 641	26 735	28 307	29 292	28 834	28 573	28 678	28 990
	growth in %	2.5	2.9	3.7	4.3	5.9	3.5	-1.6	-0.9	0.4	1.1
Median monthly wage	CZK monthly	21 786	22 414	23 692	25 398	27 620	29 416				
	growth in %	3.2	2.9	5.7	7.2	8.7	6.5				
Wage bill	growth in %	3.9	5.0	5.7	9.2	9.6	6.6	-1.9	0.8	2.7	3.3
Labour productivity	growth in %	1.7	3.9	0.9	3.6	1.8	2.1	-5.4	4.4	2.0	1.9
Unit labour costs 6)	growth in %	1.1	-0.8	3.0	3.5	6.2	4.1	5.7	-3.1	0.4	1.1
Compens. of employees / GDP	%	41.4	40.9	41.7	42.8	44.4	44.6	45.5	43.5	42.9	42.5

Source: CZSO, Ministry of Labour and Social Affairs. Calculations and forecast of the MoF.

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.

Table 3.3.2: Labour Market – quarterly

Table 3.3.2: Labour Warke			201	.9			202	20	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
							Estimate	Forecast	Forecast
Labour Force S	urvey								
Employment	av. in thous. persons	5 306	5 296	5 306	5 305	5 277	5 213	5 239	5 239
	YoY growth in %	0.9	0.1	0.1	-0.4	-0.5	-1.6	-1.3	-1.2
	QoQ growth in %	0.2	-0.4	-0.2	-0.1	0.0	-1.2	0.0	-0.1
Employees	av. in thous. persons	4 411	4 403	4 4 1 0	4 425	4 390	4 3 3 0	4 3 6 2	4 3 7 4
	growth in %	1.0	0.3	0.3	-0.1	-0.5	-1.7	-1.1	-1.2
Entrepreneurs and	av. in thous. persons	894	893	896	879	888	882	876	865
self-employed	growth in %	0.3	-0.8	-0.7	-1.8	-0.7	-1.1	-2.3	-1.6
Unemployment	av. in thous.persons	110	102	115	109	106	126	153	180
Unemployment rate	average in %	2.0	1.9	2.1	2.0	2.0	2.4	2.8	3.3
Long-term unemployment 1)	av. in thous.persons	36	33	31	31	29			
Labour force	av. in thous. persons	5 415	5 398	5 421	5 414	5 384	5 339	5 391	5 419
	growth in %	0.5	-0.2	-0.1	-0.4	-0.6	-1.1	-0.6	0.1
Population aged 20–64	av. in thous. persons	6 403	6 384	6 3 7 6	6 369	6 374	6 346	6 3 3 5	6 323
	growth in %	-0.4	-0.5	-0.5	-0.5	-0.4	-0.6	-0.6	-0.7
Employment/Pop. 20-64	average in %	82.9	83.0	83.2	83.3	82.8	82.1	82.7	82.9
	increase over a year	1.1	0.5	0.5	0.0	-0.1	-0.8	-0.5	-0.4
Employment rate 20–64 2)	average in %	80.1	80.2	80.4	80.5	80.1	79.4	79.8	80.1
	increase over a year	0.9	0.4	0.3	0.0	0.0	-0.8	-0.6	-0.5
Labour force/Pop. 20-64	average in %	84.6	84.6	85.0	85.0	84.5	84.1	85.1	85.7
	increase over a year	0.8	0.3	0.3	0.0	-0.1	-0.4	0.1	0.7
Participation rate 20–64 3)	average in %	81.8	81.7	82.1	82.2	81.7	81.3	82.1	82.7
	increase over a year	0.7	0.1	0.2	0.1	-0.1	-0.5	0.0	0.6
Participation rate 15-64 3)	average in %	76.6	76.5	76.9	76.9	76.4	75.9	76.8	77.3
	increase over a year	0.6	0.1	0.1	-0.1	-0.3	-0.6	-0.2	0.5
Registered unemp	loyment								
Unemployment	av. in thous. persons	239	207	203	201	226	256	279	303
Share of unemployed 4)	average in %	3.2	2.7	2.7	2.6	3.0	3.5	3.8	4.1
Wages and sal	aries								
Average monthly wage 5)	9000								
Nominal	CZK monthly	32 467	34 111	33 686	36 161	34 132	34 271	34 006	36 318
	growth in %	6.7	6.6	6.3	6.2	5.1	0.5	1.0	0.4
Real	CZK 2010	28 148	29 354	28 802	30 805	28 553	28 592	28 129	30 089
	growth in %	3.9	3.7	3.4	3.1	1.4	-2.6	-2.3	-2.3
Median monthly wage	CZK monthly	27 730	29 177	29 539	31 217	29 380	29 123		
	growth in %	7.4	6.6	6.0	6.1	6.0	-0.2		
Wage bill	growth in %	7.2	6.9	6.3	6.2	4.4	-5.3	-3.1	-3.4

¹⁾ Persons in unemployment for longer than 12 months.

Source: CZSO, Ministry of Labour and Social Affairs. Calculations and forecast of the MoF.

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.

Table 3.3.3: Income and Expenditures of Households – yearly

		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
										Forecast	Forecast
Current income											
Compensation of employees	bill.CZK	1724	1 751	1 825	1 923	2 038	2 223	2 430	2 578	2 542	2 562
	growth in %	2.8	1.5	4.2	5.4	6.0	9.1	9.3	6.1	-1.4	0.8
Gross operating surplus	bill.CZK	660	655	674	691	703	740	798	851	792	841
and mixed income	growth in %	-3.8	-0.7	3.0	2.4	1.7	5.2	7.9	6.7	-7.0	6.1
Property income received	bill.CZK	128	133	133	127	133	162	161	173	152	154
	growth in %	5.3	3.9	0.0	-4.3	4.1	21.9	-0.3	7.3	-11.9	1.1
Social benefits not-in-kind	bill.CZK	587	583	596	613	630	650	685	734	836	882
	growth in %	2.8	-0.8	2.2	2.8	2.8	3.2	5.4	7.2	13.9	5.4
Other current transfers received	bill.CZK	151	146	160	181	217	244	281	305	315	329
	growth in %	8.6	-3.1	9.2	13.3	19.4	12.8	15.1	8.5	3.4	4.3
Current expenditure											
Property income paid	bill.CZK	15	21	16	14	14	13	19	20	18	18
	growth in %	-27.2	40.5	-24.3	-10.7	0.2	-7.4	43.2	1.9	-7.7	1.3
Curr. taxes on income and property	bill.CZK	179	185	197	205	227	264	309	335	336	343
	growth in %	2.9	3.5	6.5	3.9	10.8	16.3	16.9	8.4	0.5	2.0
Social contributions	bill.CZK	654	670	696	732	775	836	911	974	963	1 025
	growth in %	2.3	2.4	3.8	5.3	5.8	7.9	9.0	7.0	-1.2	6.5
Other current transfers paid	bill.CZK	154	140	150	169	207	238	278	304	314	326
	growth in %	6.2	-9.3	7.3	12.5	22.4	15.3	16.5	9.5	3.2	3.8
Gross disposable income	bill.CZK	2 248	2 251	2 328	2 414	2 497	2 666	2 838	3 009	3 006	3 054
	growth in %	1.4	0.2	3.4	3.7	3.4	6.8	6.4	6.0	-0.1	1.6
Final consumption	bill.CZK	1 995	2 027	2 072	2 152	2 241	2 383	2 524	2 670	2 623	2 730
	growth in %	1.0	1.6	2.2	3.9	4.1	6.4	5.9	5.8	-1.8	4.1
Change in share in pension funds	bill.CZK	15	35	35	33	31	32	33	38	32	36
Gross savings	bill.CZK	267	260	292	295	286	315	347	376	416	360
Capital transfers											
(income (-) / expenditure (+))	bill.CZK	-21	-13	-32	-12	-14	-11	-12	-13	-20	-24
Gross capital formation	bill.CZK	200	203	214	220	237	216	261	294	286	291
	growth in %	-9.2	1.7	5.2	2.9	7.9	-9.2	21.2	12.7	-3.0	1.9
Change in financial assets and liab.	bill.CZK	87	68	108	85	61	110	98	95	151	93
Real disposable income	growth in %	-0.7	-0.5	2.6	3.7	3.0	4.4	3.8	3.1	-3.3	-0.3
Gross savings rate	%	11.8	11.4	12.4	12.1	11.3	11.7	12.1	12.4	13.7	11.6

Source: CZSO. Calculations of the MoF.

3.4 External Relations

The **current account balance to GDP ratio**¹ reported a surplus of 0.3% (*versus a deficit of 0.4%*) in Q1 2020, meaning that it had improved by 0.6% of GDP quarter on quarter. All items except the balance of goods contributed to this result, most significantly the reduction in the primary and secondary income deficit.

Export markets shrank by 14.1% YoY (*versus 20.7%*) in Q2 2020, thus by far exceeding expectations. The main reason for this was the lower-than-expected quarter-on-quarter decline in the imports of Germany and Austria. The lower decline in import intensity (by 12.3 pp) was one of the reasons why export markets differed so much from the forecast. However, developments in the GDP of the Czech Republic's main trading partners partially offset this error (the forecast was worse by 4.7 pp). Taking into account the figures for the second quarter and the improved imports forecast among our main trading partners in the second half of the year, we expect export markets to contract by 9.4% (*versus 14.7%*) this year. In 2021, export markets should increase by 6.1% (*versus 5.4%*) as other countries recover.

Export performance decreased by 11.5% (*versus 3.0%*) in Q2 2020. The severe year-on-year deterioration in performance was affected by production constraints and labour shortages due to the quarantine measures imposed by firms and the state. Factoring in the rise in unit labour costs and restrictions in industry, we expect export performance to shrink by 2.7% (*versus 1.4%*) in 2020 as a whole. We then project a modest improvement in performance by 0.4% (*versus 0.2%*) in 2021. It will be hobbled by the forecast stronger koruna (see section 1.4) and, evidently, also by a hike in the costs incurred by car manufacturers as financial penalties start being imposed on them for breaching the tougher new emission standards.

In external trade (according to the balance of payments methodology) there was a slight drop in the **balance of goods** surplus in Q1 2020 owing to a steep decline in export momentum, prompted by the coronavirus pandemic. Current figures place this surplus at 4.0% of GDP (*versus 4.1% of GDP*). The worsening balance in machinery and transport equipment, a group that accounts for more than half of all exports of goods, contributed to this result. In this respect, there was a decline in exports of cars and machinery. By contrast, the decline in the price of oil helped to cushion the year-on-year deterioration in the balance.

Prices of mineral fuels remain an important factor affecting **terms of trade** in goods. In Q1 2020, the deficit of the balance's fuel part was 2.3% of GDP (*versus 2.4% of GDP*). Considering the projected oil price (see section

1.2), we forecast a deficit equivalent to 1.7% of GDP both this year and next (*unchanged in both cases*).

We forecast that the surplus on the balance of goods relative to GDP will come to 3.3% (*versus 4.2%*) this year. The export side mainly reflects a deterioration in developments abroad. Lower decrease in import-intensive investment demand will also contribute to the decline in the trade balance. On the other hand, a modest improvement in terms of trade should offset these adverse effects to some degree. In 2021, in connection with the recovery expected abroad, we forecast that the surplus will grow to 3.6% of GDP (*versus 4.5% of GDP*).

In Q1 2020, the surplus on the **balance of services** came to 1.9% of GDP (*versus 1.8% of GDP*). Compared to the previous quarter, the improvement in the positive balance stemmed from higher revenues from telecommunications services and better balance of transport services. Taking into account the restrictions on economic activities (e.g. tourism and air traffic), we expect the surplus to decline to 1.7% of GDP (*versus 1.4% of GDP*) this year; as effects of the coronavirus pandemic subside, the surplus could increase to 1.8% of GDP (*versus 1.6% of GDP*) in 2021.

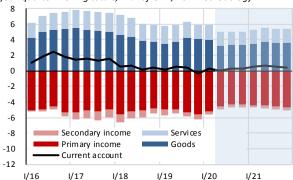
The primary income balance improved by 0.5% of GDP in Q1 2020, reporting a deficit of 5.2% of GDP (versus 5.5% of GDP). The reduction in the deficit reflects the lower outflow of direct investment income (in the form of dividends and reinvested earnings) due to a drop in the profitability of firms owned by non-residents. Primary income exhibits high volatility over time; this is associated with the cyclical development of the economy. Bearing in mind the predicted GDP and gross operating surplus, we expect the momentum of foreign-controlled companies' profits to fall considerably this year. In this respect, the primary income deficit could amount to 4.3% of GDP (versus 4.7% of GDP). We do not expect the overall primary income balance to be affected by the CNB's recommendation for financial institutions in the Czech Republic to stall the payment of dividends for the sake of prudence. Profits retained from the "dividend payout" item will be transferred to reinvested earnings. Consequently, this will not change the resultant balance of investment income. For 2021, we forecast a deficit of 4.7% of GDP (versus 5.1% of GDP) as economic activity is revived and the profitability of foreign-controlled firms recovers.

In this context, we estimate that the **current account of the balance of payments** will report a modest surplus, which could be 0.3% of GDP (*versus 0.2% of GDP*) this year and 0.4% of GDP (*versus 0.3% of GDP*) in 2021.

 $^{^{\}rm 1}$ All $\it quarterly$ figures relative to GDP are reported as annual rolling totals.

Graph 3.4.1: Current Account

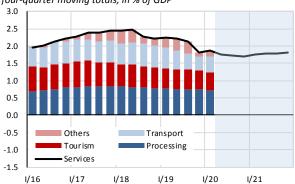
four-quarter moving totals, in % of GDP, BoP methodology



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

Graph 3.4.3: Balance of Services

four-quarter moving totals, in % of GDP



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

Graph 3.4.5: GDP and Goods Imports of Partner Countries

YoY growth rate in %, seasonally adjusted



Source: Eurostat. Calculations and forecast of the MoF.

Graph 3.4.7: Deflator of Exports of Goods

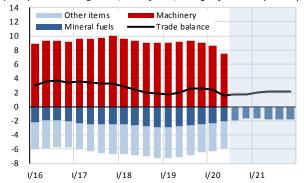
YoY growth in %, contributions in percentage points



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

Graph 3.4.2: Balance of Trade

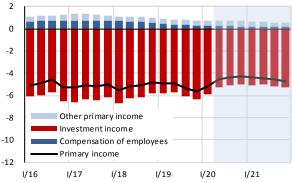
four-quarter moving totals, in % of GDP, change of ownership concept



Source: CZSO. Calculations and forecast of the MoF.

Graph 3.4.4: Balance of Primary Income

four-quarter moving totals, in % of GDP



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

Graph 3.4.6: Real Exports of Goods

YoY growth in %, contributions in pp, seasonally adjusted



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

Table 3.4.1: Balance of Payments – yearly *international investment position and gross external debt – end of period*

		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
										Forecast	Forecast
Goods and services	bill.CZK	201	237	276	274	365	384	321	341	278	319
	% GDP	4.9	5.7	6.3	5.9	7.6	7.5	5.9	5.9	5.0	5.4
Goods	bill.CZK	124	167	220	188	259	259	201	236	184	212
	% GDP	3.0	4.0	5.1	4.1	5.4	5.1	3.7	4.1	3.3	3.6
Services	bill.CZK	78	70	56	87	107	125	120	104	94	106
	% GDP	1.9	1.7	1.3	1.9	2.2	2.4	2.2	1.8	1.7	1.8
Primary income	bill.CZK	-238	-249	-261	-255	-253	-255	-260	-324	-241	-277
	% GDP	-5.8	-6.0	-6.0	-5.5	-5.3	-5.0	-4.8	-5.6	-4.3	-4.7
Secondary income	bill.CZK	-27	-10	-7	1	-27	-50	-37	-33	-21	-19
	% GDP	-0.7	-0.2	-0.2	0.0	-0.6	-1.0	-0.7	-0.6	-0.4	-0.3
Current account	bill.CZK	-63	-22	8	21	85	79	24	-17	17	23
	% GDP	-1.5	-0.5	0.2	0.4	1.8	1.5	0.4	-0.3	0.3	0.4
Capital account	bill.CZK	53	82	32	99	52	45	13	30	62	72
	% GDP	1.3	2.0	0.7	2.1	1.1	0.9	0.2	0.5	1.1	1.2
Net lending/borrowing	bill.CZK	-10	61	40	120	137	124	37	13	78	95
	% GDP	-0.3	1.5	0.9	2.6	2.9	2.4	0.7	0.2	1.4	1.6
Financial account	bill.CZK	12	68	64	173	122	116	61	45	•	
Direct investments	bill.CZK	-121	7	-80	50	-187	-46	-51	-61		
Portfolio investments	bill.CZK	-55	-93	90	-164	-170	-268	30	-118		
Financial derivatives	bill.CZK	-9	-5	-6	-5	11	-14	-15	1		
Other investments	bill.CZK	116	-30	-13	-59	-97	-802	47	112		
Reserve assets	bill.CZK	80	188	73	351	564	1 246	50	110		
International investment position	bill.CZK	-1 864	-1 695	-1 577	-1 523	-1 304	-1 273	-1 320	-1 167	•	•
	% GDP	-45.6	-40.9	-36.3	-32.9	-27.2	-24.9	-24.4	-20.3		
Gross external debt	bill.CZK	2 434	2 733	2 947	3 119	3 499	4 370	4 413	4 383		
	% GDP	59.5	66.0	67.8	67.4	72.9	85.5	81.6	76.2		

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

Table 3.4.2: Balance of Payments – quarterly

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

-			201	9			202	20	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
							Estimate	Forecast	Forecast
Goods and services	bill.CZK	317	333	361	341	340	284	281	278
	% GDP	5.8	6.0	6.4	5.9	5.9	5.0	5.0	5.0
Goods	bill.CZK	194	209	239	236	232	184	185	184
	% GDP	3.5	3.8	4.2	4.1	4.0	3.2	3.3	3.3
Services	bill.CZK	123	124	121	104	108	100	96	94
	% GDP	2.2	2.2	2.1	1.8	1.9	1.8	1.7	1.7
Primary income	bill.CZK	-270	-274	-303	-324	-300	-258	-245	-241
	% GDP	-4.9	-4.9	-5.4	-5.6	-5.2	-4.6	-4.4	-4.3
Secondary income	bill.CZK	-42	-30	-31	-33	-24	-23	-22	-21
	% GDP	-0.8	-0.5	-0.5	-0.6	-0.4	-0.4	-0.4	-0.4
Current account	bill.CZK	6	30	26	-17	17	3	15	17
	% GDP	0.1	0.5	0.5	-0.3	0.3	0.1	0.3	0.3
Capital account	bill.CZK	9	22	24	30	53	56	59	62
	% GDP	0.2	0.4	0.4	0.5	0.9	1.0	1.0	1.1
Net lending/borrowing	bill.CZK	15	52	50	13	70	59	73	78
	% GDP	0.3	0.9	0.9	0.2	1.2	1.0	1.3	1.4
Financial account	bill.CZK	29	57	51	45	114			
Direct investments	bill.CZK	-73	-86	-85	-61	-57			
Portfolio investments	bill.CZK	-68	-188	-181	-118	-9		•	
Financial derivatives	bill.CZK	-18	-9	-15	1	23		•	
Other investments	bill.CZK	134	274	239	112	36			
Reserve assets	bill.CZK	54	66	93	110	121		•	
International investment position	stock in bill.CZK	-1 152	-1 175	-1 101	-1 167	-788	•	•	•
	% GDP	-21.0	-21.1	-19.4	-20.3	-13.6			
Gross external debt	stock in bill.CZK	4 392	4 359	4 447	4 383	4 495			
	% GDP	80.0	78.2	78.4	76.2	77.9			

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

Table 3.4.3: Decomposition of Exports of Goods (National Accounts Methodology) – yearly

seasonally adjusted

seasonany adjusted		2012	2012	2014	2015	2016	2017	2010	2010	2020	2021
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
										Forecast	Forecast
GDP 1)	average of 2005=100	104.6	105.3	107.7	110.0	112.3	115.7	118.2	119.9	111	117
	growth in %	1.0	0.7	2.2	2.1	2.1	3.0	2.2	1.4	-7.1	5.1
Import intensity 2)	average of 2005=100	102.7	104.4	106.9	110.5	113.1	115.8	118.4	119.2	116	117
	growth in %	-1.0	1.6	2.4	3.4	2.4	2.4	2.2	0.6	-2.5	0.9
Export markets 3)	average of 2005=100	107.4	109.9	115.1	121.5	127.1	134.0	140.0	142.9	129	137
	growth in %	0.0	2.4	4.7	5.6	4.6	5.5	4.5	2.1	-9.4	6.1
Export performance	average of 2005=100	107.1	105.3	109.9	109.7	109.3	111.5	110.5	109.5	107	107
	growth in %	4.3	-1.6	4.4	-0.2	-0.4	2.0	-0.9	-0.9	-2.7	0.4
Real exports	average of 2005=100	114.9	115.8	126.5	133.4	138.9	149.5	154.7	156.5	138	147
	growth in %	4.4	0.7	9.3	5.4	4.2	7.6	3.5	1.1	-11.9	6.6
1 / NEER	average of 2005=100	100.5	103.0	108.6	109.9	106.9	103.9	100.2	100.5	102	99
	growth in %	3.6	2.4	5.5	1.2	-2.8	-2.8	-3.6	0.4	1.4	-2.4
Prices on foreign markets	average of 2005=100	103.5	102.5	100.8	98.2	98.2	100.3	103.2	104.0	103	105
	growth in %	-0.4	-0.9	-1.7	-2.6	-0.1	2.1	2.9	0.7	-0.8	1.5
Exports deflator	average of 2005=100	104.0	105.6	109.5	108.0	104.9	104.1	103.4	104.5	105	104
	growth in %	3.2	1.5	3.7	-1.4	-2.8	-0.7	-0.7	1.1	0.5	-0.9
Nominal exports	average of 2005=100	119.6	122.2	138.5	144.0	145.7	155.6	159.9	163.5	145	153
	growth in %	7.7	2.2	13.4	3.9	1.2	6.8	2.8	2.2	-11.5	5.7

¹⁾ Weighted average of GDP of the six most important partners – Germany, Slovakia, Austria, the United Kingdom, Poland and France.

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

Table 3.4.4: Decomposition of Exports of Goods (National Accounts Methodology) - quarterly seasonally adjusted

			201	9			20:	20	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
						•••••		Forecast	Forecast
GDP 1)	average of 2010=100	119.8	119.6	120.1	120.2	117.0	104.6	110	114
	growth in %	2.0	1.3	1.4	1.1	-2.4	-12.5	-8.3	-5.4
Import intensity 2)	average of 2010=100	119.9	119.8	118.9	118.0	115.3	117.7	116	116
	growth in %	2.3	1.7	0.1	-1.4	-3.8	-1.8	-2.2	-1.9
Export markets 3)	average of 2010=100	143.6	143.3	142.8	141.8	134.9	123.1	128	132
	growth in %	4.4	3.0	1.5	-0.4	-6.1	-14.1	-10.3	-7.2
Export performance	average of 2010=100	108.3	110.4	110.3	109.1	112.3	97.6	108	107
	growth in %	-3.3	-0.3	1.0	-1.2	3.7	-11.5	-1.8	-1.8
Real exports	average of 2010=100	155.5	158.2	157.4	154.8	151.5	120.2	139	141
	growth in %	0.9	2.7	2.5	-1.6	-2.6	-24.0	-11.9	-8.8
1 / NEER	average of 2010=100	100.6	100.6	100.6	100.2	100.2	105.0	101	101
	growth in %	1.1	0.4	0.5	-0.6	-0.4	4.4	0.8	0.6
Prices on foreign markets	average of 2010=100	104.3	104.1	103.6	103.6	103.2	101.3	104	104
	growth in %	1.8	1.4	-0.2	-0.1	-1.0	-2.7	0.4	0.3
Exports deflator	average of 2010=100	105.0	104.8	104.3	103.9	103.5	106.4	105	105
	growth in %	3.0	1.8	0.3	-0.8	-1.4	1.5	1.2	0.9
Nominal exports	average of 2010=100	163.2	165.8	164.1	160.7	156.7	127.9	146	148
	growth in %	3.9	4.6	2.8	-2.3	-4.0	-22.9	-10.9	-8.1

¹⁾ Weighted average of GDP of the six most important partners – Germany, Slovakia, Austria, the United Kingdom, Poland and France.

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

Index of ratio of real imports of goods to real GDP.
 Weighted average of imports of goods of main partners.

²⁾ Index of ratio of real imports of goods to real GDP.

Weighted average of imports of goods of main partners.

4 Survey of Other Institutions' Forecasts

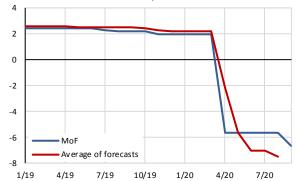
The averaged **forecasts of monitored institutions** indicate that the consequences of measures to mitigate the spread of the coronavirus epidemic could trigger a 7.5% slump in real GDP this year. Due to the base effect, it should be possible to achieve 5.1% growth in 2021, though the economy would still be far below the 2019 level of economic output. The average inflation rate should ease from 2.9% in 2020 to 2.0% next year. The momentum of the average wage should settle at around 3.5% in both years. In both 2020 and 2021, the current

account of the balance of payments should continue to post a small deficit.

The forecasts of the Ministry of Finance for GDP, inflation and the current account differ only slightly from the averaged estimates of the monitored institutions and fall within the variation range for those estimates. The only exception is the average wage. Here the Ministry of Finance, drawing on data for Q2 2020, is much more pessimistic.

Graph 4.1: Forecasts for Real GDP Growth in 2020

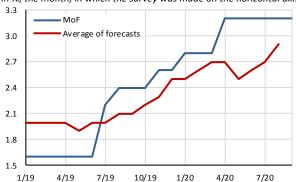
in %; the month, in which the survey was made on the horizontal axis



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

Graph 4.2: Forecasts for Average Inflation Rate in 2020

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

			August 2020		September 2020
		min.	max.	average	MoF forecast
Gross domestic product (2020)	growth in %, const.pr.	-10.3	-5.0	-7.5	-6.6
Gross domestic product (2021)	growth in %, const.pr.	3.5	7.9	5.1	3.9
Average inflation rate (2020)	%	2.1	3.4	2.9	3.2
Average inflation rate (2021)	%	1.7	2.4	2.0	1.9
Average monthly wage (2020)	growth in %	3.0	4.7	3.6	1.7
Average monthly wage (2021)	growth in %	2.0	4.8	3.5	0.9
Current account / GDP (2020)	%	-2.5	1.5	-1.1	0.2
Current account / GDP (2021)	%	-1.3	2.2	-0.1	0.3

Note: The survey is based on publicly available forecasts of 13 institutions, of which 8 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 of the MoF.

5 Monetary Policy of the Fed, ECB and CNB during the Pandemic

During the COVID-19 pandemic, central banks all over the world used both traditional and unconventional instruments of monetary policy. Graph 5.1, which tracks primary interest rates of the Fed, the ECB and the CNB, shows that the ECB had no room to cut rates. Instead, it had to rely on unconventional monetary policy instruments

The US **Fed**, which sets a target band for the primary Federal Funds Rate, gradually decreased this rate from 2.25–2.50% in August 2019 to 1.50–1.75% in October 2019. Responding to the onset of the pandemic and the global constraints on economic activity, the Fed made a drastic cut to 0.00–0.25% in March 2020.

In the second half of March 2020, it progressively introduced economic support that was not limited in volume or time. This included quantitative easing (purchases of U.S. Treasuries and mortgage-backed securities), the purchase of corporate bonds on the primary and secondary market, long-term loans to credit institutions secured with selected credit, and the purchase of the loans originated by SMEs (subject to certain conditions).

The actions taken by the Fed aim not only at ensuring the smooth running of financial markets and monetary policy transmission mechanisms, but also at supporting the economy by financing all types of loans. Between the end of 2019 and the beginning of September 2020, the Fed increased the volume of its assets purchased through quantitative easing by USD 2,587.0 billion, i.e. by 69.0%. Of this, the US government bonds accounted for USD 2,057.8 billion, while mortgage-backed securities for USD 529.3 billion.

The US banking system has been relatively stable and robust during the pandemic. A stress test conducted on data from the beginning of 2020 and on a hypothetical decline in GDP (by a cumulative 8.5% in the worst-case scenario) concluded that large banks were able to comply with capital requirements and that they would be able to withstand the adverse economic developments. At the same time as it published the stress test, the Fed announced that, in Q3 2020, it would not be approving any repurchasing of shares by banks and that it had capped dividend payouts at the level from Q2 2020, noting that any dividends would be dependent on profits. The Fed also requires all large banks to review their long-term capital plans.

At the end of August, the Fed updated its Statement on Longer-Run Goals and Monetary Policy Strategy. Among other things, the long-term inflation target was adjusted to an average inflation of 2% over time (without specifying the period). Therefore, if inflation is below 2% for some time, the Fed will target inflation slightly higher in

future periods. The Fed also specified that the goal of full employment would be achieved by evaluating deviations from the highest employment values. Amid longterm low interest rates, monetary policy rates are increasingly constrained by effective lower bound in the US and worldwide.

In contrast, the **ECB**'s key interest rate has been 0.00% since March 2016 (it was 0.05% as of September 2014). In order to promote liquidity in the euro area's financial system and maintain the smooth functioning of money markets, the ECB has gradually introduced a number of refinancing operations.

From March to June 2020, additional longer-term refinancing operations (LTROs) took place, followed by targeted longer-term refinancing operations (TLTRO III). Banks can obtain financing for loans to SMEs at an interest rate that is the average of the applied primary rate reduced by 0.25 pp (and reduced by 0.50 pp since April). This should result in better financing conditions for SMEs. TLTRO III is expected to last until June 2021.

Since May 2020, a series of non-targeted pandemic emergency longer-term refinancing operations (PELTRO) has been carried out at a rate 0.25 pp lower than the average interest rate of the main refinancing operations. In total, there will be seven additional refinancing operations gradually maturing between June and September 2021.

Even before the start of the pandemic, the ECB made net monthly asset purchases of EUR 20 billion and reinvested in full the principals of maturing securities purchased under the Asset Purchase Programme (APP). Graph 5.3 compares the volume of assets held before the start of the pandemic with the last available values.

In March the ECB Governing Council decided to further increase net asset purchases in total by EUR 120 billion up to the end of 2020 (over and above the previously approved EUR 20 billion per month). According to the Governing Council, net asset purchases will continue for as long as is necessary to support the accommodative impact of monetary policy rates, and will end shortly before base interest rates start to rise.

In addition, the EUR 750 billion Pandemic Emergency Purchase Programme (PEPP) was launched. It was soon increased to EUR 1,350 billion. Assets eligible for purchase are the same as assets suitable for purchase under the APP programme. Purchases under the PEPP will continue until the Governing Council decides that the coronavirus crisis phase is over, but in any event until June 2021. Principal due on securities purchased under the PEPP will be reinvested at least until the end of 2022.

Securities purchased by the ECB under the above-mentioned programmes may be divided into the following groups: the public sector, the corporate sector and asset backed securities. A comparison of assets held for monetary policy purposes at the end of 2019 and in September 2020 reveals an increase by EUR 626.1 billion, i.e. 22.9%. Public sector securities have contributed the most to this growth, rising by EUR 515.5 billion. At the end of August, the ECB held public sector debt securities totalling EUR 2,737.6 billion.

The ECB has been assessing its monetary policy strategy since January 2020. The publication of the results has been postponed from the end of 2020 to the middle of 2021.

In the TARGET2 payment system, which is used by euro area central and commercial banks to process euro payments, imbalances have started to increase again since the beginning of 2020. This reflects distrust in the banking sector, stress on financial markets and macroeconomic imbalances between euro area countries. Distrust in the banking sector has meant that euro area banks have almost stopped providing liquidity to each other, which is why net claims of mainly German banks vis-à-vis the ECB and net liabilities of mainly Italian and Spanish banks have accumulated.

In the Czech Republic, the **CNB** raised the two-week reporate by 0.25 pp to 2.25% in February after considering the inflation outlook. Shortly after the introduction of measures to stop the spread of COVID-19 in March, the CNB began to slash the primary rate – by 2.0 pp to 0.25% within two months.

The CNB did not engage in direct asset purchases in response to the economic downturn. According to its current statements, there are no reasons in the near future as well. However, an amendment to the CNB Act approved in March 2020 allows the CNB to trade on the financial market without restrictions on instruments and counterparties until the end of 2021.

Building on the possibility of deferring loan repayments, which accounted for 14.9% of the total volume of loans to households and non-financial corporations as at 21 August, the CNB allowed these loans not to be classi-

fied as non-performing. In addition, the CNB reduced the countercyclical capital buffer from 1% to 0.5%, recommended that banks not pay dividends, and requested the submission of updated capital plans.

The total amount of assets purchased for monetary policy purposes and held by the ECB in August 2020 corresponded to 28.2% of the euro area's 2019 GDP. At the end of August 2020, assets purchased by the Fed under quantitative easing accounted for 29.6% of US 2019 GDP. Monetary expansion is likely fuelling the strong price inflation of certain types of assets, such as equities. Although the CNB has not engaged in quantitative easing, its balance sheet increased significantly during the exchange-rate commitment between 2013 and 2017. Foreign-currency assets held by the CNB correspond to 60.3% of the Czech 2019 GDP, most of which comes from foreign-exchange interventions to weaken the koruna.

Graph 5.5 shows selected stock indices in the period since the beginning of the 2008 financial crisis. During the coronavirus pandemic, there has been a significant and unprecedented decline in all of the stock indices depicted. This began in February 2020 and reached a trough in April, when the S&P 500 had weakened by 15.6% compared to January, the DAX by 22.4% and the PX by 22.6%. In the following months, despite the negative developments reported for economic fundamentals, both the US S&P 500 and the German DAX quickly returned to their values before the coronavirus pandemic, with the S&P 500 actually surpassing its previous highs. The Prague Stock Exchange's PX index also strengthened, but did not come close to the levels at the beginning of the year.

The use of unconventional monetary policy instruments in particular raises a number of questions that are extremely difficult, if not impossible, to answer in the current circumstances. First and foremost, the point is in what way and how quickly (if at all) to return to normal, not only in terms of the level of monetary-policy interest rates, but also in terms of the size of central banks' balance sheets. More generally, a question is starting to be discussed whether monetary-policy objectives and instruments used by central banks to achieve them should be reassessed amid secular decline in real interest rates.

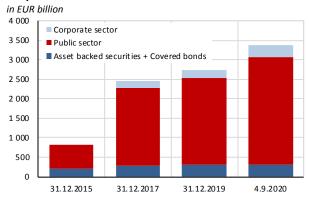
Graph 5.1: Main Interest Rates of the Fed, ECB and CNB



Note: End-of-month values. Since December 2008, the Fed sets an interest rate band. The chart shows its lower bound.

Source: CNB, ECB, Fed.

Graph 5.3: Assets Held by the ECB for Monetary Policy Purposes



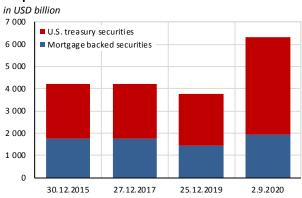
Source: ECB. Calculations of the MoF.

Graph 5.5: Stock Indices



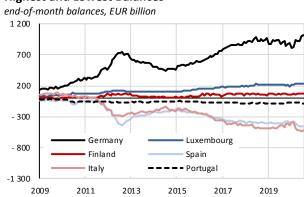
Source: Prague Stock Exchange, investing.com. Calculations of the MoF.

Graph 5.2: Assets Held by the Fed for Monetary Policy Purposes



Source: Federal Reserve Economic Data.

Graph 5.4: TARGET2 Balances of Three Countries with Highest and Lowest Balances



Source: ECB.

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