Ministry of Finance
of the Czech Republic

Macroeconomic Forecast

of the Czech Republic

January 2019

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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 2020) and for certain indicators an outlook for another 2 years (i.e. until 2022). 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

BoP	balance of payments
const.pr.	constant prices
CNB	Czech National Bank
CPI	consumer price index
CR	Czech Republic
curr.pr.	current prices
CZSO	Czech Statistical Office
EA19	euro zone consisting of 19 countries
EC	European Commission
ECB	European Central Bank
ESI	Economic Sentiment Indicator
EU28	European Union consisting of 28 countries
Fed	Federal Reserve System
GDP	gross domestic product
GVA	gross value added
IMF	International Monetary Fund
LFS	Labour Force Survey
MoF	Ministry of Finance
pp	percentage points
rev.	revisions
TFP	total factor productivity
VAT	value added tax

Basic Terms

Prelim. (preliminary data)	data from quarterly national accounts, released by the CZSO, as yet unverified by annual national accounts
Estimate	data for past period that were unavailable as of the cut-off date
Forecast	forecast of future numbers, using expert and mathematical methods
Outlook	projection of more distant future numbers, using mainly extrapolation methods

Symbols Used in Tables

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

Cut-off Date for Data Sources

The forecast was made on the basis of data known as of **15 January 2019**.

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 (November 2018) are indicated by italics. Data relating to the years 2021 and 2022 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 cyclical recovery in advanced economies is past its peak. While their growth was, according to the IMF data, 2.4% in 2018, which was the highest since 2010, it should slow down to 2.1% in 2019. The world trade growth is slowing down even more considerably, which is partly due to escalating tensions in global trade relations. Increasing political risks affect economic sentiment and may further undermine economic growth and its sustainability in the medium term. That is also confirmed by declining confidence indicators.

A specific problem is the issue of the United Kingdom's withdrawal from the European Union. It is still unclear and unpredictable under what conditions, when and if it will happen at all. Although the baseline scenario of the macroeconomic forecast is based on the assumption that trade relations between the European Union and the United Kingdom will not be cut, the forecast also includes a box showing the impacts of a "hard Brexit" on the Czech economy.

The growth of real gross domestic product in the Czech Republic remained **stable** (adjusted for seasonal and calendar effects) at 0.6% QoQ and 2.4% YoY in Q3 2018.

In the year-on-year perspective, the most dynamic component of domestic use was **investment in fixed capital**, which grew by 9.0%. Within total investments, non-residential construction investments as well as acquisition of transport equipment achieved a double-digit growth.

In the sectoral perspective, the general government sector's investment activity accelerated significantly. The almost 40% increase was driven by domestic investment as well as projects co-funded from the European Structural and Investment Funds. Private investment also showed high dynamics of almost 5%.

Household consumption moderated slightly to 3.1%. Under conditions of high dynamics of the wage bill growth, consumption reflected not only higher consumer inflation but also a continued increase in the savings rate. Consumption of the general government sector, which was driven mainly by intermediate consumption, increased by 5.2%.

In Q3 2018, the contribution of **foreign trade** was negative; it took 1.0 pp off the economic growth. This reflected not only an increase in imports, which was due to high import intensity of investment, but also – on the side of exports – a slowdown in the growth of export markets. There was an unexpected high increase in imports of services in the area of research and consultancy.

We expect that in aggregate **real GDP increased by 2.8% in 2018**. The forecast for growth **in 2019** is slightly reduced from 2.9% **to 2.5%**. The most important growth factor should be household consumption, which will reflect the still robust wage dynamics at an extremely low unemployment rate, and a sharp increase in pensions. Investment in fixed capital and government consumption should contribute to the growth, although to a lesser extent than in 2018, whereas the contribution of foreign trade should remain negative. In **2020**, we expect a slight slowdown in the economic growth to **2.4%**.

Since the beginning of 2017, the year-on-year growth in **consumer prices** has mostly hovered in the upper half of the tolerance band of the Czech National Bank's 2% inflation target. It should remain in the tolerance band, though due to a slump in the price of oil at a lower level than it was indicated in the previous forecast. Pro-inflationary effects of the development of wages and salaries and of the positive output gap should continue to act but with a gradually decreasing intensity. The average **inflation rate** in 2018 was 2.1%. The forecast for 2019 is decreased from 2.3% to 2.1%, and the inflation in 2020 is expected at 1.6%.

Due to the limits of the **labour market**, the employment growth has gradually been slowing down. In Q3 2018 it dropped below the 1% threshold for the first time since the end of 2014. Lack of employees is a primary barrier to a further extensive production growth, which should motivate companies to invest in raising labour productivity. The room for further decrease in unemployment appears to be almost exhausted. In connection with current developments, however, we are decreasing the forecast for the **unemployment rate** in 2019 from 2.3% to 2.2%, and the same value can also be expected in 2020.

As regards the **current account of the balance of payments**, the positive balance of goods has gradually been decreasing as a result of higher domestic demand for imports influenced by the increase in consumption and investment. This factor is being accompanied by the impact of uncertainties in world trade. The remaining items of the current account should more or less stagnate or only slightly improve. The result should be a relatively stable small surplus of 0.3% of GDP in 2019 and 0.2% of GDP in 2020.

The estimate for the **general government balance** in 2018 remains unchanged at 1.6% of GDP. Long-lasting surplus budget performance of local governments and health insurance companies as well as a surplus cash balance of the state budget, which recorded the second best result since 1996, all contributed positively to the overall outcome. The forecast for the general government surplus in 2019 remains at 1.0% of GDP. We estimate that the general government debt decreased to 32.9% of GDP at the end of 2018, and that it should continue in that trend also in 2019, declining to 31.7% of GDP.

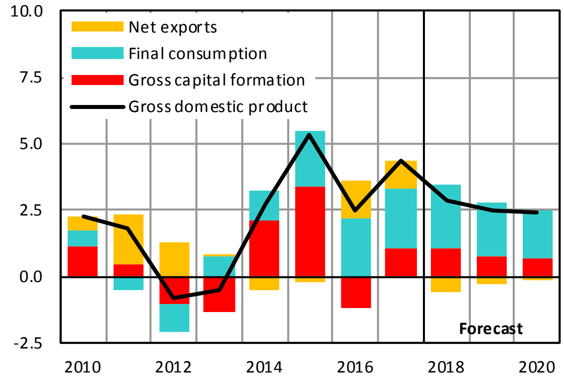
Table: Main Macroeconomic Indicators

		2014	2015	2016	2017	2018	2019	2020	2018	2019
							Current forecast		*Previous forecast*	
Gross domestic product	*bill. CZK*	**4 314**	**4 596**	**4 768**	**5 047**	**5 313**	**5 590**	**5 823**	5 296	5 568
Gross domestic product	*real growth in %*	**2.7**	**5.3**	**2.5**	**4.4**	**2.8**	**2.5**	**2.4**	3.0	2.9
Consumption of households	*real growth in %*	**1.8**	**3.7**	**3.6**	**4.3**	**3.5**	**3.3**	**3.0**	3.6	3.6
Consumption of government	*real growth in %*	**1.1**	**1.9**	**2.7**	**1.3**	**3.8**	**2.1**	**1.9**	2.5	2.1
Gross fixed capital formation	*real growth in %*	**3.9**	**10.2**	**-3.1**	**3.7**	**8.8**	**3.1**	**2.7**	7.8	3.2
Net exports	*contr. to GDP growth, pp*	**-0.5**	**-0.2**	**1.4**	**1.1**	**-0.6**	**-0.3**	**-0.1**	-0.4	0.0
Change in inventories	*contr. to GDP growth, pp*	**1.1**	**0.8**	**-0.4**	**0.1**	**-1.1**	**0.0**	**0.0**	-0.8	0.0
GDP deflator	*growth in %*	**2.5**	**1.2**	**1.3**	**1.4**	**2.4**	**2.6**	**1.7**	1.9	2.2
Average inflation rate	*%*	**0.4**	**0.3**	**0.7**	**2.5**	**2.1**	**2.1**	**1.6**	2.2	2.3
Employment *(LFS)*	*growth in %*	**0.8**	**1.4**	**1.9**	**1.6**	**1.3**	**0.3**	**0.2**	1.3	0.2
Unemployment rate *(LFS)*	*average in %*	**6.1**	**5.1**	**4.0**	**2.9**	**2.3**	**2.2**	**2.2**	2.3	2.3
Wage bill *(domestic concept)*	*growth in %*	**3.6**	**4.8**	**5.7**	**8.3**	**9.6**	**7.7**	**6.3**	9.5	8.4
Current account balance	*% of GDP*	**0.2**	**0.2**	**1.6**	**1.1**	**0.3**	**0.3**	**0.2**	0.4	0.4
General government balance	*% of GDP*	**-2.1**	**-0.6**	**0.7**	**1.5**	**1.6**	**1.0**	**.**	1.6	1.0
Assumptions:										
Exchange rate CZK/EUR		**27.5**	**27.3**	**27.0**	**26.3**	**25.6**	**25.5**	**25.1**	25.5	24.9
Long-term interest rates	*% p.a.*	**1.4**	**0.6**	**0.4**	**1.0**	**2.0**	**2.7**	**3.0**	2.1	2.6
Crude oil Brent	*USD/barrel*	**99**	**52**	**44**	**54**	**71**	**56**	**57**	74	77
GDP in Eurozone	*real growth in %*	**1.4**	**2.1**	**2.0**	**2.4**	**1.9**	**1.4**	**1.5**	2.0	1.7

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

Domestic demand should be the main driver of growth

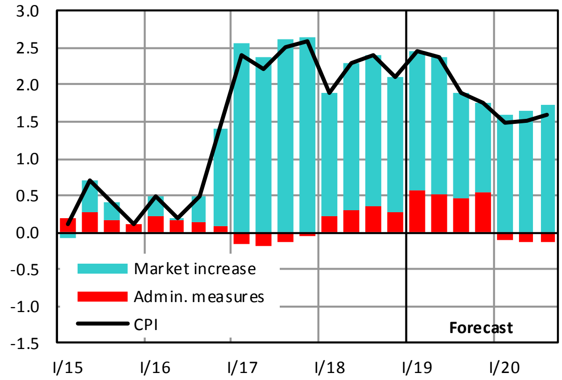
YoY growth rate of real GDP in %, contributions of individual expenditure components in percentage points



Source: CZSO. Calculations of the MoF.

Inflation within the tolerance band of the CNB's target

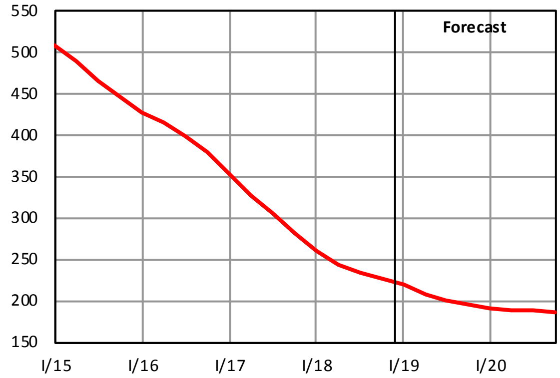
decomposition of YoY growth of CPI, contributions in pp



Source: CZSO. Calculations of the MoF.

Unemployment should decline only moderately

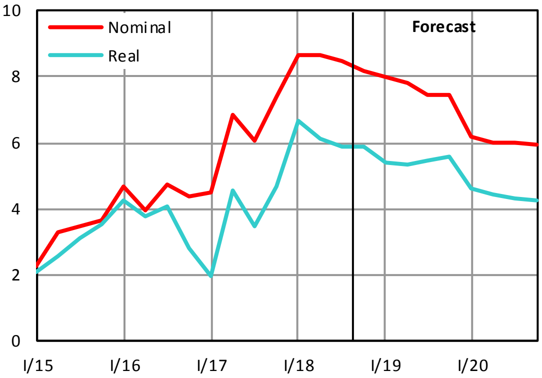
registered unemployment, in thous. of persons, seasonally adjusted



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

Growth of wages should gradually decelerate

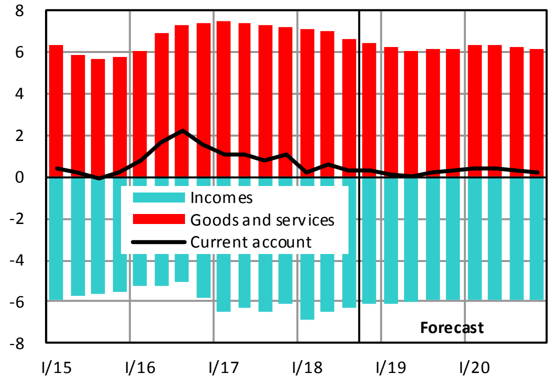
average gross monthly wage, YoY growth rate, in %



Source: CZSO. Calculations of the MoF.

Current account should be in a moderate surplus

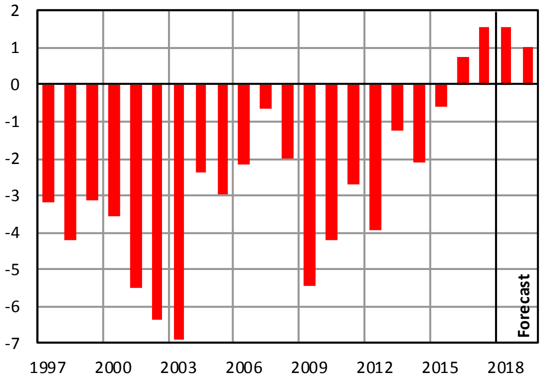
in % of GDP (yearly moving sums)



Source: CNB, CZSO. Calculations of the MoF.

Balance of the general government should stay positive

in % of GDP



Source: CZSO. Calculations of the MoF.

Forecast Risks and Uncertainty

The macroeconomic forecast is subject to a number of risks that we regard, on balance, to be **significantly tilted to the downside.**

The main negative risk for the strongly export-oriented Czech economy is currently the uncertainty associated with the **United Kingdom's withdrawal from the European Union**. On 15 January, the British Parliament rejected, by an overwhelming majority, the agreement on withdrawal conditions that PM May negotiated with the EU. Therefore, as at the cut-off date of the forecast, it was not clear whether the date of Brexit would only be postponed, whether the United Kingdom would leave the EU without any agreement entered into, or if it would eventually remain a member of the EU. This macroeconomic forecast is based on the assumption that the United Kingdom will leave the EU with a concluded agreement on the conditions of withdrawal, i.e., that there will be no hard Brexit. It also assumes that the future set-up of relations between the United Kingdom and the EU will maintain free movement of goods, services, persons and capital to the maximum possible extent.

Rising **protectionist tendencies**, which manifest themselves mainly in trade relations between the United States of America and China, are a significant external risk. A potential increase in existing import duties or their imposition on new commodities will, in addition to their negative effects on the volume of foreign trade and the resulting benefits, also have a negative impact on the confidence of economic agents. Higher uncertainty could then lead to the postponement of some investment decisions. The impact of higher tariffs on imported goods and the purchasing power of consumers should also not be overlooked. However, given the high complexity of international supply chains, it cannot be excluded that import tariffs will have a number of unintended consequences, e.g. shifting production to other countries. Although the Czech Republic predominantly trades with other EU countries, indirect exposure to some non-EU countries can potentially be substantial, which makes credible quantification of the effects of higher tariffs (in mutual trade between the US and China, or the US and the EU) extremely difficult.

Indirectly, the Czech economy could also be adversely influenced by an escalation of problems of the Italian banking sector. The uncertainty in the global economy is further increased by instability of some emerging economies (Turkey, Argentina, Brazil), slowing economic growth in China or increased volatility in stock markets.

The Czech economy shows marked signs of overheating in some areas, especially in the labour and real estate markets. In terms of **cyclical development of the economy**, one cannot rule out the possibility of the economy entering the downward phase of the business cycle in the case that some risks listed here materialize in the forecast horizon. In business cycle surveys, more and more companies are pointing to the shortage of employees as a barrier to increasing their production. A key factor in the medium and longer terms will thus be the increase in **labour productivity**, considering the current labour market situation and anticipated demographic developments. In the short term, labour market imbalances create **strong pressure on wage growth**, which results in higher unit labour costs. This could adversely affect competitiveness of some companies if this effect persists; on the other hand, however, this factor greatly supports the growth of households' disposable income and productivity enhancing investment, and creates an incentive to focus more on the production of goods and services with higher value added.

The cyclical development of the economy in connection with low interest rates led to an increased dynamics of mortgage loans. Together with the factors limiting the supply of residential real estate (some of which are Prague-specific), this development has contributed to a significant growth in asking prices of flats. Continuing **rapid growth in housing loans and property prices** poses a macroeconomic risk as some households might not be able to repay their loans in the case of worsening economic situation or increase in market rates, which would also have an impact on financial stability. The dynamics of housing loans, however, has been moderating slightly approximately since mid-2017 due to interest rate increases, tightening of credit conditions, and the high level of housing prices. In late 2018, however, it increased slightly in connection with regulatory recommendations of the CNB effective since October 2018, though we consider such development temporary. Going forward, the mortgage loans market should thus cool down. Housing construction data suggest that the number of completed dwellings should continue to grow dynamically in early 2019, but given the development in the number of dwellings started it should then start slowing down.

1 Forecast Assumptions

1.1 External Environment

In Q3 2018, the **US economy** continued to grow dynamically, with real GDP increasing by 0.8% QoQ (*in line with the estimate*). This result was exclusively due to domestic demand, with households' consumption expenditures and gross capital formation being the main drivers. The growth in household consumption reflected an already very tight labour market situation and the tax reform adopted in December 2017, while the development of gross capital formation reflected a high contribution of the change in inventories. The negative contribution of net exports was largely influenced by the introduction of tariffs in the US–China trade.

With regard to the growing economic activity, strong creation of new jobs, very low unemployment rate and a robust growth in household consumption, the Fed raised the interest rates again at its December meeting, to 2.25–2.50%. It also anticipated it would hike the rates twice in 2019. The Fed continues to sell its assets worth USD 50 billion a month. In mid-2018 the inflation rate started to decrease slowly, reaching 2.2% in November 2018. The Fed expects the inflation rate to stabilize around the 2% target in the medium term. During Q4 2018, stock markets experienced a strong correction when they dropped by almost 20% from their historic highs. That drop is attributed, among other things, to the deteriorating growth prospects of the global economy, the uncertainty associated with tensions in trade relations between the US and China, or the worse than expected economic results of major technology companies. However, at the turn of December 2018 and January 2019, the situation in stock markets calmed and indexes started to grow again.

We assume that household consumption will remain the main factor in the growth of economic activity in the following years. That should further be supported by high consumer confidence and a fading fiscal stimulus in the short term. Low unemployment rate and growing participation rate should have a more lasting effect. Lack of suitably qualified workers is then reflected in a gradual acceleration of the average wage, which rose by 3.1% in Q4 2018, the fastest rate since 2009. However, investment and export activity should, at least in the short term, be negatively affected by the continued tension in trade relations with China. In order to reduce the trade deficit by limiting the import of products and to protect the domestic industry, the USA imposed tariffs on steel and aluminium in March and June 2018 and on selected Chinese goods in July and September 2018. During a 90-day "truce", intensive negotiations are conducted but in the case of their failure, the USA are ready to impose further tariffs on Chinese goods in March. As regards confidence indicators, business confidence deteriorated sharply to a two-year low in December 2018, but Purchasing Managers' Indexes in manufacturing and services remain relatively high.

We estimate that GDP increased by 2.9% (*unchanged*) in 2018. We expect economic growth to decelerate gradually to 2.4% (*versus 2.5%*) in 2019 and to 2.0% in the following year in the context of fading effects of the fiscal stimulus and tighter monetary conditions.

The **Chinese economy** still maintains decent growth dynamics. The quarter-on-quarter GDP growth was 1.6% in Q3 2018, and China thus remains the main driver of the global economic growth. Services are becoming the dominant sector, while the importance of industry is further weakening. The focus of economic growth is also slowly shifting from investment and exports to household consumption, which accounted for around 39% of GDP in 2017. Although the year-on-year growth rate of retail sales has been consistently falling, it is still high and exceeds 8%. Growth in investment is also slowing down as a result of a number of government measures aimed at curbing rising housing prices, shadow banking and risky loans or reducing overcapacity in some industries through stricter environmental regulations.

We expect the rate of economic growth to continue to slow down gradually. The development of leading indicators remains satisfactory in the case of consumer confidence and Purchasing Managers' Index in services. The indicators of business confidence and Purchasing Managers' Index in manufacturing, however, indicated that conditions in that industry deteriorated in December 2018. Due to escalation of trade conflicts with the USA, foreign reserve assets further declined in 2018 and the stock market recorded a correction of approx. 25%. Any further escalation of that conflict then poses the most serious risk to economic growth in the short-term. However, high public and private sector debt and the share of non-performing loans also cause considerable concerns as they could threaten the macroeconomic stability in the case of a major slowdown of the economy. From the long-term perspective, the most serious risk is the unfavourable demographic development.

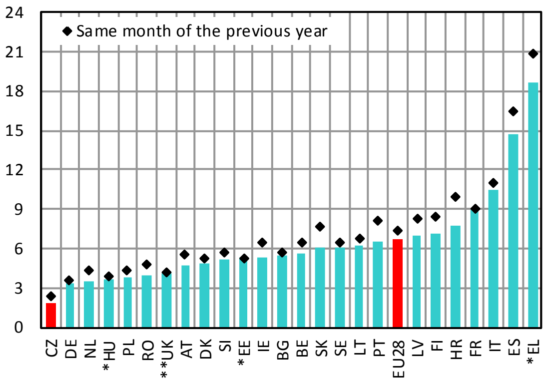
Economic growth in the **European Union** slowed down in Q3 2018, when GDP growth reached 0.3% QoQ in both the EU28 (*versus 0.5%*) and the EA19 (*versus 0.4%*). In year-on-year terms GDP growth was 1.8% in the EU28 (*versus 2.0%*) and 1.6% in the EA19 (*versus 1.8%*). Causes of the weak economic performance were to a large extent related to introduction of new emission measurement standards that had a negative impact on automotive production, and to a slowdown in domestic demand. The pace of economic growth in individual economies differed considerably, with Lithuania, Sweden, Germany and Italy reporting a slight quarter-on-quarter decline. In some countries, a more significant recovery is still hampered, in addition to external factors, by structural problems, loss of competitiveness or high indebtedness of the government and private sectors.

In November 2018, the price level growth slowed down slightly in the EA19 and the inflation rate reached 1.9%. Consumer prices grew mostly due to increasing energy prices and unit labour costs. The European Central Bank has been keeping the main refinancing rate at 0.00% and the deposit rate at −0.40% since March 2016. At the same time, it assumes that key interest rates will remain at current or lower levels at least until summer 2019. In December 2018, monthly purchases of assets were terminated.

The slowing economic activity is also reflected in the development in the labour market. The unemployment rate has stagnated or declined only marginally in a number of countries, and in some economies it has even begun to increase slightly. The unemployment rate in the EU28 stagnated for the third month in a row at 6.7% (year-on-year decline of 0.6 pp) in November 2018, which represents the lowest value in the recorded history since 2000. However, enormous differences still persist among individual economies (see Graph 1.1.1).

Graph 1.1.1: Unemployment rate in the EU in November 2018

in %, seasonally adjusted data, LFS



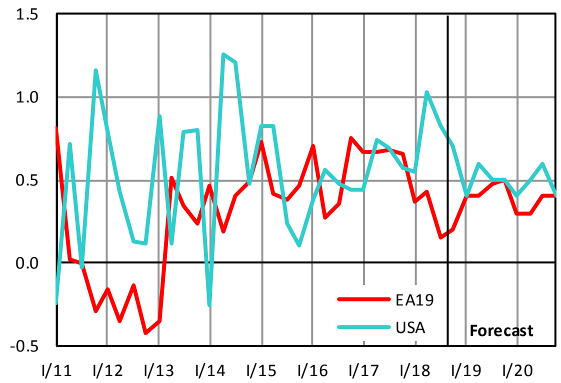
*Note: *) October 2018. **) September 2018.*
Source: Eurostat.

A number of leading indicators have reached their historical highs at the turn of 2017 and 2018, and then began a steady decline. Despite the declining tendency, their level is still relatively high in the long term context. The drop in indicators in the business environment reflects deteriorated export prospects in view of the slowdown in global economic growth and the uncertainty associated with the United Kingdom's withdrawal from the EU. Consumers, in turn, assess their future financial situation, expected savings and unemployment more negatively.

We expect economic growth to be further driven by domestic demand in the coming years. The main factor will remain household consumption, which will additionally be supported, in the short term, by low interest rates, favourable financial conditions, and expansionary fiscal policy in some countries. Wage growth, associated with the labour market situation, will have a more permanent effect. The labour market situation is very tight in a number of countries, and a significant shortage of skilled workers is an obstacle to economic growth. The labour market situation, together with an eased monetary policy and high capacity utilization, contributes to investment growth. Conversely, weakening global demand and, above all, the uncertainty associated with the process of the United Kingdom's withdrawal from the EU, have unfavourable effects. However, we anticipate that the situation regarding the United Kingdom's withdrawal from the EU will be clarified during 2019, which will greatly reduce this uncertainty. We estimate that economic growth in the EU28 reached 2.0% in 2018 (*versus 2.1%*). GDP could increase by 1.6% (*versus 1.9%*) in 2019 and slightly accelerate to 1.8% in the following year.

Graph 1.1.2: Growth of GDP in the EA19 and in the USA

QoQ growth rate, in%, seasonally and working day adjusted



Source: Eurostat. Calculations of the MoF.

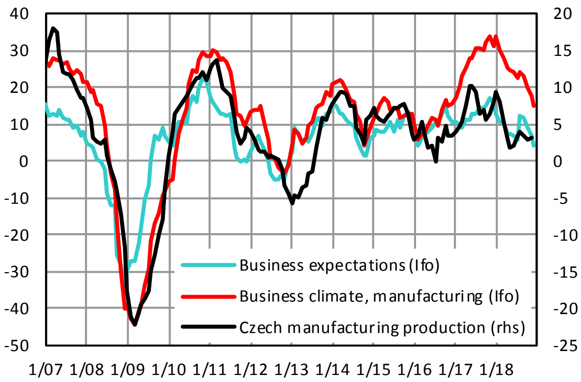
In Q3 2018, the performance of the **German** economy unexpectedly worsened as GDP fell by 0.2% QoQ (*versus growth by 0.5%*). This result can be attributed to foreign demand. While the growth rate of imports has almost kept its dynamics from the previous quarter, exports of goods have fallen due to slowing global growth and introduction of new emission standards. Households' consumption expenditures also contributed to the dip in GDP, though only to a small extent, despite the very low unemployment rate and the still high level of consumer confidence. However, the effects of lower car purchases and higher inflation rates were reflected here. General government final consumption expenditures increased only slightly, and the main source of economic growth was thus gross capital formation, where the contribution of changes in inventories strongly dominated.

The German economy is close to full employment. In November 2018, the unemployment rate was only 3.3%

and employment reached the highest levels since the German reunification. Although labour shortage is increasingly evident in the labour market, real wages grew by only 1.5% in Q3 2018. A number of leading indicators that reached their long-term highs at the turn of 2017 and 2018 are now undergoing a correction. The decline in the Purchasing Managers' Index in industry, which in December 2018 reached its lowest value since March 2016, reflects a decrease in purchases and new orders due to slowing global trade. Also, the decline in business confidence, measured by the Ifo indicator, to a two-year low reflects deterioration in the economic situation and the future economic outlook. A slowly decreasing Consumer Confidence Index (GfK), which reached its 18-month low in December 2018, then reflects consumers' concerns about the US-China trade disputes and the United Kingdom's withdrawal from the EU. In the historical context, however, its level remains high.

Graph 1.1.3: Ifo (Germany) and Czech manufacturing production

indicator balances (Ifo); seasonally adjusted index of industrial production in the Czech manufacturing, YoY growth in% (from quarterly moving averages)



Source: CESifo, CZSO.

We assume that the German economy will continue to be further driven by domestic demand. Household consumption expenditure will be supported mainly by wage growth due to lack of suitable workers, by planned tax cuts or increased maternity support. Due to relatively high capacity utilization, further growth in business investment can be expected, which will also be supported by continuing good financial conditions. However, the deteriorating global trade situation resulting from introduced tariff barriers or those that are being considered and, above all, from the uncertainty associated with the United Kingdom's withdrawal from the EU (in 2017, exports to the United Kingdom accounted for 3.5% of Germany's GDP) will continue to weigh on corporate investments and exports. The introduction of emission regulations or uncertainty related to the growing number of decisions to ban some cars into city centres is having a negative impact on the automotive industry. We estimate that due to the decline in economic performance in Q3, economic growth reached only 1.6% (*versus 2.0%*) in 2018. GDP could increase by 1.3% (*versus 1.9%*) in 2019. Growth could then accelerate slightly to 1.5% in the following year due to a higher number of working days.

The growth of the **French** economy remained very low in Q3 2018 – despite a marginal acceleration GDP grew by only 0.3% QoQ (*in line with the estimate*). Household consumption was encouraged by termination of transport strikes, and growth in gross fixed capital formation was mainly driven by corporate investment. Increased consumption and investment in fixed capital were, however, almost offset by a negative contribution of the change in inventories. Net exports, on the contrary, supported economic growth thanks to decreased imports and increased exports.

We assume that the growth of the French economy will continue to be moderate in the years to come. The slowdown in economic performance is indicated by a number of leading indicators. Business and consumer confidence or the Purchasing Managers' Index in industry and services have been steadily decreasing since the turn of 2017 and 2018, when they reached their long-term highs. Declining indicators of business confidence are due to protests of the yellow vests movement, a drop in new orders and the weakening foreign demand, especially in the automotive industry. The consumer confidence indicator, which in December 2018 declined to its lowest level since November 2014, reflects consumers' concerns about the future financial situation and the increase in unemployment. In spite of the reforms adopted, the labour market situation has not improved much; the unemployment rate in November 2018 remained at 8.9% (a year-on-year decline of only 0.2 pp).

In the short term, economic activity will be dampened by ongoing protests of the yellow vests movement, which negatively affect mainly services and industrial production. Extensive demonstrations against high living costs and economic policy have already led to abandonment of some planned reforms and, on the contrary, to adoption of a number of social measures (increased minimum wage, abolishing the taxation of overtime pay or abandoning the introduction of a special tax for most pensioners). The approved package of social measures will positively impact household consumption, but at the same time it is likely to lead to a breach of the EU fiscal rule and a further increase in the general government sector debt. Further questions are raised by the feasibility of other necessary structural reforms, such as of the pension system. We estimate that GDP grew by 1.5%, in 2018 and the same pace (*versus 1.6%*) should be achieved this year. In 2020, the growth of the French economy could slightly accelerate to 1.6%.

The **Polish** economy continues to grow dynamically, with a sharp acceleration in growth to 1.7% QoQ (*versus 0.9%*) in Q3 2018. That result was solely due to domestic demand as all its components showed growth, mainly household consumption expenditure and gross fixed capital formation. Household consumption was supported by low unemployment rate and accelerating wage growth. Increased investment activity was mainly due to the European Structural and Investment Funds. Conversely, economic growth was dampened by the balance of foreign trade.

In the next years, economic growth should be driven mainly by household consumption, although its pace will gradually slow down. Household consumption expenditure will be supported by low interest rates in the short term, while in the longer term especially by wage growth associated with a good labour market situation. In November 2018, the unemployment rate remained, for the eighth month in a row, at 3.8% (a year-on-year decline of 0.6 pp). With the start of new projects from the 2014–2020 programming period and the need for capital replacement, investments should also continue to slightly accelerate. Risks, however, include worsened predictability of economic policy, parliamentary election this year, and also – for long-term sustainability of public finances and the labour market – a drastic reduction in the retirement age. We estimate that GDP growth was 5.3% in 2018 (*versus 4.6%*). Due to a slowdown in household consumption and rising imports in connection with investment dynamics, GDP could go up by 4.0% (*versus 3.5%*) in 2019, followed by 3.4% in the following year.

The **Slovak** economy grew by 1.1% QoQ (*in line with the estimate*) in Q3 2018. Economic growth was driven by domestic demand with dominant contribution of the change in inventories. Household consumption expenditure growth was driven by a high level of consumer confidence, declining unemployment and wage growth. Conversely, economic performance was dampened by gross fixed capital formation and net exports. The decline in investment reflected deteriorating business confidence, while the negative contribution of net exports reflected slowing global trade and the related deceleration of exports.

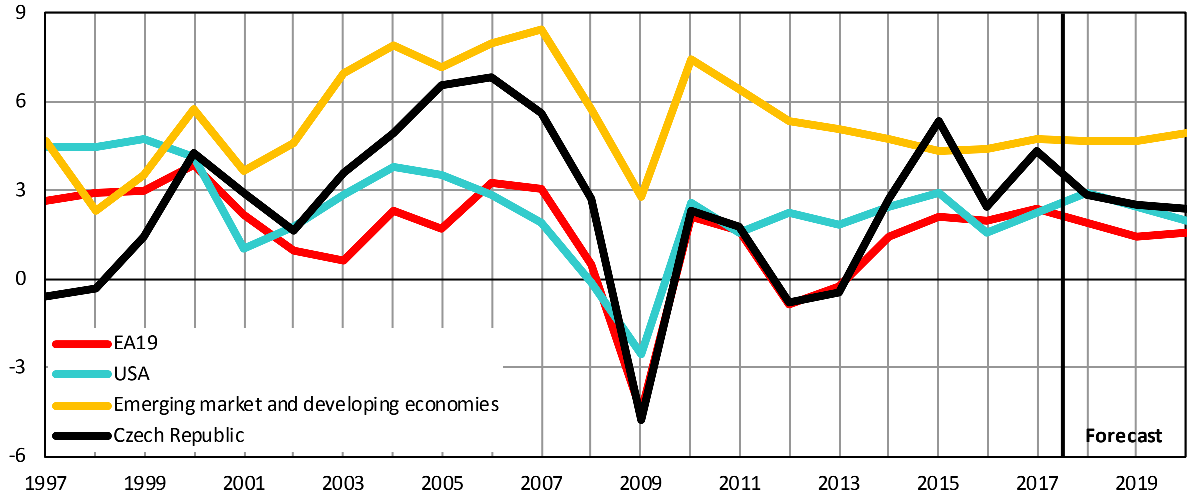
In the forecast horizon, GDP growth should be driven mainly by domestic demand. Household expenditure on consumption will be stimulated by a number of fiscal measures (doubling the tax bonus for children under the age of 6, or free lunches for children), high levels of consumer confidence, low interest rates and, most importantly, the labour market situation. The unemployment rate further decreased to 6.0% in November 2018 (year-on-year decline of 1.6 pp), which represents the lowest value in the recorded history since 1998. A mismatch between the supply and demand in the labour market creates pressure on the growth of wages, which increased by 6.1% YoY in Q3 2018. An increase in the minimum wage by 8.3% and salary increases in the public sector will also contribute to the dynamics of wages in 2019. Lack of suitably qualified workers will also be reflected in the growth of corporate investment in machinery and equipment that increases labour productivity. Gross fixed capital formation in the private sector as well as in the general government sector will also be supported by the drawdown of European Structural and Investment Funds. Acceleration of exports in 2019 will be significantly influenced by the start of production of the Jaguar Land Rover plant in October 2018. In this context, however, a significant negative risk is the high share of automotive industry in the economy and the slowing pace of world trade. We estimate that GDP increased by 4.3% in 2018 (*versus 4.0%*). In 2019, due to the start of production of Jaguar Land Rover, economic growth should slow down only marginally to 4.1% (*unchanged*). In 2020 it could reach 3.8%.

Table 1.1.1: Gross Domestic Product – yearly
YoY real growth rate, in %

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
								Estimate	*Forecast*	*Forecast*
World	4.3	3.5	3.5	3.6	3.5	3.3	3.7	3.7	3.7	3.7
USA	1.6	2.2	1.8	2.5	2.9	1.6	2.2	2.9	2.4	2.0
China	9.5	7.9	7.8	7.3	6.9	6.7	6.9	6.6	6.3	6.1
EU28	1.8	-0.4	0.3	1.8	2.3	2.0	2.4	2.0	1.6	1.8
EA19	1.6	-0.9	-0.2	1.4	2.1	2.0	2.4	1.9	1.4	1.5
Germany	3.7	0.5	0.5	2.2	1.7	2.2	2.2	1.6	1.3	1.5
France	2.2	0.3	0.6	1.0	1.1	1.2	2.2	1.5	1.5	1.6
United Kingdom	1.6	1.4	2.0	2.9	2.3	1.8	1.8	1.4	1.1	1.1
Austria	2.9	0.7	0.0	0.7	1.1	2.0	2.6	2.8	1.9	2.0
Hungary	1.7	-1.6	2.1	4.2	3.5	2.3	4.1	5.1	3.5	3.0
Poland	5.0	1.6	1.4	3.3	3.8	3.1	4.8	5.3	4.0	3.4
Slovakia	2.8	1.7	1.5	2.8	4.2	3.1	3.2	4.3	4.1	3.8
Czech Republic	1.8	-0.8	-0.5	2.7	5.3	2.5	4.4	2.8	2.5	2.4

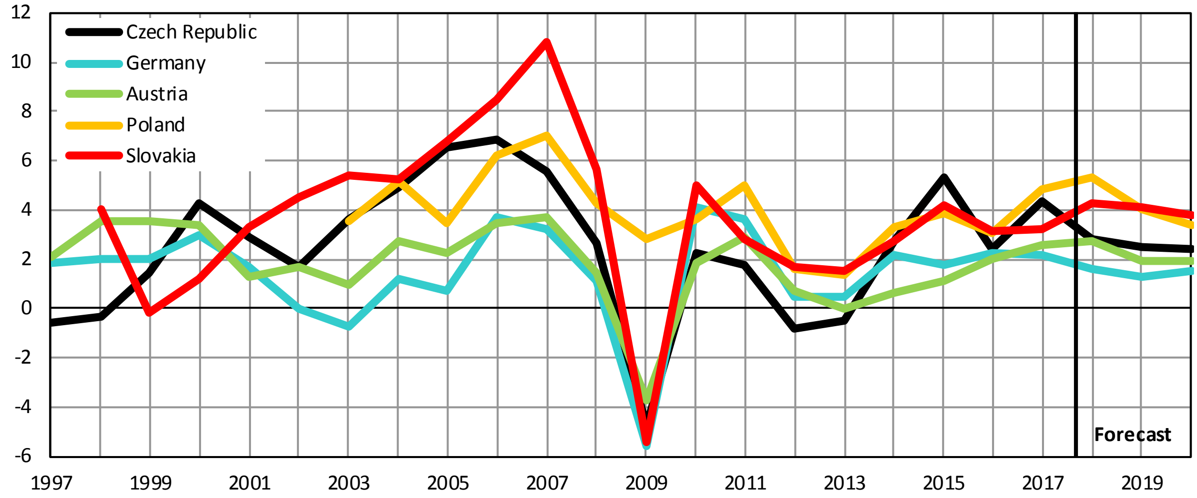
Source: CZSO, Eurostat, IMF, NBS China. Calculations of the MoF.

Graph 1.1.4: Gross Domestic Product
YoY real growth rate, in %



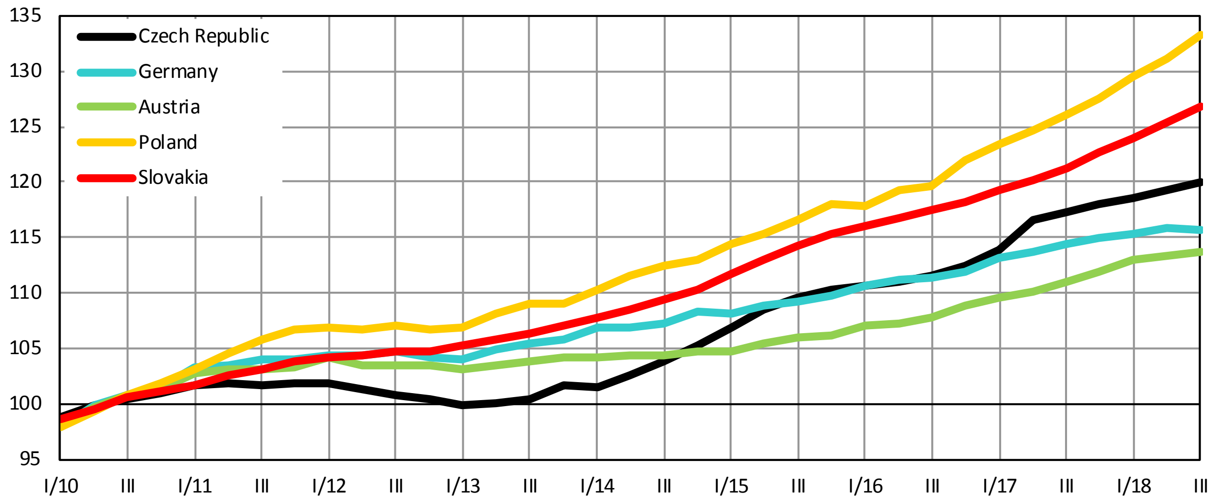
Note: Emerging market and developing economies comprising 154 countries (according to the IMF's classification)
Source: Eurostat, IMF. Calculations of the MoF.

Graph 1.1.5: Gross Domestic Product – Czech Republic and the neighbouring states
YoY real growth rate, in %



Source: Eurostat. Calculations of the MoF.

Graph 1.1.6: Gross Domestic Product – Czech Republic and the neighbouring states
2010=100, seasonally adjusted data, constant prices



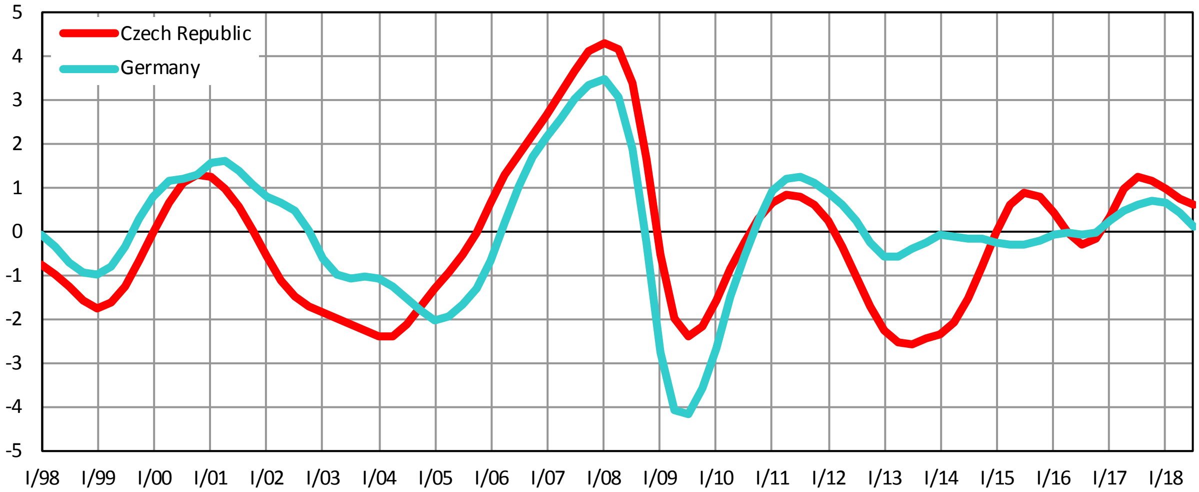
Source: Eurostat. Calculations of the MoF.

Table 1.1.2: Gross Domestic Product – quarterly
real growth rate, in %, seasonally adjusted data

		2018				2019			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
					Estimate	*Forecast*	*Forecast*	*Forecast*	*Forecast*
USA	*QoQ*	**0.5**	**1.0**	**0.8**	**0.7**	**0.4**	**0.6**	**0.5**	**0.5**
	YoY	2.6	2.9	3.0	3.1	3.0	2.6	2.2	2.0
China	*QoQ*	**1.5**	**1.7**	**1.6**	**1.5**	**1.5**	**1.6**	**1.4**	**1.5**
	YoY	6.8	6.7	6.5	6.5	6.5	6.3	6.1	6.1
EU28	*QoQ*	**0.4**	**0.5**	**0.3**	**0.3**	**0.4**	**0.4**	**0.5**	**0.5**
	YoY	2.3	2.2	1.8	1.5	1.5	1.4	1.6	1.8
EA19	*QoQ*	**0.4**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.5**	**0.5**
	YoY	2.4	2.2	1.6	1.2	1.2	1.2	1.5	1.8
Germany	*QoQ*	**0.4**	**0.5**	**-0.2**	**0.1**	**0.4**	**0.5**	**0.6**	**0.5**
	YoY	2.0	1.9	1.2	0.7	0.8	0.8	1.6	2.0
France	*QoQ*	**0.2**	**0.2**	**0.3**	**0.0**	**0.4**	**0.6**	**0.6**	**0.5**
	YoY	2.2	1.7	1.4	0.7	0.9	1.3	1.6	2.1
United Kingdom	*QoQ*	**0.1**	**0.4**	**0.6**	**0.3**	**0.1**	**0.2**	**0.2**	**0.3**
	YoY	1.3	1.4	1.5	1.4	1.4	1.2	0.8	0.8
Austria	*QoQ*	**0.9**	**0.3**	**0.3**	**0.4**	**0.6**	**0.6**	**0.4**	**0.5**
	YoY	3.2	2.8	2.4	1.9	1.6	1.9	2.0	2.1
Hungary	*QoQ*	**1.3**	**1.1**	**1.3**	**0.9**	**0.7**	**0.8**	**0.8**	**0.7**
	YoY	4.8	4.8	5.2	4.7	4.1	3.8	3.2	3.0
Poland	*QoQ*	**1.6**	**1.1**	**1.7**	**1.2**	**0.8**	**0.7**	**0.8**	**0.8**
	YoY	5.0	5.2	5.7	5.7	4.9	4.4	3.5	3.1
Slovakia	*QoQ*	**1.0**	**1.2**	**1.1**	**1.0**	**0.9**	**1.1**	**1.0**	**0.9**
	YoY	3.9	4.3	4.5	4.4	4.3	4.2	4.1	4.0
Czech Republic	*QoQ*	**0.5**	**0.6**	**0.6**	**0.8**	**0.6**	**0.5**	**0.5**	**0.5**
	YoY	4.1	2.4	2.4	2.5	2.6	2.5	2.4	2.1

Source: Eurostat, NBS China. Calculations of the MoF.

Graph 1.1.7: Cyclical Component of GDP – Czech Republic and Germany
in % of GDP, derived using the Hodrick-Prescott filter



Source: Eurostat. Calculations of the MoF.

1.2 Commodity Prices

In Q4 2018, the average price of Brent crude oil reached USD 69.0/barrel (*versus USD 79/barrel*). After five quarters of sustained growth it declined by 8.1% QoQ, but in year-on-year terms it was still up 12.4%.

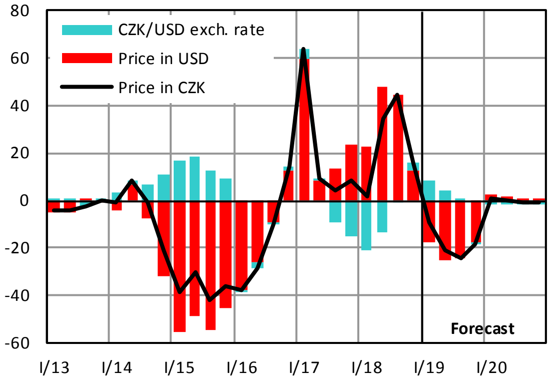
Q4 2018 was characterized by a trend decline in the crude oil price, as well as by a decline in stock markets. The common cause was probably the concern about weakening global economic growth. Developments on the supply side of the crude oil market also contributed to the downward trend. Crude oil production was record-breaking in the United States and Russia. The Organization of the Petroleum Exporting Countries, in view of the market situation, agreed in December to reduce the production in the first half of 2019 by 800 thousand barrels a day compared to October 2018. Other countries (especially Russia) that joined the agreement should reduce production by further 400 thousand barrels a day. It is estimated that there was an increase in global reserves of extracted oil in the second half of 2018. This situation should persist in the first half of 2019, but in the second half of 2019 the oil market should become balanced according to current estimates.

Further projected development of the Brent crude oil price reflects the only very slowly upward sloping futures price curve. The price should average USD 56/barrel in 2019 (*versus USD 77/barrel*) and we expect the price to be USD 57/barrel in 2020. The decrease in the forecast is due to the shift in the futures price curve.

Compared to the previous forecast, the Brent oil price in koruna terms decreases more moderately than the dollar price as we expect the koruna to be weaker against the dollar. Nevertheless, the koruna price should decrease by almost one fifth in 2019 according to our assumptions, though in 2020 it should be practically stagnant (see Graph 1.2.1).

Graph 1.2.1: Koruna Price of Brent Crude Oil

YoY change of the koruna price of Brent crude oil in %, contributions of the CZK/USD exchange rate and USD price of Brent crude oil in pp



Source: CNB, U. S. Energy Inf. Administration. Calculations of the MoF.

Table 1.2.1: Prices of Selected Commodities – yearly

spot prices

		2011	2012	2013	2014	2015	2016	2017	2018	2019 *Forecast*	2020 *Forecast*
Crude oil Brent	*USD/barrel*	**111.3**	**111.5**	**108.6**	**99.0**	**52.4**	**43.6**	**54.2**	**71.4**	**56**	**57**
	growth in %	39.8	0.2	-2.6	-8.8	-47.1	-16.9	24.3	31.7	-21.0	1.7
Crude oil Brent index *(in CZK)*	*2010=100*	**129.5**	**143.8**	**139.9**	**134.6**	**85.0**	**70.1**	**83.1**	**102.1**	**83**	**83**
	growth in %	29.5	11.0	-2.7	-3.8	-36.9	-17.4	18.5	22.9	-18.6	-0.1
Natural gas (Europe)	*USD/MMBtu*	**10.5**	**11.5**	**11.8**	**10.1**	**6.8**	**4.6**	**5.7**	**7.7**	.	.
	growth in %	26.9	9.1	2.7	-14.7	-32.1	-33.1	25.3	34.4	.	.
Natural gas (Europe) index *(in CZK)*	*2010=100*	**117.9**	**142.2**	**145.9**	**131.7**	**106.2**	**70.7**	**84.2**	**105.9**	.	.
	growth in %	17.9	20.6	2.6	-9.8	-19.4	-33.4	19.2	25.7	.	.

Source: CNB, IMF, U. S. Energy Information Administration. Calculations of the MoF.

Table 1.2.2: Prices of Selected Commodities – quarterly

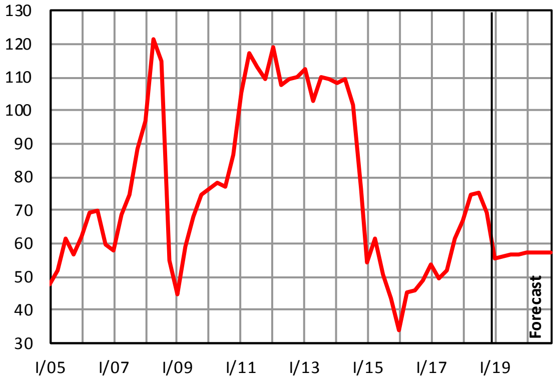
spot prices

		2018				2019			
		Q1	Q2	Q3	Q4	Q1 *Forecast*	Q2 *Forecast*	Q3 *Forecast*	Q4 *Forecast*
Crude oil Brent	*USD/barrel*	**66.9**	**74.5**	**75.1**	**69.0**	**56**	**56**	**57**	**57**
	growth in %	24.8	50.2	44.1	12.4	-16.9	-24.5	-24.4	-17.6
Crude oil Brent index *(in CZK)*	*2010=100*	**91.0**	**105.6**	**109.7**	**102.2**	**83**	**83**	**84**	**83**
	growth in %	1.6	34.2	44.1	16.0	-9.3	-21.2	-23.9	-18.5
Natural gas (Europe)	*USD/MMBtu*	**6.7**	**7.3**	**8.4**	**8.3**	.	.	.	.
	growth in %	16.8	46.2	53.3	25.1	.	.	.	.
Natural gas (Europe) index *(in CZK)*	*2010=100*	**87.5**	**99.2**	**117.9**	**118.8**	.	.	.	.
	growth in %	-4.9	30.6	53.3	29.2	.	.	.	.

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

Graph 1.2.2: Dollar Prices of Oil

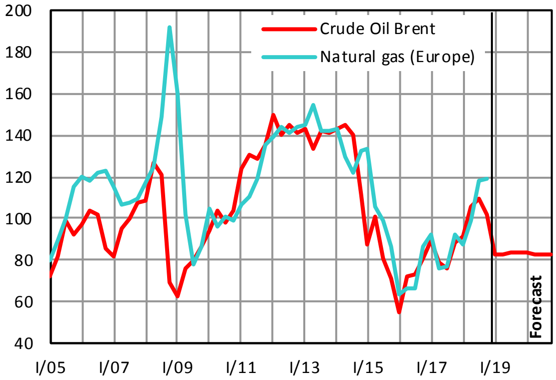
USD/barrel



Source: U. S. Energy Information Administration. Calculations of the MoF.

Graph 1.2.3: Koruna Prices of Selected Commodities

index 2010=100



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

1.3 Fiscal Policy

We estimate that the general government balance **in 2018** ended with a surplus of 1.6% of GDP (*unchanged*), which would be an almost identical result as in 2017. In terms of the structural balance, there was probably no change in the surplus of about 1% of GDP.

Since data about the general government budget performance for 2018 in the ESA 2010 accrual methodology will only be available at the beginning of April 2018, our estimate is mainly based on results of the cash performance of the state budget, state funds, local government budgets, and health insurance companies. Quarterly national accounts for the general government sector available for the first three quarters of the last year were also used for the estimate, but these are often revised in retrospect.

In the national cash methodology, the state budget ended with a surplus of CZK 2.9 billion in 2018, which is the second best result since 1996. In comparison with the deficit of CZK 6.2 billion in 2017, the balance improved by CZK 9.1 billion. Budget performance adjusted on the revenue and expenditure side for funds from the EU budget and financial mechanisms ended in year-on-year terms with a comparable moderate deficit (CZK 1.3 billion in 2017, CZK 2.2 billion in 2018).

The positive development of the balance is mainly due to high dynamics of tax revenues, including social insurance contributions. At the level of the state budget, they increased by about CZK 83 billion (7.2%), at the level of public budgets by almost CZK 112 billion (7.9%). For example, value-added tax collection grew by 8.3% YoY at the level of public budgets, the collection of personal income tax, reflecting strong wage and salary growth, including an increase in minimum and guaranteed wages, by 14%. The collection of social insurance increased by 10%, and the collection of corporate tax, influenced by the dynamics of compensation of employees, was higher by 2%.

On the expenditure side of the state budget, capital expenditures grew by more than 46%, which is mainly due to considerably higher investment transfers to other components of public budgets (local governments, allowance organisations receiving contributions from the state budget, state funds) as well as business entities, as a result of renewed investment activity co-financed by EU funds.

The performance of local government budgets on cash basis ended with a surplus of CZK 20.4 billion at the end of November 2018. In spite of higher year-on-year tax revenues that were reinforced, among other things, by a change in the tax assignment, and of received transfers the surplus dropped by half in comparison with the same period of 2017. This is mainly due to an enormous increase in capital expenditures.

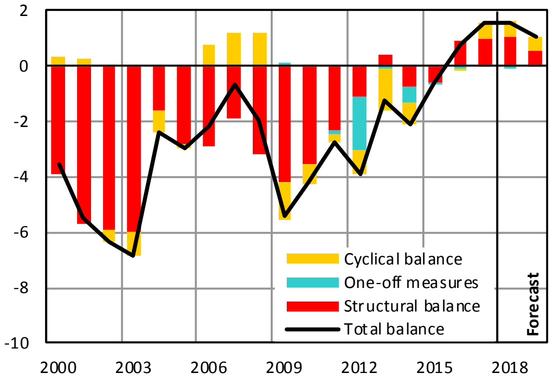
Health insurance companies also contributed to the positive performance of the general government sector, as they reported a cash surplus of CZK 12.3 billion at the end of November 2018, the positive balance being almost twice as large year-on-year. The main factor of this development is, in particular, the revenue side, i.e. a higher growth of health insurance.

The general government balance in the ESA 2010 accrual methodology recorded a surplus of CZK 72.6 billion in the first three quarters of 2018. However, in terms of the annual balance, the result of the last quarter has a great weight, as it is usually relatively volatile and therefore hard to estimate. The exceptionally high tax revenue is also suggested by national accounts data, which show an increase in taxes, including social security contributions, by CZK 100 billion (by 7.7%) in the first three quarters. Conversely, on the expenditure side, we expect a considerable increase in compensation of employees, which grew by 14.5% YoY as of the end of September, as a result of salary scales increases across professions within the general government sector. There was also investment growth in the same period by 20.9%. Based on the accelerated growth of investment expenditure at the end of the year, indicating investment purchases made by the state budget, state funds and local governments, we estimate that the year-on-year nominal government investment growth was more than 26%, which represents an increase of 9 pp compared to the previous forecast. However, due to the high level of co-financing of investments from EU sources, the impact on the overall balance is significantly lower. Intermediate consumption accelerated during Q3 and grew by 8.6% in the first nine months of 2018, possibly also due to projects co-financed by EU funds. A change in the trend of declining interest costs, previously lasting for several years, contributed slightly negatively to the general government balance in 2018.

Due to the current estimate of the general government balance for 2018, the forecast for the balance **in 2019** remains unchanged at 1.0% of GDP. Accordingly, we do not change the estimate of the structural balance, which should drop by 0.6 pp compared to 2018 and post a surplus of 0.5% of GDP.

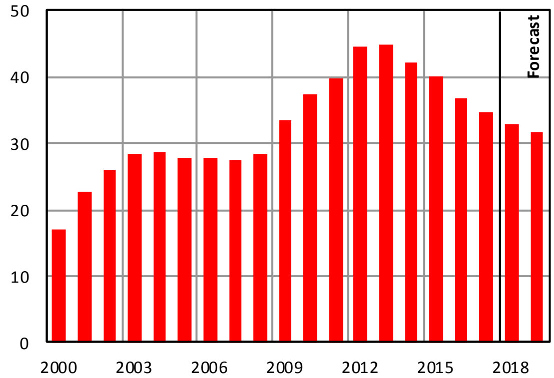
The absolute level of the government debt should remain almost unchanged at the end of 2018 compared to 2017, but the estimated nominal GDP growth of more than 5% should result in a year-on-year decline in relative debt to 32.9% of GDP (*versus 33.0%*). The state debt at the end of 2018 recorded a year-on-year decrease by almost CZK 3 billion and amounted to CZK 1,622 billion, which is 30.5% of GDP. Of that amount, more than 11% is debt with zero or negative yield. A further decline in the general government sector debt in relative terms is expected also in 2019, when the debt level should decline to 31.7% of GDP (*versus 31.9%*).

Graph 1.3.1: Decomposition of the Government Balance
in % of GDP



Source: CZSO. Calculations of the MoF.

Graph 1.3.2: General Government Debt
in % of GDP



Source: CZSO. Calculations of the MoF.

Table 1.3.1: Net Lending/Borrowing and Debt

		2010	2011	2012	2013	2014	2015	2016	2017	2018 *Estimate*	2019 *Forecast*
General government balance	*% GDP*	**-4.2**	**-2.7**	**-3.9**	**-1.2**	**-2.1**	**-0.6**	**0.7**	**1.5**	**1.6**	**1.0**
	bill. CZK	-166	-110	-160	-51	-91	-28	35	78	83	57
Cyclical balance	*% GDP*	**-0.7**	**-0.3**	**-0.9**	**-1.5**	**-0.8**	**0.1**	**-0.1**	**0.6**	**0.6**	**0.5**
Cyclically adjusted balance	*% GDP*	**-3.5**	**-2.4**	**-3.1**	**0.2**	**-1.3**	**-0.7**	**0.8**	**1.0**	**1.0**	**0.6**
One-off measures [1]	*% GDP*	**0.1**	**-0.1**	**-1.9**	**-0.1**	**-0.5**	**-0.1**	**-0.1**	**0.0**	**-0.1**	**0.0**
Structural balance	*% GDP*	**-3.5**	**-2.3**	**-1.1**	**0.4**	**-0.8**	**-0.6**	**0.9**	**1.0**	**1.1**	**0.6**
Fiscal effort [2]	*pp*	0.6	1.2	1.2	1.5	-1.2	0.2	1.5	0.1	0.1	-0.5
Interest expenditure	*% GDP*	**1.3**	**1.3**	**1.4**	**1.3**	**1.3**	**1.1**	**0.9**	**0.7**	**0.7**	**0.7**
Primary balance	*% GDP*	**-2.9**	**-1.4**	**-2.5**	**0.1**	**-0.8**	**0.5**	**1.6**	**2.3**	**2.3**	**1.8**
Cyclically adjusted primary balance	*% GDP*	**-2.2**	**-1.1**	**-1.6**	**1.6**	**0.0**	**0.4**	**1.7**	**1.7**	**1.7**	**1.3**
General government debt	*% GDP*	**37.4**	**39.8**	**44.5**	**44.9**	**42.2**	**40.0**	**36.8**	**34.7**	**32.9**	**31.7**
	bill. CZK	1 480	1 606	1 805	1 840	1 819	1 836	1 755	1 750	1 750	1 774
Change in debt-to-GDP ratio	*pp*	3.8	2.5	4.6	0.4	-2.7	-2.2	-3.1	-2.1	-1.7	-1.2

[1] *One-off and temporary measures are such measures that have only a temporary impact on public budgets. Besides their temporary impact on overall balance, these measures are usually of non-recurring nature and very often result from the events that are beyond the direct power of the government.*
[2] *Change in structural balance.*
Source: CZSO. Calculations of the MoF.

1.4 Monetary Policy, Financial Sector and Exchange Rates

1.4.1 Monetary Policy

In Q4 2018, the CNB raised the **two-week repo rate** once in November by 0.25 pp to 1.75%. It responded not only to domestic inflationary pressures (wage and salary increases, strong domestic demand growth in the environment of a positive output gap), but also to renewed pro-inflationary effects of import prices (weaker koruna exchange rate and a rise in foreign prices).

Given the assumed future monetary policy stance and the expected appreciation of the koruna (see Chapter 1.4.3), monetary conditions in 2019 should tighten not only in the interest rate but also in the exchange rate component. In 2020, they should have almost a neutral effect.

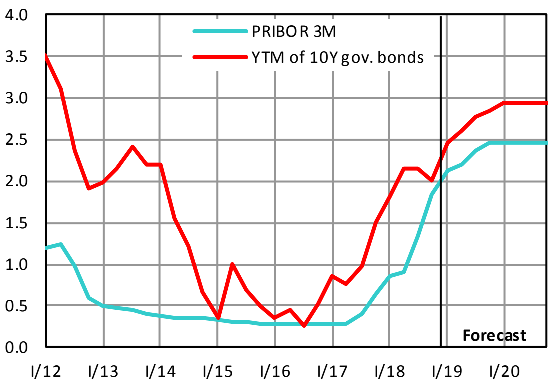
1.4.2 Financial Sector and Interest Rates

In line with the development of the CNB's monetary policy rates, the **three-month PRIBOR** rate increased to 1.8% (*versus 1.9%*) in Q4 2018, and the average for 2018 was 1.2% (*in line with the forecast*). We expect that the trend of rising short-term rates will continue and the three-month PRIBOR will average 2.1% (*versus 2.0%*) in Q1 2019. Due to the assumption of a faster increase in monetary-policy interest rates, the three-month PRIBOR could go up to an average 2.3% (*versus 2.1%*) in 2019 and further to 2.5% in 2020.

Compared with the previous quarter the **yield to maturity on ten-year government bonds** for convergence purposes declined slightly in Q4 2018 to 2.0% (*vs 2.4%*), but despite that it increased in year-on-year terms and averaged 2.0% (*versus 2.1%*) in 2018. Given the anticipated inflation and the monetary policy stance of the CNB and the ECB, we expect long-term interest rates to continue to rise. In 2019 they can reach 2.7% (*versus 2.6%*), then stabilize around 3.0% in 2020.

Graph 1.4.1: Interest Rates

in % p.a.

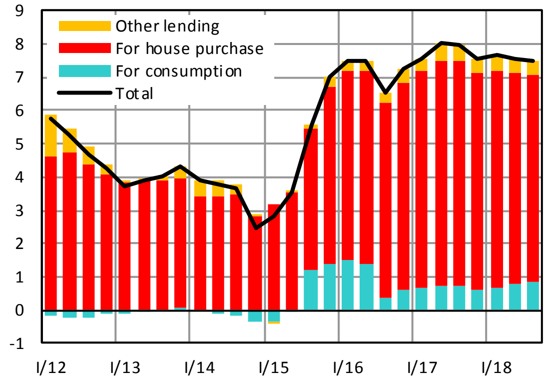


Source: CNB. Calculations of the MoF.

In Q3 2018 total **loans to households** grew by 7.5% YoY. Their dynamics have been above 7% since the end of 2016. Loans to households continue to be mainly driven by housing loans, which represent about 75% of total loans to households.

Graph 1.4.2: Loans to Households

YoY growth rate in%, contributions in pp



Source: CNB. Calculations of the MoF.

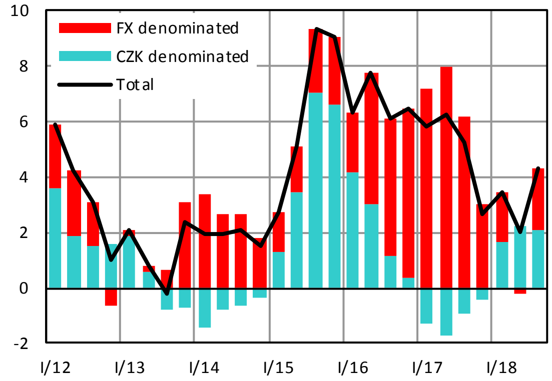
In addition to existing limits on the loan-to-value ratios the CNB's recommendation on the management of the risks associated with the provision of retail loans secured by residential real estate, effective since 1 October 2018, introduced limits on debt-to-income (should not exceed 9) and debt-service-to-income (should not exceed 45%) ratios. To a limited extent, however, banks may apply exceptions to these limits.

Following the publication of the CNB's recommendation in mid-June 2018, new bank loans to households for house purchase returned to double-digit growth, peaking at 31% in October 2018. The so-called front-loading effect, when households speeded up their loan decisions, and the time span between the offer of a mortgage agreement and its signing could be a possible explanation. Newly granted loans are reported in the month of signing the agreement, which is preceded – in the order of tens of days – by an offer from the loan provider. Therefore, the October statistics may contain loans that had been offered under the conditions before the CNB's recommendation took effect. A substantial slowdown in the growth of newly provided loans to households for the purchase of real estate in November 2018 to 4.5% supports this hypothesis.

Although the primary repo interest rate and money market rates have been rising since mid-2017, average client interest rates on the total volume of loans to households have been declining over the same period. Interest rates on new loans to households were higher by 0.3 pp in November 2018 compared to September.

The year-on-year growth in total **loans to non-financial corporations** was 4.3% in Q3 2018, driven by long-term loans in 2018. The volume of loans with a maturity over 1 year is 75%, with maturity over 5 years 50% of loans to non-financial corporations. Growth in koruna denominated loans slowed down slightly to 3.0% compared to the previous quarter, while loans denominated in foreign currencies accelerated to 7.5% and significantly contributed to the dynamics of total loans to non-financial corporations.

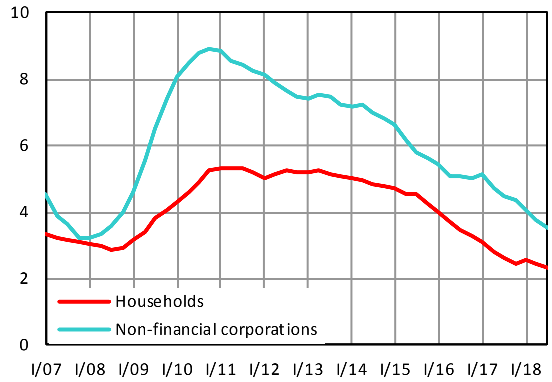
Graph 1.4.3: Loans to Non-financial Corporations
YoY growth rate in%, contributions in pp



Source: CNB. Calculations of the MoF.

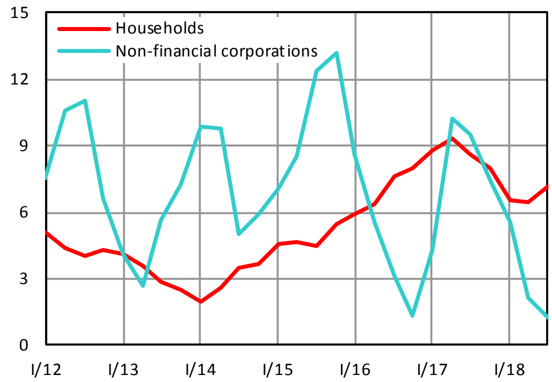
The **share of non-performing loans** in total loans reflects the positive economic development. For households the ratio dropped to 2.3% in Q3 2018. For non-financial corporations it was down to 3.5%, though it did not decline further in October and November 2018. On the other hand, however, the risk level of currently provided loans cannot be deduced from this indicator.

Graph 1.4.4: Non-performing Loans
ratio of non-performing to total loans, in%



Source: CNB. Calculations of the MoF.

Graph 1.4.5: Deposits
YoY growth rate, in%



Source: CNB. Calculations of the MoF.

In Q3 2018 the year-on-year growth in **deposits** of non-financial corporations and households reached 1.3% and 7.2%, respectively. In the case of the latter, growth accelerated also in November and December 2018 (7.6% and 8.0%, respectively). In terms of the capacity to finance future consumption and investment from own resources, the continued growth in deposits may be assessed positively.

1.4.3 Exchange Rates

During Q4 2018 the koruna initially weakened to just above CZK 26.0/EUR in the middle of November, but then started to strengthen. Despite the growing interest rate differential with the euro area, the exchange rate depreciated by 0.6% YoY to an average of CZK 25.8/EUR (*versus CZK 25.4/EUR*) in Q4. As at the cut-off date of the forecast the koruna traded close to CZK 25.6/EUR. However, other currencies in the region also weakened (Polish zloty and Hungarian forint). This is probably the result of investors withdrawing from Central and Eastern Europe due to rising interest rates in the US and heightened risk aversion, which could have been due to fears of a rise in protectionism. Nevertheless, the average exchange rate of the koruna against the euro in 2018 was 2.7% stronger than in the previous year – on average the koruna traded at CZK 25.6/EUR (*versus CZK 25.5/EUR*).

Given the ongoing real convergence, the expected development of labour productivity and the positive interest rate differential between the Czech Republic and the euro area, the koruna should strengthen. However, given the aforementioned behaviour of investors, we expect the average exchange rate to reach CZK 25.7/EUR (*versus CZK 25.4/EUR*) in Q1 2019. For the entire year 2019, the koruna should strengthen by 0.5% YoY to CZK 25.5EUR (*versus CZK 24.9/EUR*) and by 1.8% in 2020, i.e. to CZK 25.1/EUR. Renewed closing of investors' positions denominated in Central and Eastern European currencies, which may be less attractive for investors due to rising interest rates in the US and the exchange rate risk, could impact the CZK/EUR exchange rate in the direction of a weaker koruna.

The expected development of the koruna against the US dollar is implied by the USD/EUR exchange rate, for which a technical assumption of stability at USD 1.14/EUR was adopted (average of 10 business days preceding the cut-off date for forecast assumptions).

Table 1.4.1: Interest Rates – yearly
average of period, unless stated otherwise

		2011	2012	2013	2014	2015	2016	2017	2018	2019 *Forecast*	2020 *Forecast*
Repo 2W rate CNB (*end of period*)	*in % p.a.*	0.75	0.05	0.05	0.05	0.05	0.05	0.50	1.75	.	.
Main refinancing rate ECB (*end of period*)	*in % p.a.*	1.00	0.75	0.25	0.05	0.05	0.05	0.00	0.00	.	.
Federal funds rate (*end of period*)	*in % p.a.*	0.25	0.25	0.25	0.25	0.50	0.75	1.50	2.25	.	.
PRIBOR 3M	*in % p.a.*	1.19	1.00	0.46	0.36	0.31	0.29	0.41	1.23	2.3	2.5
YTM of 10Y government bonds	*in % p.a.*	3.63	2.73	2.19	1.41	0.63	0.40	1.03	2.03	2.7	3.0
Client interest rates											
Loans to households	*in % p.a.*	6.84	6.47	6.05	5.59	5.15	4.65	4.10	.	.	.
Loans to non-financial corporations	*in % p.a.*	3.94	3.72	3.20	3.01	2.78	2.59	2.57	.	.	.
Deposits of households	*in % p.a.*	1.20	1.18	1.02	0.85	0.65	0.47	0.36	.	.	.
Deposits of non-financial corporations	*in % p.a.*	0.51	0.56	0.41	0.29	0.19	0.10	0.05	.	.	.

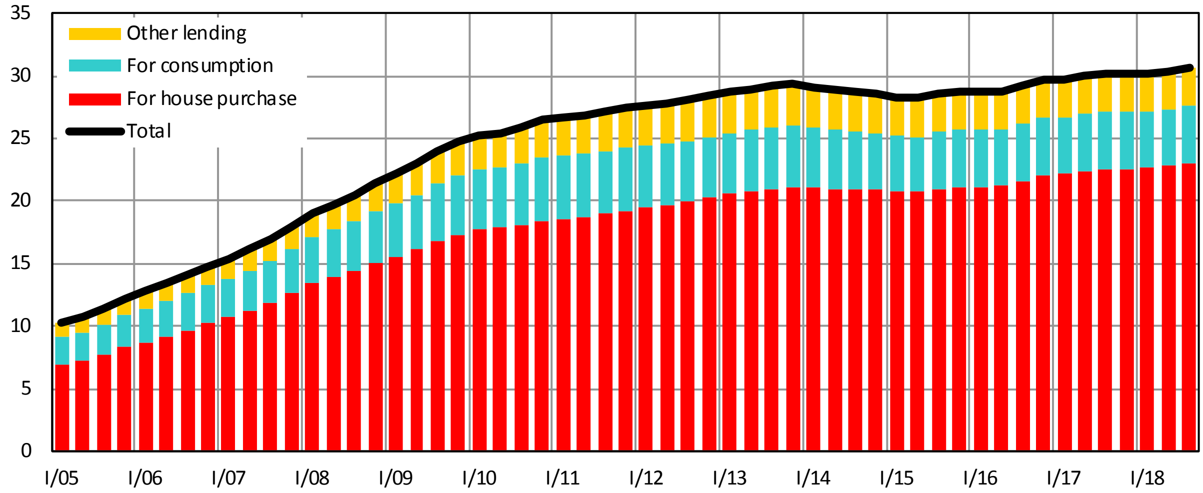
Source: CNB, ECB, Fed. Calculations of the MoF.

Table 1.4.2: Interest Rates – quarterly
average of period, unless stated otherwise

		2018				2019			
		Q1	Q2	Q3	Q4	Q1 *Forecast*	Q2 *Forecast*	Q3 *Forecast*	Q4 *Forecast*
Repo 2W rate CNB (*end of period*)	*in % p.a.*	0.75	1.00	1.50	1.75	.	.	.	.
Main refinancing rate ECB (*end of period*)	*in % p.a.*	0.00	0.00	0.00	0.00	.	.	.	.
Federal funds rate (*end of period*)	*in % p.a.*	1.75	2.00	2.00	2.25	.	.	.	.
PRIBOR 3M	*in % p.a.*	0.86	0.92	1.33	1.83	2.1	2.2	2.4	2.5
YTM of 10Y government bonds	*in % p.a.*	1.81	2.14	2.14	2.01	2.5	2.6	2.8	2.9
Client interest rates									
Loans to households	*in % p.a.*	3.85	3.78	3.73	.	.	.	.	.
Loans to non-financial corporations	*in % p.a.*	2.81	2.88	3.06	.	.	.	.	.
Deposits of households	*in % p.a.*	0.33	0.32	0.32	.	.	.	.	.
Deposits of non-financial corporations	*in % p.a.*	0.05	0.09	0.13	.	.	.	.	.

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

Graph 1.4.6: Loans to Households
in % of GDP (from yearly moving sums)



Source: CNB, CZSO. Calculations of the MoF.

Table 1.4.3: Loans and Deposits – yearly averages

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Households											
Loans	*growth in %*	**29.2**	**16.5**	**8.9**	**6.6**	**5.0**	**4.0**	**3.4**	**4.8**	**7.2**	**7.8**
For consumption	*growth in %*	25.7	16.4	7.3	4.2	-1.0	-0.1	-0.9	3.4	6.0	4.3
For house purchase	*growth in %*	30.8	15.5	8.9	6.5	6.4	5.5	4.5	5.6	8.1	9.0
Other lending	*growth in %*	24.9	23.9	11.6	11.1	6.0	1.2	2.9	1.0	3.0	4.2
CZK denominated	*growth in %*	29.3	16.5	8.8	6.6	4.9	4.0	3.4	4.7	7.2	7.7
FX denominated	*growth in %*	-8.9	0.1	31.0	2.4	30.8	-1.3	0.0	12.7	8.5	36.3
Deposits	*growth in %*	**10.0**	**10.2**	**5.1**	**5.0**	**4.5**	**3.3**	**2.9**	**4.8**	**7.0**	**8.7**
CZK denominated	*growth in %*	10.7	10.1	5.6	5.4	4.7	3.3	2.7	4.1	6.9	9.7
FX denominated	*growth in %*	-3.4	13.1	-6.8	-4.0	-2.1	2.3	8.5	22.5	7.3	-13.9
Non-performing loans *(banking statistics)*	*share, in %*	**3.0**	**3.6**	**4.8**	**5.3**	**5.2**	**5.2**	**4.9**	**4.5**	**3.6**	**2.7**
Loans to deposits ratio	*in %*	**56**	**59**	**61**	**62**	**63**	**63**	**63**	**63**	**63**	**63**
Non-financial corporations											
Loans	*growth in %*	**15.9**	**1.9**	**-5.2**	**4.7**	**3.5**	**1.3**	**1.9**	**6.5**	**6.6**	**5.0**
CZK denominated	*growth in %*	18.7	0.5	-5.2	4.9	2.6	0.3	-1.0	5.9	2.8	-1.4
FX denominated	*growth in %*	3.4	9.1	-5.4	3.7	7.8	5.7	13.7	9.0	20.5	24.4
Deposits	*growth in %*	**5.1**	**-2.2**	**5.5**	**0.4**	**8.9**	**4.9**	**7.6**	**10.3**	**4.6**	**7.8**
CZK denominated	*growth in %*	6.4	-3.2	6.9	2.0	8.2	4.2	5.6	6.7	4.5	13.9
FX denominated	*growth in %*	0.5	1.6	0.2	-6.1	11.8	8.0	15.2	23.2	4.8	-11.1
Non-performing loans *(banking statistics)*	*share, in %*	**3.5**	**6.0**	**8.6**	**8.5**	**7.8**	**7.4**	**7.0**	**6.0**	**5.2**	**4.7**
Loans to deposits ratio	*in %*	**129**	**135**	**121**	**126**	**120**	**116**	**110**	**106**	**108**	**105**

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

		2016	2017				2018		
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Households									
Loans	*growth in %*	**7.2**	**7.6**	**8.0**	**8.0**	**7.6**	**7.7**	**7.6**	**7.5**
For consumption	*growth in %*	3.7	4.2	4.6	4.5	3.9	4.2	5.2	5.8
For house purchase	*growth in %*	8.5	8.9	9.2	9.2	8.8	8.8	8.5	8.3
Other lending	*growth in %*	3.5	3.7	4.7	4.4	4.1	4.7	4.4	4.3
CZK denominated	*growth in %*	7.2	7.6	7.9	7.9	7.5	7.7	7.6	7.5
FX denominated	*growth in %*	-2.0	12.0	48.5	49.4	35.8	11.1	-10.8	-0.9
Deposits	*growth in %*	**8.0**	**8.8**	**9.3**	**8.6**	**8.0**	**6.6**	**6.4**	**7.2**
CZK denominated	*growth in %*	8.2	9.4	10.6	9.8	8.9	7.1	6.4	7.2
FX denominated	*growth in %*	3.1	-5.6	-18.7	-17.3	-13.7	-7.3	7.8	6.9
Non-performing loans *(banking statistics)*	*share, in %*	**3.3**	**3.1**	**2.8**	**2.6**	**2.4**	**2.6**	**2.4**	**2.3**
Loans to deposits ratio	*in %*	**64**	**62**	**62**	**63**	**64**	**63**	**63**	**63**
Non-financial corporations									
Loans	*growth in %*	**6.4**	**5.8**	**6.3**	**5.3**	**2.6**	**3.5**	**2.0**	**4.3**
CZK denominated	*growth in %*	0.5	-1.7	-2.3	-1.2	-0.5	2.3	3.2	3.0
FX denominated	*growth in %*	27.1	31.1	32.6	24.8	11.5	6.3	-0.7	7.5
Deposits	*growth in %*	**1.3**	**4.3**	**10.2**	**9.5**	**7.4**	**5.6**	**2.2**	**1.3**
CZK denominated	*growth in %*	2.4	8.5	19.8	15.6	12.0	6.8	0.2	-0.1
FX denominated	*growth in %*	-2.2	-8.8	-18.0	-9.4	-7.8	1.0	10.7	6.9
Non-performing loans *(banking statistics)*	*share, in %*	**5.0**	**5.1**	**4.7**	**4.5**	**4.3**	**4.0**	**3.8**	**3.5**
Loans to deposits ratio	*in %*	**109**	**105**	**104**	**106**	**104**	**103**	**104**	**109**

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

		2013	2014	2015	2016	2017	2018 Estimate	2019 Forecast	2020 Forecast	2021 Outlook	2022 Outlook
Nominal exchange rates											
CZK / EUR	*average*	**25.97**	**27.53**	**27.28**	**27.03**	**26.33**	**25.65**	**25.5**	**25.1**	**24.6**	**24.2**
	appreciation in %	-3.2	-5.7	0.9	0.9	2.7	2.7	0.5	1.8	1.8	1.9
CZK / USD	*average*	**19.56**	**20.75**	**24.60**	**24.43**	**23.39**	**21.74**	**22.4**	**22.0**	**21.6**	**21.2**
	appreciation in %	0.1	-5.7	-15.7	0.7	4.5	7.6	-2.9	1.8	1.8	1.9
NEER	*average of 2015=100*	**106.4**	**100.8**	**100.0**	**102.4**	**105.4**	**109.3**	**110**	**112**	**114**	**116**
	appreciation in %	-2.3	-5.2	-0.8	2.4	2.9	3.7	0.3	1.8	1.8	1.9
Real exchange rate to EA19 [1]	*average of 2010=100*	**96.8**	**92.7**	**93.3**	**94.6**	**97.5**	**101**	**102**	**104**	**106**	**109**
	appreciation in %	-3.0	-4.2	0.7	1.4	3.0	3.6	1.4	1.9	2.0	2.1
REER [2]	*average of 2010=100*	**96.9**	**91.8**	**91.2**	**93.6**	**97.2**	**.**	**.**	**.**	**.**	**.**
	appreciation in %	-2.3	-5.2	-0.7	2.6	3.9	.	.	.	.	.

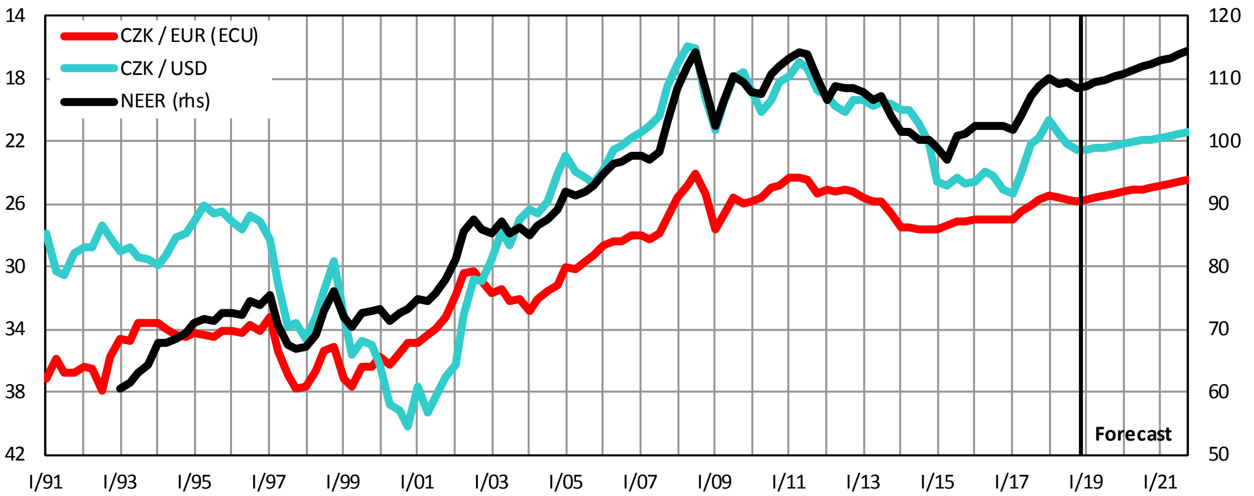
[1] *Deflated by GDP deflators.*
[2] *Eurostat calculations, deflated by CPI, versus 42 countries.*
Source: CNB, Eurostat. Calculations of the MoF.

Table 1.4.6: Exchange Rates – quarterly

		2018 Q1	2018 Q2	2018 Q3	2018 Q4 Estimate	2019 Q1 Forecast	2019 Q2 Forecast	2019 Q3 Forecast	2019 Q4 Forecast
Nominal exchange rates									
CZK / EUR	*average*	**25.40**	**25.60**	**25.76**	**25.81**	**25.7**	**25.6**	**25.5**	**25.4**
	appreciation in %	6.4	3.6	1.3	-0.6	-1.2	0.1	1.1	1.8
CZK / USD	*average*	**20.66**	**21.51**	**22.19**	**22.50**	**22.5**	**22.4**	**22.3**	**22.2**
	appreciation in %	22.8	12.0	0.0	-3.1	-8.3	-4.1	-0.7	1.1
NEER	*average of 2015=100*	**110.1**	**109.3**	**109.4**	**108.5**	**109**	**109**	**110**	**110**
	appreciation in %	8.0	5.1	2.1	-0.3	-1.1	0.1	0.5	1.7
Real exchange rate to EA19 [1]	*average of 2010=100*	**101.9**	**100.9**	**100.6**	**101**	**102**	**102**	**103**	**103**
	appreciation in %	7.6	4.7	2.0	0.2	0.1	1.3	1.8	2.3
REER [2]	*average of 2010=100*	**102.3**	**101.4**	**101.6**	**.**	**.**	**.**	**.**	**.**
	appreciation in %	9.1	6.1	2.9	.	.	.	.	.

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

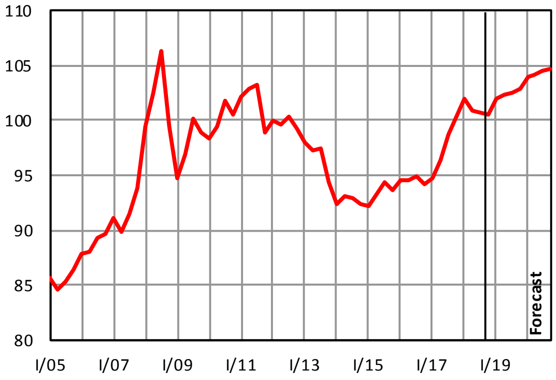
Graph 1.4.7: Nominal Exchange Rates
quarterly averages, average 2015=100 (rhs)



Source: CNB. Calculations of the MoF.

Graph 1.4.8: Real Exchange Rate to EA19

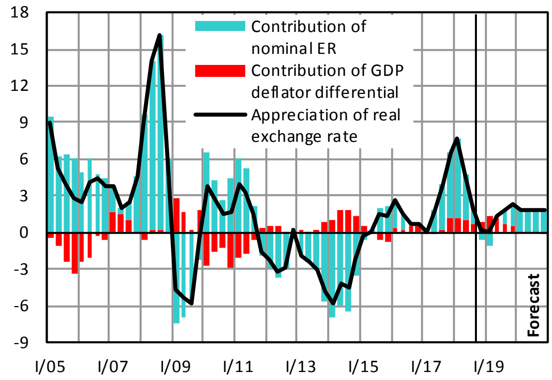
quarterly averages, deflated by GDP deflators, average 2010=100



Source: CNB, Eurostat. Calculations of the MoF.

Graph 1.4.9: Real Exchange Rate to EA19

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



Source: CNB, Eurostat. Calculations of the MoF.

1.5 Structural Policies

In connection with possible withdrawal of the United Kingdom from the EU without an agreement, the Government adopted, on 7 January 2019, a **draft law regulating certain relations in connection with the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union**. In the transition period between 30 March 2019 and 31 December 2020, the bill provides legal certainty for British citizens in the Czech Republic (stay, marriage, acquisition of citizenship of the CR, access to the labour market, recognition of professional qualifications, public health insurance, existing supplementary pension insurance, building savings, etc.).

An **amendment to the Value Added Tax Act**, signed by the President of the CR on 27 December 2018, transfers fares on trains, buses and cableways from the first to the second reduced rate. The amendment will come into effect on 1 February 2019.

On 21 December 2018, the Chamber of Deputies passed the **Act amending certain tax-related acts**. The new legal regulation doubles the limit for the use of lump-sum expenditure for self-employed persons to CZK 2 million. At the same time, it transfers value added tax on heat and cold from the first to the second reduced rate. Last but not least, it introduces excise duty on heated tobacco products. The law will enter into effect on 1 January 2020, but the new excise duty will be effective from the first day of the calendar month following the day of its publication in the Collection of Laws.

Rules introduced by an **amendment to the Act on Pension Insurance** came into force on 1 January 2019. The amendment increased the basic rate for newly granted pensions and pensions already being paid from 9% to 10% of the average wage and at the same time increased monthly pensions to pensioners who are at least 85 years of age by CZK 1,000.

An **amendment to the Social Services Act**, passed by the Chamber of Deputies on 7 December 2018, increases the monthly allowance for home care for people with the most severe disability by CZK 6,000 and the severely disabled by CZK 4,000. The amendment should become effective on the first day of the second calendar month after its publication.

A **government regulation on the minimum wage** entered into effect on 1 January 2019. The minimum wage thus increased by 9.4% YoY to CZK 13,350 per month, and the lowest levels of guaranteed wage increased by approx. 9.4%.

1.6 Demographic Trends

Population of the Czech Republic has seen a moderate but steady long-term increase. At the end of September 2018 10.638 million people lived in the Czech Republic. Population increased by 37.0 thousand YoY, i.e. by 0.3%, and by 27.7 thousand during January to September 2018.

This increase was mainly due to a **positive net migration** of 26.1 thousand persons with a year-on-year increase of 7.3 thousand. While 43.1 thousand persons moved from abroad to the Czech Republic (10.4 thousand more YoY), 17.0 thousand persons moved out from the Czech Republic. The highest net migration balance was seen with the citizens of Ukraine (8.9 thousand) and of Slovakia (3.9 thousand).

The difference between the number of **births and deaths** of 1.6 thousand persons also contributed positively to population growth. The number of live births (86.6 thousand) and the number of deaths (85.0 thousand) roughly corresponded to the same period of the previous year.

In November 2018, the CZSO published a **new demographic projection**, the medium variant of which is the basis for the forecast of population developments. The new projection sounds significantly less pessimistic than the previous population projection from 2013, but it continues to be true that the aging process is a reality that affects both economic and social development.

The main cause of the less pessimistic scenario is a high increase in total fertility rate in recent years (see Table 1.6.1). The total fertility rate in 2017 reached 1.687 (*versus 1.458 in the previous projection*), and it should be maintained at this or a slightly higher value throughout the projection period.

Also, the assumption of a positive balance of migration at constant 26 thousand per year (*versus 10–17 thousand*) has been increased, while life expectancy at birth has been decreased, particularly for women. Yet, it should reach 91 years in 2100, and almost 87 years for men. The result of the medium variant should be a stable size of the Czech population until around 2060, while the previous projection indicated a decrease of about 1.3 million inhabitants in that period.

From the economic point of view, the demographic dependency rate (the ratio of the population over the age of 64 to the working age population of 15 to 64 years) is an important indicator of projection. That should increase slightly from the current 29.6% to 35.5% (*versus 37.9%*) in 2030, until when the current mode of increasing the retirement age is valid. However, there should be a significant acceleration before 2040 and the highest dependency rate of 54.2% (*versus 63.5%*) should be achieved in 2059.

The increasing number of **old-age pensioners** is currently lower than would correspond to demographic development and postponement of the statutory retirement age, probably due to the economic boom. At the end of September 2018, a total of 2.409 million old-age pensioners were clients of the pension system, i.e., 22.7% of the Czech population. The YoY increase was 12.3 thousand persons, i.e. 0.5%. Because the increase in the number of old-age pensioners lags behind the growth of employment, there has been a notable decrease in the effective rate of dependence by 2.2 pp. (see Graph 1.6.5) since 2012, which is one of the factors for improving the balance of the pension account.

Table 1.6.1: Demographics

in thousands of persons (unless stated otherwise)

	2013	2014	2015	2016	2017	2018 *Estimate*	2019 *Forecast*	2020 *Forecast*	2021 *Outlook*	2022 *Outlook*
Population (as of 1 January)	**10 516**	**10 512**	**10 538**	**10 554**	**10 579**	**10 610**	**10 649**	**10 674**	**10 697**	**10 717**
growth in %	0.1	0.0	0.2	0.1	0.2	0.3	0.4	0.2	0.2	0.2
0–14 years	**1 560**	**1 577**	**1 601**	**1 624**	**1 647**	**1 671**	**1 693**	**1 709**	**1 718**	**1 719**
growth in %	1.2	1.1	1.5	1.4	1.5	1.4	1.4	0.9	0.5	0.1
15–64 years	**7 188**	**7 109**	**7 057**	**6 998**	**6 943**	**6 899**	**6 868**	**6 831**	**6 801**	**6 779**
growth in %	-1.0	-1.1	-0.7	-0.8	-0.8	-0.6	-0.5	-0.5	-0.4	-0.3
65 and more years	**1 768**	**1 826**	**1 880**	**1 932**	**1 989**	**2 040**	**2 089**	**2 134**	**2 178**	**2 219**
growth in %	3.9	3.3	3.0	2.8	2.9	2.6	2.4	2.2	2.1	1.9
Old-age pensioners (as of 1 January) [1]	**2 341**	**2 340**	**2 355**	**2 377**	**2 395**	**2 403**	**2 412**	**2 418**	**2 421**	**2 420**
growth in %	0.0	0.0	0.6	0.9	0.8	0.3	0.4	0.3	0.1	0.0
Old-age dependency ratios (as of 1 January, in %)										
Demographic [2]	**24.6**	**25.7**	**26.6**	**27.6**	**28.6**	**29.6**	**30.4**	**31.2**	**32.0**	**32.7**
Under current legislation [3]	**38.3**	**38.8**	**39.3**	**39.8**	**40.1**	**40.4**	**40.5**	**40.6**	**40.7**	**40.7**
Effective [4]	**47.6**	**47.2**	**46.9**	**46.8**	**46.2**	**45.7**	**45.5**	**45.5**	**45.4**	**45.4**
Fertility rate (*number of children*)	**1.456**	**1.528**	**1.570**	**1.630**	**1.687**	**1.69**	**1.69**	**1.70**	**1.70**	**1.70**
Population increase	**-4**	**26**	**16**	**25**	**31**	**39**	**25**	**23**	**20**	**17**
Natural increase	**-2**	**4**	**0**	**5**	**3**	**1**	**-1**	**-3**	**-6**	**-9**
Live births	107	110	111	113	114	113	111	109	107	105
Deaths	109	106	111	108	111	111	112	112	113	114
Net migration	**-1**	**22**	**16**	**20**	**28**	**38**	**26**	**26**	**26**	**26**
Immigration	30	42	35	38	46	.	.	.	.	.
Emigration	31	20	19	17	18	.	.	.	.	.

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

[2] *Demographic dependency: ratio of people in senior ages (65 and more) to people in productive age (15–64).*

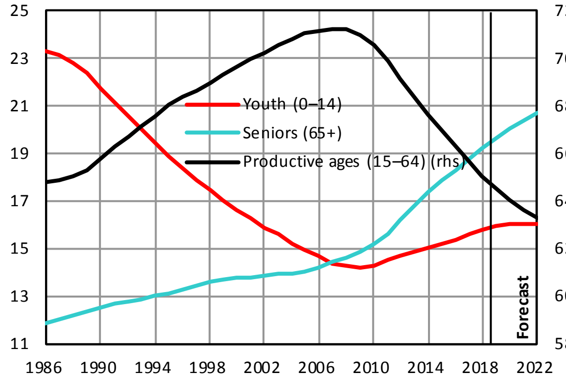
[3] *Dependency under current legislation: ratio of people above the official retirement age to the people over 19 below the official retirement age.*

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

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

Graph 1.6.1: Age Groups

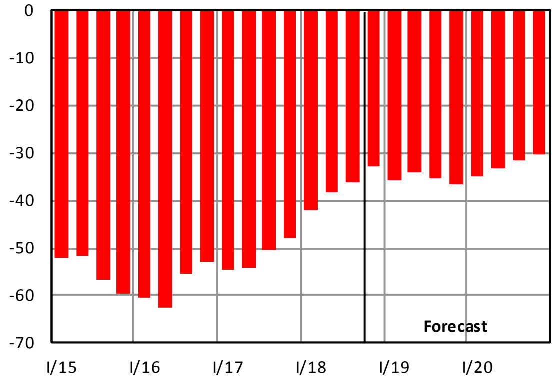
shares on total population, in %



Source: CZSO. Calculations of the MoF.

Graph 1.6.2: Population Aged 15–64

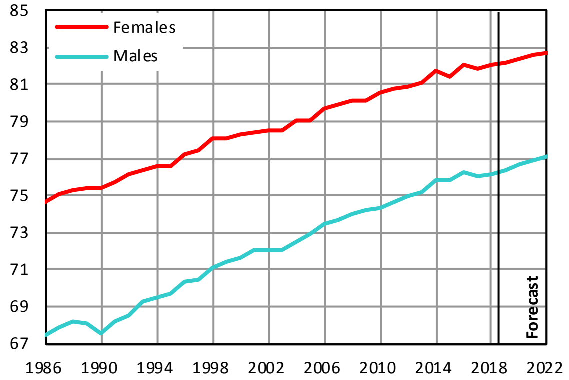
based on LFS, YoY increases of quarterly averages, in thousands



Source: CZSO. Calculations of the MoF.

Graph 1.6.3: Life Expectancy at Birth

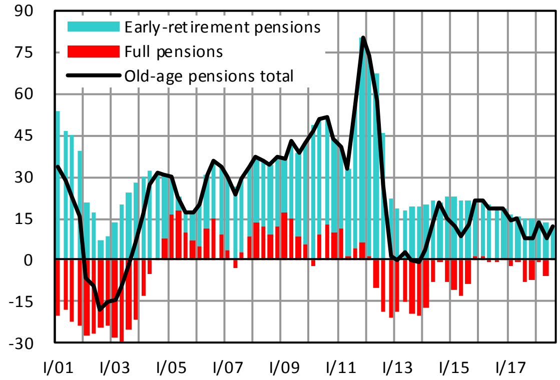
in years



Note: Change in methodology since 2017.
Source: CZSO.

Graph 1.6.4: Old-Age Pensioners

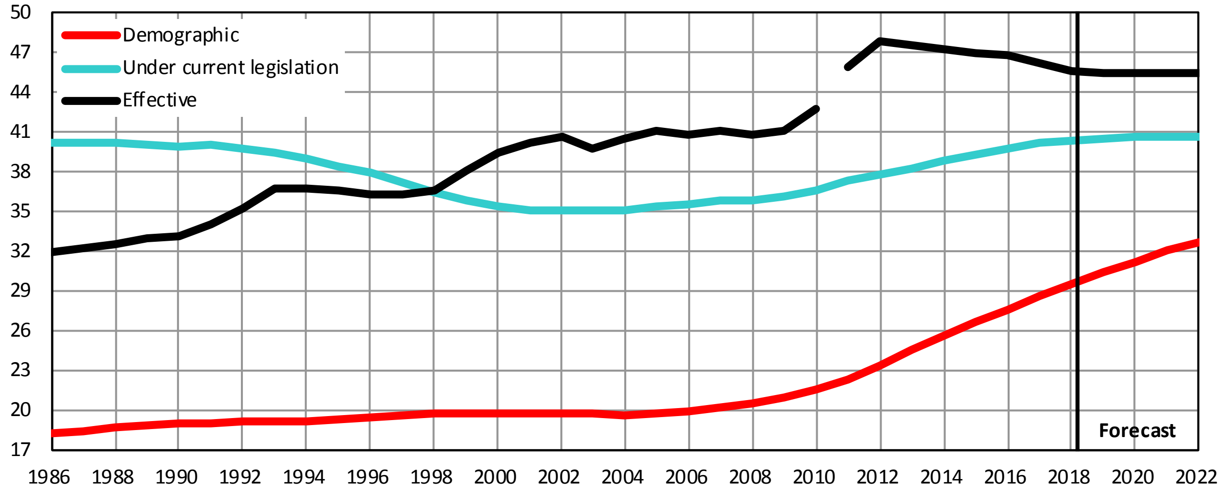
absolute increase over a year in thousands of persons



Note: Adjusted for the transfer of disability pensions to old-age pensions for people over 64 years in 2010.
Source: Czech Social Security Administration, CZSO. Calculations of the MoF.

Graph 1.6.5: Dependency Ratios

As of January 1, in %, inconsistent between 2010 and 2011 due to transfer of disability pensions to old-age pensions for people over 64 years



Source: CZSO. Calculations of the MoF.

2 Economic Cycle

2.1 Position within the Economic Cycle

In 2018 the Czech economy has been in a **positive output gap** for the second year. The positive output gap reached 1.4% of potential output in Q3 2018 (see Graph 2.1.1). Compared to the peak in Q2 2017, it declined by 0.6 pp. Due to the expected economic growth and anticipated development of the potential product the output gap should gradually decrease in the future and should be headed towards closing in the outlook horizon.

The positive output gap is most evident in the **labour market** (see Chapter 3.3). In Q3 2018 the unemployment rate reached 2.3%, which is an extremely low value in terms of comparison both over time and with other EU countries. The number of vacancies (according to data of the Ministry of Labour and Social Affairs) continues to increase dramatically year-on-year and exceeded the number of registered unemployed persons by two fifths in December 2018. Lack of workers is a strong barrier to the economic expansion.

We estimate that the year-on-year **potential product** growth in Q3 2018 was 2.8%, thus exceeding by 0.3 pp the average growth rate of gross value added (as well as of the potential output) over the period since 1995.

The main driver of potential growth is **total factor productivity**. The contribution of its trend component reached 1.9 pp in Q3 2018, which was the same as in the previous three quarters.

Labour supply is influenced by population ageing (see Chapter 1.6). This is reflected, among other things, by the long-lasting decline in the size of working-age population (15–64 years), which took 0.3 pp away from the year-on-year potential output growth in Q3 2018.

However, the negative impact of population ageing on the labour supply is largely outweighed by a dynamic **increase in participation rate**, which leads to growth of the labour force in the economy. Structural factors – an increase in the number of inhabitants in age groups with naturally high participation and raising the statutory and effective retirement age, as well as higher labour force demand – are predominating here. In Q3 2018, the contribution of the participation rate to potential product growth reached 0.6 pp.

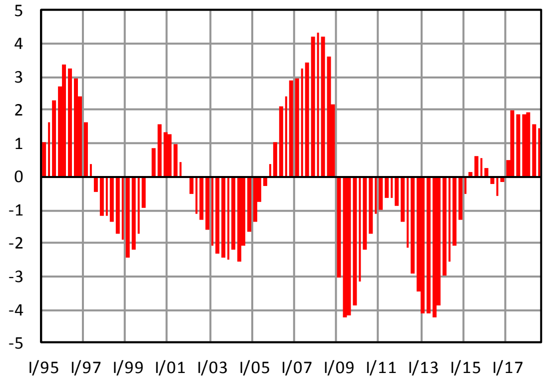
The high growth in gross fixed capital formation in the first three quarters of 2018 led to an increase in the contribution of **the capital stock** to 0.6 pp. Such a value corresponds to the average over the period 2008–2017.

Table 2.1.1: Output Gap and Potential Product

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018 Q1-3
Output gap	%	-3.8	-2.1	-0.8	-2.5	-4.1	-2.2	0.2	-0.2	1.6	1.6
Potential product [1)]	growth in %	2.0	0.8	0.7	0.9	1.2	1.4	2.3	2.7	2.6	2.8
Contributions											
Trend total factor productivity	pp	1.1	0.6	0.4	0.4	0.7	1.2	1.7	1.9	2.0	1.9
Fixed assets	pp	0.8	0.6	0.6	0.5	0.4	0.4	0.6	0.6	0.5	0.6
Demography [2)]	pp	0.1	-0.2	-0.4	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.3
Participation rate	pp	0.3	0.1	0.3	0.8	1.0	0.5	0.5	0.7	0.7	0.6
Usually worked hours	pp	-0.3	-0.3	-0.2	-0.3	-0.3	-0.2	-0.1	-0.1	-0.1	0.0

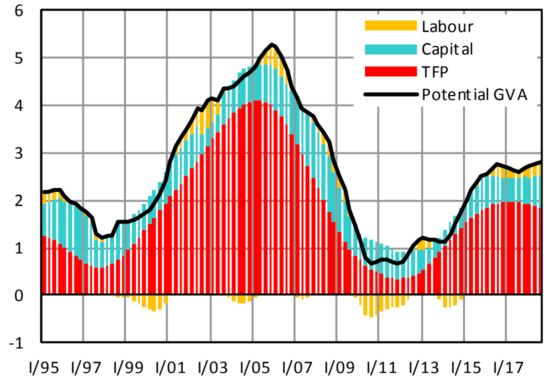
[1)] *Based on gross value added.*
[2)] *Contribution of growth of working-age population (15–64 years).*
Source: CZSO. Calculations of the MoF.

Graph 2.1.1: Output Gap
in % of potential product



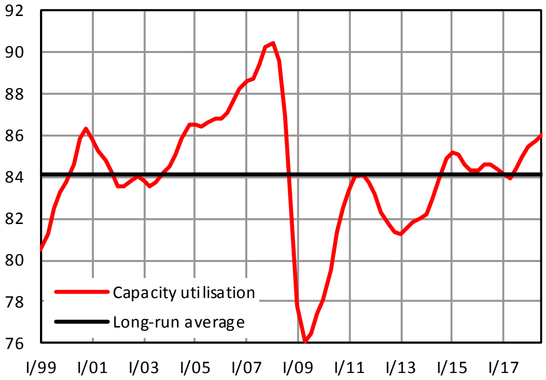
Source: CZSO. Calculations of the MoF.

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



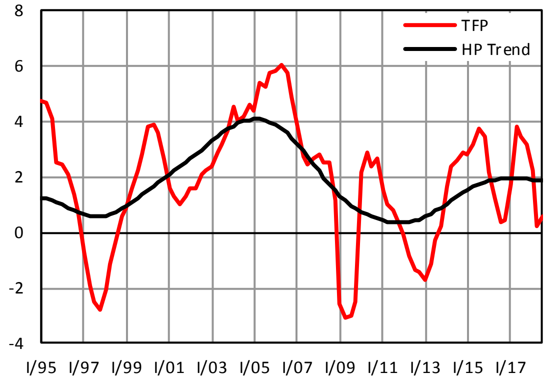
Source: CZSO. Calculations of the MoF.

Graph 2.1.3: Capacity Utilisation in Industry
smoothed by Hodrick-Prescott filter, in %



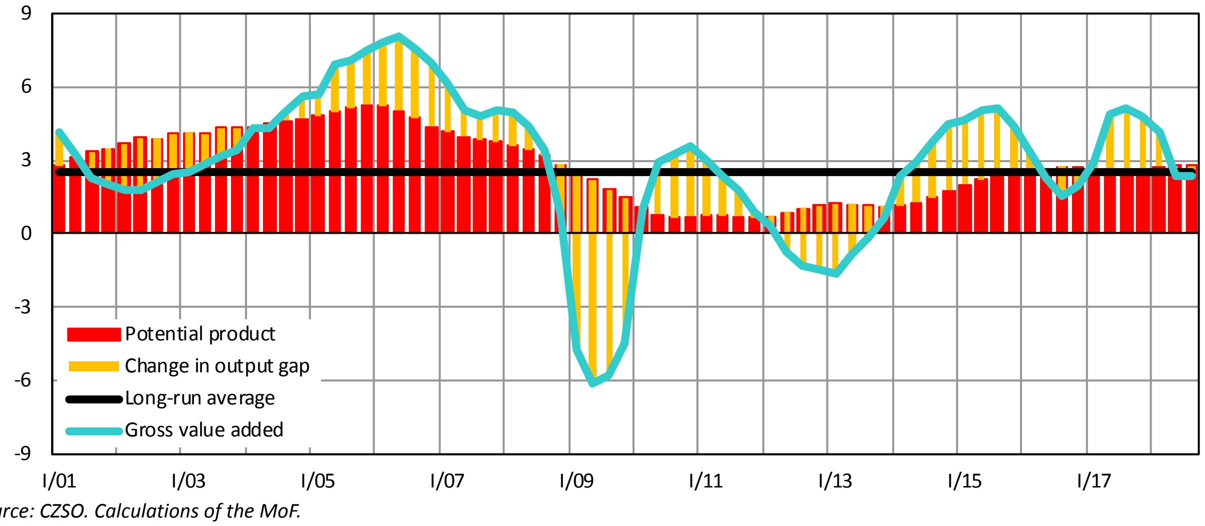
Source: CZSO.

Graph 2.1.4: Total Factor Productivity
YoY growth rate, in %



Source: CZSO. Calculations of the MoF.

Graph 2.1.5: Decomposition of the Growth in Gross Value Added – Business Cycle Perspective
YoY growth rate in %, contributions in percentage points



Source: CZSO. Calculations of the MoF.

2.2 Business Cycle Indicators

Developments in confidence indicators in Q4 2018 indicate that the year-on-year dynamics of gross value added in industry was likely sustained, recovery in construction continued and that the year-on-year growth in gross value added in trade and services accelerated (see Graphs 2.2.1–2.2.3).

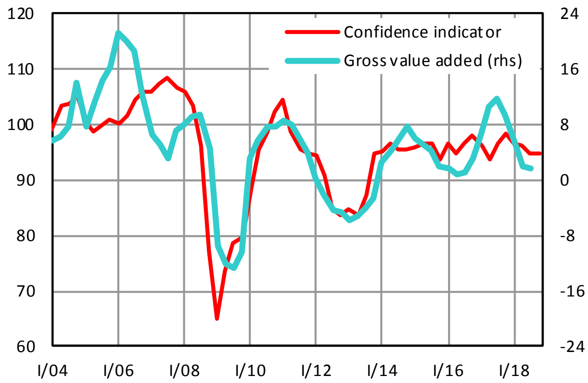
The consumer confidence indicator declined again in Q4 2018, but due to still high levels and a lead of 1–2 quarters, it signals that dynamics of final consumption expenditures were likely preserved in early 2019.

Individual confidence indicators thus largely offset each other and the overall confidence indicator was virtually unchanged, indicating that the year-on-year growth of gross value added was stable in Q4 2018.

The composite leading indicator shows that the positive output gap roughly stabilized in Q4 2018. For Q1 2019, however, it already indicates its steep narrowing, which may be the signal of a beginning of the downward phase of the business cycle.

Graph 2.2.1: Confidence and GVA in Industry

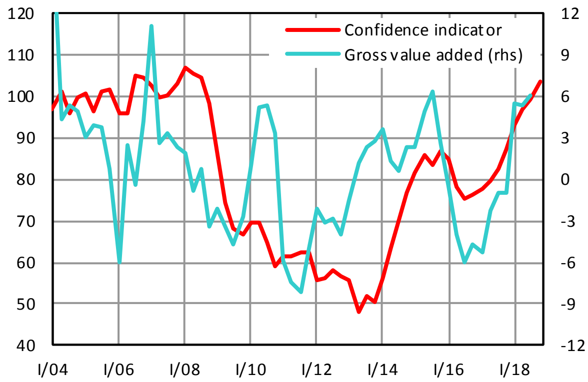
2005=100 (lhs), YoY growth in % (rhs)



Source: CZSO.

Graph 2.2.2: Confidence and GVA in Construction

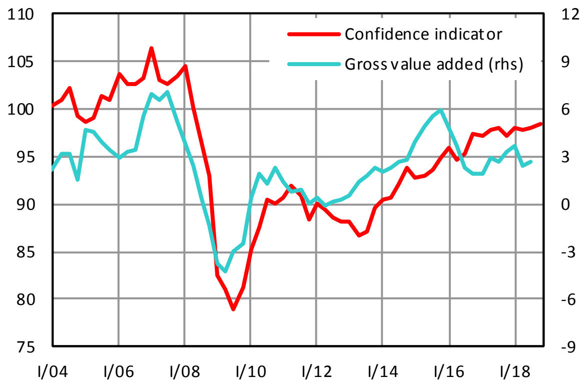
2005=100 (lhs), YoY growth in % (rhs)



Source: CZSO.

Graph 2.2.3: Confidence and GVA in Trade and Services

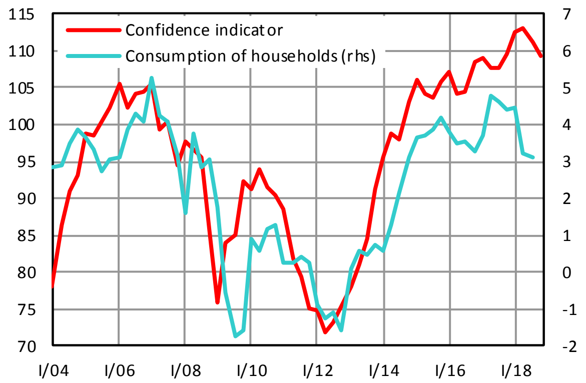
2005=100 (lhs), YoY growth in % (rhs)



Source: CZSO. Calculations of the MoF.

Graph 2.2.4: Consumer Confidence and Consumption

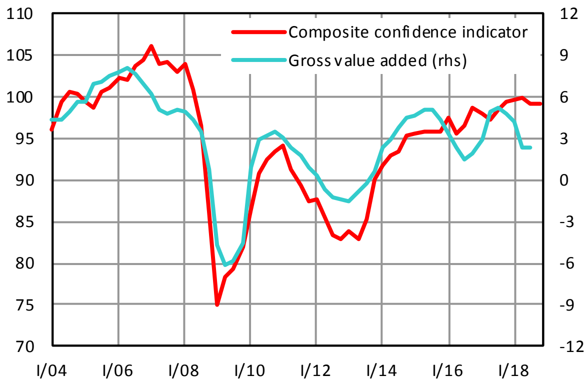
2005=100 (lhs), YoY growth in % (rhs)



Source: CZSO.

Graph 2.2.5: Composite Confidence Indicator and GVA

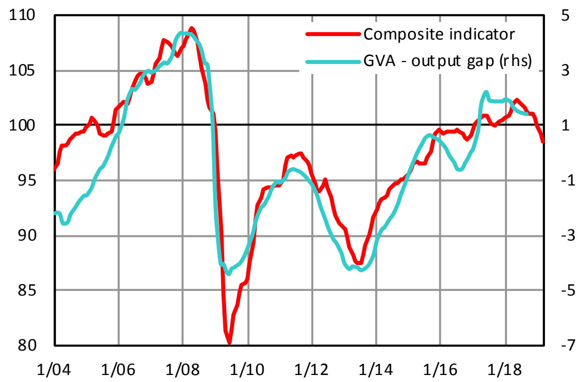
2005=100 (lhs), YoY growth in % (rhs)



Source: CZSO.

Graph 2.2.6: Composite Leading Indicator

2005=100 (lhs), in % of GVA (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 Third Quarter of 2018

Real GDP grew by 2.4% YoY (*versus 2.7%*) in Q3 2018. On seasonally adjusted data, GDP increased 0.6% QoQ (*versus 0.7%*), to which industry, finance and insurance, and information and communication activities contributed the most. The other sectors had basically neutral effect on growth dynamics. The CZSO, in publishing sectoral national accounts, raised GDP growth in 2017by 0.1 pp due to a revision of gross capital formation. Year-on-year GDP dynamics was left unchanged in the first half of 2018, with a modest increase in investment dynamics offset by a weaker growth rate of final consumption expenditure of the general government.

The year-on-year increase in GDP in Q3 2018 was exclusively due to growing domestic demand. The main driver of growth was investment activity of the general government sector and of companies, and household final consumption expenditures. The contribution of the balance of foreign trade in goods and services was significantly negative.

The increase in household consumption was due to rising disposable income and high consumer confidence. On the contrary, the year-on-year increase in the savings rate weighed on the growth of households' final consumption expenditures. Expenditures on semi-durable and durable goods were the most dynamic components of household consumption, which shows that households are optimistic about their future economic situation and economic developments. Expenditures on non-durable goods and services also grew. Real consumption expenditures of households increased by 3.1% (*versus* 3.3%). Consumption of the general government grew by 5.2% (*versus 2.1%*), mainly due to dynamics of intermediate consumption and employment.

Gross fixed capital formation increased by 9.0% (*versus 6.7%*). This was especially due to investments in non-residential buildings, information and communication technologies, machinery and equipment, and dwellings. Preservation of high dynamics of investment in transport equipment related to the clearance sale of stock vehicles homologated according to ending environmental standards was also evident. Investment activity was driven by dynamic growth of investment of the general government sector, which increased by 37% at constant prices, but private investment also contributed significantly to the overall growth of gross fixed capital formation (see Graph 3.1.7). Both private investment expenditures and investment of the general government sector were significantly supported by co-financing from EU funds. Considering the deeply negative year-on-year contribution of the change in inventories, gross capital formation increased less than investment in fixed capital, only by 3.4% (*versus 2.9%*).

Due to a slowdown in export markets growth and a decline in export performance, the year-on-year growth in exports of goods and services declined sharply compared to the same quarter of 2017. Total exports thus increased by 4.4% in Q3 2018 (*versus 4.7%*). Imports of goods and services, on the other hand, preserved the annual growth rate at 6.3% (*versus 5.3%*) due to strong import-intensive investment demand and likely a one-off increase in imports of services in the area of research and consultancy.

A higher decrease in import prices compared to export prices resulted in a deterioration of the terms of trade by 1.1% (*versus 0.9%*). The trading loss resulting from foreign trade brought about a situation where real gross domestic income increased only by 1.5% YoY (*versus 2.0%*).

Gross operating surplus grew by 0.6% (*versus a decrease of 0.1%*), compensation of employees increased by 9.3% (*versus 9.5%*) and net taxes on production were up by 5.3% YoY (*versus 6.3%*). As a result, nominal GDP recorded growth of 4.6% (*versus 4.4%*). Growth in compensation of employees, which has been significantly higher than GDP growth since early 2016, leads to a further shift in the distribution of income in favour of the production factor of labour.

3.1.2 Estimate for the Fourth Quarter of 2018

We estimate that in Q4 2018 real GDP grew by 3.0% YoY (*versus 3.1%*) and by 0.8% QoQ (*unchanged*). The estimated acceleration of the quarter-on-quarter GDP dynamics in comparison with the Q3 reflects data on the development of the economy in Q4 2018 available as of the cut-off date of the forecast (industrial and construction production, sales in retail and in services, confidence indicators, foreign trade). GDP probably increased by 2.8% for the entire 2018 (*versus 3.0%*).

We believe that the GDP growth in Q4 was due to the growth in domestic demand. Due to increasing disposable income of households and very high consumer confidence final consumption expenditures of households may have increased by 3.3% year-on-year (*versus 3.4%*). We estimate that consumption of the general government sector grew by 4.3% (*versus 1.7%*) due to dynamics of employment and intermediate consumption. Gross capital formation increased, according to our estimates, by 3.2% (*versus 6.1%*) due to an increase in investment in fixed capital. A negative change in inventories is likely to have significantly decreased the growth of total investment.

Foreign trade seemed to act slightly negatively towards GDP growth. Export dynamics were supported by demand from abroad as well as by the growth in export performance, while import growth was driven by the strengthening of import-intensive investment demand. We estimate that exports of goods and services increased by 4.1% (*versus 5.2%*) and imports, in relation to the development of domestic demand and exports, increased by 4.9% (*versus 6.3%*).

3.1.3 Forecast for the Years 2019 and 2020

In 2019, economic growth should be driven exclusively by domestic demand led by strong final consumption expenditures of households and investment activity of companies and the general government sector. GDP growth should also be strengthened by consumption of the general government. Foreign trade balance should affect the dynamics of GDP slightly negatively. We expect real GDP to grow by 2.5% (*versus 2.9%*) in 2019 and by 2.4% in 2020.

Household consumption will be supported by a rise in real disposable income in 2019, which will positively reflect a number of discretionary changes in the social sphere. The growth in households' final consumption expenditures should also be driven by the dynamics of consumer loans. However, the savings rate should have a broadly neutral impact on household consumption in 2019, and consumption could thus increase by 3.3% (*versus 3.6%*). In 2020, its growth could slow down to 3.0% (with almost identical real disposable income dynamics as in 2019), due to expected increase in the savings rate.

Final consumption expenditures of the general government sector could increase by 2.1% (*unchanged*) in 2019 and by 1.9% in 2020. The main factor of the general government consumption growth in 2019 will be an increase in employment. The dynamics will also be supported by an increase in social security benefits in kind based mainly on health insurance plans and the medium-term outlook of health insurance companies, and by higher purchases of goods and services with the contribution of current subsidies from EU funds.

Gross fixed capital formation should grow in 2019 not only due to investment activity of the private sector but also due to investments by the general government sector. Private investment is stimulated by growth in gross operating surplus, economic growth abroad, and slightly above-average capacity utilization in manufacturing. Also, the increasing lack of employees could motivate businesses to invest in order to increase labour productivity. Rising interest rates should have a roughly neutral effect on the dynamics of investment activity. Conversely, should certain serious risks in the external environment materialize they could weigh on private investments. As regards the general government sector investment, we expect a growth in investment expenditure financed from national resources in both these years. Rather in the medium term (not much information is known yet), a significant upward risk is the planned acquisitions of military machinery worth more than CZK 80 billion. Investments should also be supported in 2019 and 2020 by a continued implementation of projects co-financed by EU funds under the 2014–2020 programming period. Gross fixed capital formation could thus increase by 3.1% in 2019 (*versus 3.2%*) and by 2.7% in 2020. A sharp decrease in the dynamics of investment activity in 2019 reflects stricter monetary conditions, slower growth of economies of main trading partners, and slower investment by the general government sector (as a result of a high comparison base – resources from EU funds allocated for 2014 and 2015 could only be utilized by the end of 2018, going forward we expect a normal level of investment co-financed by the EU).

For the years 2019 and 2020, a technical assumption of zero contribution of the change in inventories to GDP growth was adopted. In 2019 we expect an increase in gross capital formation by 3.0% (*unchanged*), and its growth should slow down to 2.6% in 2020.

We expect that exports of goods and services will grow by 3.2% (*versus 4.8%*) in 2019 and by 3.4% in 2020. The dynamics of exports of goods and services should be considerably lower in 2019 compared to the previous year due to a slower export market growth and export performance (see Chapter 3.4). Slowdown in exports and import-intensive investment demand will be reflected in a lower growth rate of imports of goods and services. Hence, imports will probably increase by 3.8% in both 2019 and 2020 (*versus 5.2% in 2019*).

Box 3.1: Impacts of a "hard Brexit" on the Czech economy

On 15 January 2019, the British Parliament voted on an agreement on the United Kingdom's withdrawal from the European Union (so-called withdrawal agreement). The withdrawal agreement was rejected by the lower house of the Parliament, and since 21 January the British government discusses other solutions to the UK's withdrawal from the EU. The specific arrangement of relations between the EU and the United Kingdom after 29 March 2019, i.e. after the withdrawal date, remains very uncertain. There are several possibilities for the future development of the situation.

One of the likely scenarios remains a "soft Brexit", that is, approval of the current agreement possibly with moderate modifications. This may still be the case if the United Kingdom requests the withdrawal date to be postponed and sets – with the consent of the European Council – a later date of Brexit. According to the latest statements made by both parties, this possibility is realistic, and the new date is most often believed to be July this year. In that case, the period of uncertainty would be extended.

As confirmed by the EU Court of Justice in its ruling from 10 December 2018 (C-621/18), the United Kingdom may also unilaterally take back its notification of withdrawal from the EU. In that case, there would be no change in the current relationship with the European Union.

If none of the above situations occurs and no other mutual agreement is reached, there would be a "hard Brexit". From the point of view of the European Union, the United Kingdom would become a "third country" without mutual trade agreements. This would very likely lead to the mutual introduction of tariffs on the movement of goods and services (and other non-tariff barriers to trade).

Possible impacts of a "hard Brexit"

The analysis of the potential impact of a "hard Brexit" on the Czech economy is designed using the dynamic model of general equilibrium created by the European Commission (QUEST model, see Roeger & Veld, 2008)[1]. The advantage of the model is its relatively broad structure including blocks for the Czech economy, the euro area and the economy of the rest of the world, which are intertwined with respect to existing economic relations. This comprehensive structure allows consistent reflection of impact of shocks on important macroeconomic variables in individual economic areas.

Simulations of the model concern direct but also indirect effects of tariff rates on the Czech economy. Direct effects stem from a decrease in the volume of foreign trade between the United Kingdom and the Czech Republic due to the introduction of tariffs. Indirect effects are derived from the impact of the reduction of trade between the euro area and the United Kingdom on the Czech economy. These linkages would motivate economic agents to adjust to the new conditions, though such feedback is difficult to capture.

In the analysis, we assume that tariffs will be imposed on trade between the United Kingdom and the EU after 29 March. We use the rates applied by the EU to third countries, as listed in the World Trade Organization database.

The effective duty rate on exports of goods to the United Kingdom would be 3.24% for the Czech Republic and 4.90% for the euro area. Tariff rates for particular commodities are the same, differences in effective rates stem from the different structure of foreign trade. Goods exported from the United Kingdom to the EU would be subject to an effective duty rate of 4.45%. Foreign trade in services is subject to authorization of activities by a regulator, which can cause a difficult-to-estimate cutoff in their international provision. Therefore, regarding services, we estimate the same impact as for goods.

Analysis using the structural model

Simulation of the scenario takes into account shocks in the form of the mentioned tariffs but it also accounts for non-tariff barriers. They represent additional costs of transportation, product regulation differences or legal barriers. When determining their amount, we draw on the current estimates in a study by Dhingra et al. (2017)[2], which deals in detail with UK's foreign trade. The study states that these barriers in total represent additional costs for UK's foreign trade of 8.31%.

As a result of the introduction of tariffs and non-tariff barriers, real GDP growth in the United Kingdom would fall, according to estimates calculated from the model, by about 5 pp in 2019 (from an estimated 1.1% in the baseline scenario to −3.9%). The decline in the UK's economy in that scenario would mean a decrease in UK's exports growth by 14 pp. Similarly, due to a decline in foreign trade with the United Kingdom, real growth in the euro area would also slow down by about 0.3 pp. Euro area exports would then be lower by 1.8 pp.

Due to the close relationship between the Czech Republic and the EU, the Czech economy would be negatively affected both directly, through a decrease in foreign trade with the United Kingdom, and indirectly due to the reduction in demand for Czech goods in the euro area. The overall decrease in demand for Czech exports would be 1.1 pp due to both factors. Similarly, the British export duties would make direct imports into the Czech economy more expensive and their volumes lower, indirect imports through the euro area would also decline. Overall, Czech imports would see a lower growth of 0.3 pp. The Czech Republic as a small open economy is highly dependent on foreign trade; the decline in exports would thus be reflected in a slowdown in the growth rate of total economic output by about 0.6 pp.

[1] Roeger W., Vargo J. & Veld J. in´t (2008). Structural reforms in the EU: A simulation-based analysis using the QUEST model with endogenous growth. DG ECFIN, European Commission, European Economy – Economic Papers 351. [quot. 15. 1. 2019], <http://ec.europa.eu/economy_finance/publications/pages/publication13531_en.pdf>.

[2] Dhingra S., Huang H., Ottaviano G., Pessoa J. P., Sampson T. & Reenen, J. V. (2017). The Costs and Benefits of Leaving the EU: Trade Effects. CEP Discussion paper, no. 1478.

Lower output of Czech companies would adversely affect income and consequently also households' expenditures on consumption. The opposite effect on consumption would be the tendency of households to substitute relatively more expensive imported goods from the UK for goods of domestic origin. In summary, however, the effect on Czech consumption would be negative.

Lower economic growth would initially be deflationary. Due to price rigidity, a higher increase in import prices would probably lead to an increase in the price level only in the year 2020, by 0.1 pp. In view of lower GDP growth and stagnating or just slightly rising inflation, the interest rate could be expected to decline by 0.1 pp compared to the baseline scenario. That would, in the light of the generally expected rise in interest rates, rather mean a postponement of their increase.

Table 1: Results of model simulations of a "hard Brexit" scenario

		2018	2019	2020
Baseline Scenario				
Gross domestic product	*year-on-year growth in %*	**2.8**	**2.5**	**2.4**
Consumption of households	*year-on-year growth in %*	3.5	3.3	3.0
Gross fixed capital formation	*year-on-year growth in %*	8.8	3.1	2.7
Exports of goods and services	*year-on-year growth in %*	4.2	3.2	3.4
Imports of goods and services	*year-on-year growth in %*	5.5	3.8	3.8
Inflation (CPI)	*year-on-year growth in %*	**2.1**	**2.1**	**1.6**
Interest rate (3M PRIBOR)	*in % p.a.*	**1.2**	**2.3**	**2.5**
Gross domestic product of the euro area	*year-on-year growth in %*	**1.9**	**1.4**	**1.5**
Gross domestic product of the UK	*year-on-year growth in %*	**1.4**	**1.1**	**1.1**
Alternative Scenario - Hard Brexit				
Gross domestic product	*year-on-year growth in %*	**2.8**	**1.9**	**2.3**
Consumption of households	*year-on-year growth in %*	3.5	3.2	2.9
Gross fixed capital formation	*year-on-year growth in %*	8.8	2.9	2.6
Exports of goods and services	*year-on-year growth in %*	4.2	2.1	3.2
Imports of goods and services	*year-on-year growth in %*	5.5	3.5	3.5
Inflation (CPI)	*year-on-year growth in %*	**2.1**	**2.1**	**1.7**
Interest rate (3M PRIBOR)	*in % p.a.*	**1.2**	**2.2**	**2.4**
Gross domestic product of the euro area	*year-on-year growth in %*	**1.9**	**1.1**	**1.5**
Gross domestic product of the UK	*year-on-year growth in %*	**1.4**	**-3.9**	**-2.9**

Source: Calculations of the MoF.

Relatively cheaper loans could moderately support the investment activity of Czech companies. On the other hand, the decline in economic activity would rather cause a drop in demand for investment. As a result, investment would record a slightly lower growth rate in the first two years by 0.1–0.2 pp.

The resulting impact of the introduction of customs measures on the Czech economy, however, depends on other factors in addition to the duty rates themselves. In particular, on the magnitude of the negative impact of the Brexit itself on the British economy. Estimates vary widely in this respect; for example, the International Monetary Fund[3] estimates a 1.5% decline in British GDP, while the British central bank[4] talks about a possible GDP drop of up to 8%.

The above simulations estimate a slowdown in GDP growth in the United Kingdom in 2019 by 5 pp compared to the baseline scenario, which would represent a total decline of the UK economy by almost 4%. These values are in the band of rather conservative estimates. A deeper fall in UK's GDP would mean a more substantial fall in demand for goods from the EU, or from the Czech Republic.

We also analysed a rather extreme situation where the impacts on the UK economy due to Brexit would be twice as high, which means that GDP would drop by 8.9% (decrease in growth rate by 10 pp compared to the baseline scenario); this estimate is in line with pessimistic estimates by Dhingra et al. (2017). The mechanism that would operate on these economies would be the same as in the previous scenario, but the effects would be more pronounced. The simulated scenario estimates, based on the model, that growth in Czech GDP would ultimately slow down by 1.3 pp and in the euro area by 0.7 pp.

[3] Chen J., Ebeke C., Lin L., Qu H., Siminitz J. (2018): The Long-Term Impact of Brexit on the European Union. IMFBlog, 10. 8. 2018 [quot 15 January 2019], <https://blogs.imf.org/2018/08/10/the-long-term-impact-of-brexit-on-the-european-union/>.

[4] Bank of England (2018): EU withdrawal scenarios and financial stability. Bank of England, [quot. 15 January 2019], <https://www.bankofengland.co.uk/-/media/boe/files/report/2018/eu-withdrawal-scenarios-and-monetary-and-financial-stability.pdf>.

Alternative analytical approach

The alternative approach estimates effects of a "hard Brexit" on the Czech economy with the help of a regression analysis. For the purpose of the present analysis we use the aforementioned effective customs barriers and also regression estimates of price and volume elasticities of foreign trade that were estimated on historical data of the CR (see Macroeconomic Forecast of the Ministry of Finance, January 2018, Box 3.1). The data on import intensities are based on the CZSO's symmetric input-output tables for 2015. The analysis divides the effects of Brexit into four channels influencing foreign trade of the Czech Republic:

1. impact on direct exports of goods and services from the Czech Republic to the United Kingdom: slowdown in Czech GDP growth by 0.07 pp;
2. impact on indirect exports to the United Kingdom through the main trading partners of the Czech Republic: slowdown in Czech GDP growth by 0.02 pp;
3. effect of weakening of the UK economy by 5.0 pp: slowdown in Czech GDP growth by 0.18 pp;
4. effect of weakening of the euro area economy by 0.4 pp: slowdown in Czech GDP growth by 0.35 pp.

The aggregate effect of the impact on foreign trade of the Czech Republic would result in a slowdown in Czech GDP growth by 0.62 pp. The analysis takes into account the regression estimates concerning weakening of net exports on domestic demand. The slowdown in GDP due to a reduction in households' final consumption expenditures and gross capital formation would be 0.18 pp.

The overall impact on the Czech economy, according to the alternative approach, could reach −0.8 pp. However, this is a central estimate that could be shifted in the direction of a more pronounced slowdown in the event of a strong decline in the confidence of agents in future economic developments.

Conclusion

A decrease in the growth rate of GDP of the CR would be a one-off and temporary issue. In the medium term, exchange rate adjustment and a shift in demand from imports to domestic production would help return growth dynamics. However, in the long run, losses stemming from lower openness of the economy could remain on the supply side of the economy. An important role would also be played by the ability of companies from the Czech Republic and the rest of the EU to react, for example by establishing new business relationships. In view of these uncertainties, we estimate the negative impact on the Czech GDP growth in the range of 0.6–0.8 pp in 2019. In the case of the pronounced negative impact of this scenario on the British economy, the drop in the Czech GDP growth could exceed 1 pp. In the years to come, the effects would be milder due to adaptation.

The United Kingdom's withdrawal from the EU without an agreement could also have an impact on the EU's financial perspective 2014–2020 in the form of a decline in EU budget revenues. Since adjusting an already existing financial perspective would be problematic, it is possible to expect that the loss of revenues in the EU budget would be at least partially replaced by an increase in national contributions of individual EU27 member states. This could mean an increase in contribution of up to CZK 3 billion annually for the Czech Republic.

Table 3.1.1: Real GDP by Type of Expenditure – yearly

chained volumes, reference year 2010

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
							Estimate	*Forecast*	*Forecast*	*Outlook*	*Outlook*
Gross domestic product	*bill. CZK 2010*	3 981	4 089	4 307	4 412	4 604	4 735	4 853	4 968	5 084	5 196
	growth in %	**-0.5**	**2.7**	**5.3**	**2.5**	**4.4**	**2.8**	**2.5**	**2.4**	**2.3**	**2.2**
	growth in % [1]	**-0.5**	**2.7**	**5.4**	**2.4**	**4.5**	**2.8**	**2.4**	**2.4**	**2.2**	**2.2**
Private consumption expenditure [2]	*bill. CZK 2010*	1 931	1 966	2 038	2 113	2 202	2 279	2 354	2 425	2 485	2 537
	growth in %	**0.5**	**1.8**	**3.7**	**3.6**	**4.3**	**3.5**	**3.3**	**3.0**	**2.5**	**2.1**
Government consumption exp.	*bill. CZK 2010*	803	812	827	849	860	893	911	929	947	965
	growth in %	**2.5**	**1.1**	**1.9**	**2.7**	**1.3**	**3.8**	**2.1**	**1.9**	**1.9**	**1.9**
Gross capital formation	*bill. CZK 2010*	997	1 083	1 223	1 171	1 217	1 267	1 305	1 340	1 372	1 415
	growth in %	**-5.1**	**8.6**	**13.0**	**-4.3**	**4.0**	**4.1**	**3.0**	**2.6**	**2.5**	**3.1**
Gross fixed capital formation	*bill. CZK 2010*	1 016	1 056	1 164	1 127	1 169	1 273	1 312	1 348	1 383	1 427
	growth in %	**-2.5**	**3.9**	**10.2**	**-3.1**	**3.7**	**8.8**	**3.1**	**2.7**	**2.6**	**3.2**
Change in stocks and valuables	*bill. CZK 2010*	-19	26	59	43	48	-6	-7	-8	-10	-12
Exports of goods and services	*bill. CZK 2010*	2 984	3 242	3 437	3 586	3 828	3 988	4 115	4 253	4 398	4 543
	growth in %	**0.2**	**8.7**	**6.0**	**4.3**	**6.7**	**4.2**	**3.2**	**3.4**	**3.4**	**3.3**
Imports of goods and services	*bill. CZK 2010*	2 734	3 008	3 212	3 302	3 498	3 689	3 831	3 978	4 118	4 265
	growth in %	**0.1**	**10.1**	**6.8**	**2.8**	**5.9**	**5.5**	**3.8**	**3.8**	**3.5**	**3.6**
Gross domestic expenditure	*bill. CZK 2010*	3 733	3 860	4 087	4 132	4 279	4 437	4 568	4 691	4 801	4 913
	growth in %	**-0.6**	**3.4**	**5.9**	**1.1**	**3.5**	**3.7**	**2.9**	**2.7**	**2.3**	**2.3**
Methodological discrepancy [3]	*bill. CZK 2010*	-1	-4	-7	-5	-5	-3	-2	0	0	1
Real gross domestic income	*bill. CZK 2010*	3 956	4 112	4 344	4 486	4 644	4 775	4 908	5 042	5 168	5 291
	growth in %	**0.4**	**3.9**	**5.6**	**3.3**	**3.5**	**2.8**	**2.8**	**2.7**	**2.5**	**2.4**
Contributions to GDP growth [4]											
Gross domestic expenditure	*pp*	**-0.6**	**3.2**	**5.5**	**1.0**	**3.3**	**3.4**	**2.8**	**2.5**	**2.2**	**2.2**
Consumption	*pp*	**0.8**	**1.1**	**2.2**	**2.2**	**2.2**	**2.4**	**2.0**	**1.8**	**1.6**	**1.4**
Household expenditure	*pp*	**0.3**	**0.9**	**1.8**	**1.7**	**2.0**	**1.7**	**1.6**	**1.5**	**1.2**	**1.0**
Government expenditure	*pp*	**0.5**	**0.2**	**0.4**	**0.5**	**0.2**	**0.7**	**0.4**	**0.4**	**0.4**	**0.4**
Gross capital formation	*pp*	**-1.3**	**2.1**	**3.4**	**-1.2**	**1.0**	**1.1**	**0.8**	**0.7**	**0.6**	**0.8**
Gross fixed capital formation	*pp*	**-0.6**	**1.0**	**2.6**	**-0.8**	**0.9**	**2.2**	**0.8**	**0.7**	**0.7**	**0.8**
Change in stocks	*pp*	**-0.7**	**1.1**	**0.8**	**-0.4**	**0.1**	**-1.1**	**0.0**	**0.0**	**0.0**	**0.0**
Foreign balance	*pp*	**0.1**	**-0.5**	**-0.2**	**1.4**	**1.1**	**-0.6**	**-0.3**	**-0.1**	**0.1**	**0.0**
External balance of goods	*pp*	**0.1**	**-0.1**	**-1.1**	**1.0**	**0.8**	**-0.4**	**-0.4**	**-0.2**	**0.0**	**-0.1**
External balance of services	*pp*	**0.0**	**-0.4**	**0.9**	**0.4**	**0.3**	**-0.2**	**0.1**	**0.1**	**0.1**	**0.1**
Gross value added	*bill. CZK 2010*	3 606	3 729	3 905	3 999	4 168	.	.	.	.	.
	growth in %	**-0.5**	**3.4**	**4.7**	**2.4**	**4.2**	.	.	.	.	.
Net taxes and subsidies on products	*bill. CZK 2010*	375	363	402	414	437	.	.	.	.	.

[1] *From working day adjusted data.*
[2] *The consumption of non-profit institutions serving households (NPISH) is included in the private consumption.*
[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 of the MoF.

Table 3.1.2: Real GDP by Type of Expenditure – quarterly
chained volumes, reference year 2010

		2018				2019			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		Prelim.	*Prelim.*	*Prelim.*	*Estimate*	*Forecast*	*Forecast*	*Forecast*	*Forecast*
Gross domestic product	*bill. CZK 2010*	1 106	1 193	1 203	1 233	1 135	1 220	1 244	1 254
	growth in %	**3.3**	**2.6**	**2.4**	**3.0**	**2.7**	**2.3**	**3.4**	**1.7**
	growth in % [1]	**4.1**	**2.4**	**2.4**	**2.5**	**2.6**	**2.5**	**2.4**	**2.1**
	QoQ in % [1]	**0.5**	**0.6**	**0.6**	**0.8**	**0.6**	**0.5**	**0.5**	**0.5**
Private consumption expenditure [2]	*bill. CZK 2010*	542	568	575	594	560	586	596	611
	growth in %	**4.1**	**3.5**	**3.1**	**3.3**	**3.3**	**3.1**	**3.7**	**3.0**
Government consumption exp.	*bill. CZK 2010*	206	217	219	250	211	221	224	255
	growth in %	**2.7**	**2.7**	**5.2**	**4.3**	**2.2**	**2.1**	**2.1**	**2.0**
Gross capital formation	*bill. CZK 2010*	257	315	359	335	274	331	367	333
	growth in %	**7.8**	**2.9**	**3.4**	**3.2**	**6.4**	**5.1**	**2.2**	**-0.6**
Gross fixed capital formation	*bill. CZK 2010*	279	309	331	354	290	315	344	363
	growth in %	**9.0**	**9.6**	**9.0**	**7.8**	**4.3**	**1.9**	**3.9**	**2.5**
Change in stocks and valuables	*bill. CZK 2010*	-21	6	28	-19	-17	16	23	-30
Exports of goods and services	*bill. CZK 2010*	994	1 016	950	1 027	1 021	1 037	1 002	1 056
	growth in %	**3.8**	**4.5**	**4.4**	**4.1**	**2.7**	**2.0**	**5.5**	**2.8**
Imports of goods and services	*bill. CZK 2010*	894	923	899	974	930	954	944	1 004
	growth in %	**5.3**	**5.4**	**6.3**	**4.9**	**4.1**	**3.4**	**5.0**	**3.1**
Gross domestic expenditure	*bill. CZK 2010*	1 006	1 100	1 152	1 179	1 045	1 137	1 185	1 200
	growth in %	**4.7**	**3.2**	**3.5**	**3.5**	**3.9**	**3.4**	**2.9**	**1.8**
Methodological discrepancy [3]	*bill. CZK 2010*	-1	-2	-1	1	-1	-2	-2	2
Real gross domestic income	*bill. CZK 2010*	1 120	1 203	1 207	1 245	1 149	1 234	1 253	1 272
	growth in %	**4.2**	**2.9**	**1.5**	**2.8**	**2.6**	**2.6**	**3.8**	**2.2**
Gross value added	*bill. CZK 2010*	1 008	1 080	1 088	.	.	.	.	.
	growth in %	**3.3**	**2.6**	**2.5**	.	.	.	.	.
	growth in % [1]	**4.2**	**2.3**	**2.3**	.	.	.	.	.
	QoQ in % [1]	**0.7**	**0.3**	**0.6**	.	.	.	.	.
Net taxes and subsidies on products	*bill. CZK 2010*	98	112	115	.	.	.	.	.

[1] *From seasonally and working day adjusted data*
[2] *The consumption of non-profit institutions serving households (NPISH) is included in the private consumption.*
[3] *Deterministic impact of using prices and structure of the previous year for calculation of y-o-y growth.*
Source: CZSO. Calculations of the MoF.

Table 3.1.3: Nominal GDP by Type of Expenditure – yearly

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
							Estimate	*Forecast*	*Forecast*	*Outlook*	*Outlook*
Gross domestic product	*bill. CZK*	**4 098**	**4 314**	**4 596**	**4 768**	**5 047**	**5 313**	**5 590**	**5 823**	**6 068**	**6 321**
	growth in %	0.9	5.3	6.5	3.7	5.9	5.3	5.2	4.2	4.2	4.2
Private consumption expenditure [1)]	*bill. CZK*	**2 025**	**2 074**	**2 152**	**2 243**	**2 393**	**2 542**	**2 685**	**2 811**	**2 934**	**3 050**
	growth in %	1.4	2.4	3.8	4.2	6.7	6.2	5.6	4.7	4.4	3.9
Government consumption exp.	*bill. CZK*	**826**	**849**	**883**	**919**	**968**	**1 060**	**1 128**	**1 176**	**1 227**	**1 279**
	growth in %	2.7	2.8	4.0	4.0	5.4	9.5	6.4	4.3	4.3	4.3
Gross capital formation	*bill. CZK*	**1 011**	**1 116**	**1 285**	**1 239**	**1 306**	**1 366**	**1 427**	**1 477**	**1 533**	**1 607**
	growth in %	-4.9	10.4	15.1	-3.6	5.4	4.6	4.5	3.5	3.8	4.9
Gross fixed capital formation	*bill. CZK*	**1 027**	**1 084**	**1 216**	**1 189**	**1 250**	**1 367**	**1 430**	**1 481**	**1 539**	**1 615**
	growth in %	-2.4	5.5	12.2	-2.3	5.2	9.3	4.6	3.6	3.9	4.9
Change in stocks and valuables	*bill. CZK*	**-16**	**32**	**68**	**50**	**56**	**-1**	**-3**	**-4**	**-6**	**-7**
External balance	*bill. CZK*	**236**	**275**	**276**	**368**	**380**	**345**	**349**	**359**	**375**	**385**
Exports of goods and services	*bill. CZK*	**3 150**	**3 561**	**3 725**	**3 793**	**4 024**	**4 174**	**4 375**	**4 522**	**4 678**	**4 842**
	growth in %	1.9	13.0	4.6	1.8	6.1	3.7	4.8	3.4	3.5	3.5
Imports of goods and services	*bill. CZK*	**2 914**	**3 286**	**3 449**	**3 425**	**3 644**	**3 829**	**4 025**	**4 163**	**4 303**	**4 458**
	growth in %	0.6	12.8	5.0	-0.7	6.4	5.1	5.1	3.4	3.4	3.6
Gross national income	*bill. CZK*	**3 854**	**4 023**	**4 286**	**4 459**	**4 737**	**5 027**	**5 293**	**5 515**	**5 750**	**5 993**
	growth in %	1.2	4.4	6.5	4.0	6.2	6.1	5.3	4.2	4.3	4.2
Primary income balance	*bill. CZK*	**-245**	**-291**	**-310**	**-309**	**-311**	**-286**	**-296**	**-308**	**-318**	**-328**

[1)] *The consumption of non-profit institutions serving households (NPISH) is included in the private consumption.*
Source: CZSO. Calculations of the MoF.

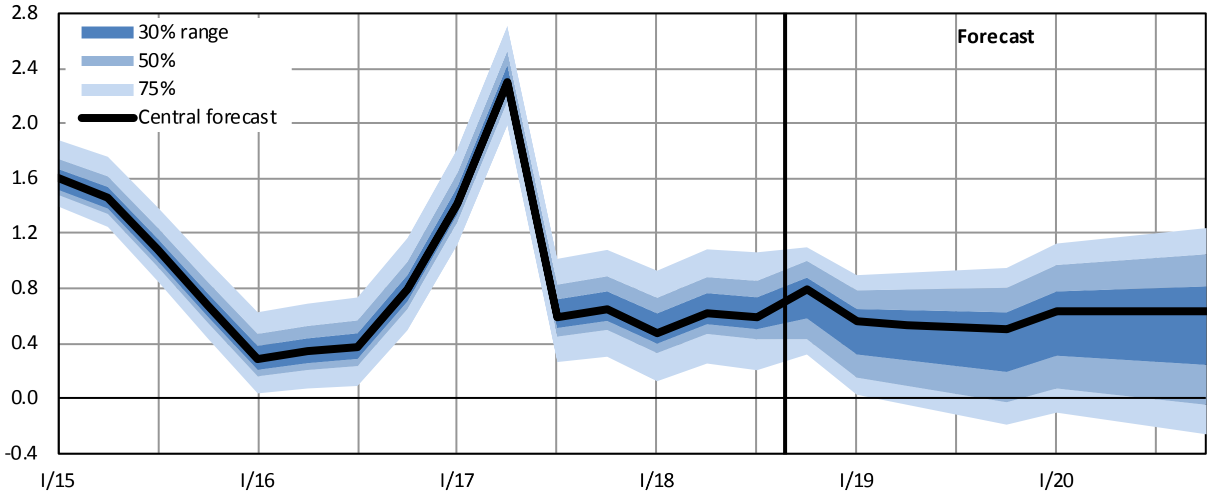
Table 3.1.4: Nominal GDP by Type of Expenditure – quarterly

		2018				2019			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		Prelim.	*Prelim.*	*Prelim.*	*Estimate*	*Forecast*	*Forecast*	*Forecast*	*Forecast*
Gross domestic product	*bill. CZK*	**1 227**	**1 330**	**1 349**	**1 407**	**1 298**	**1 401**	**1 428**	**1 462**
	growth in %	6.0	5.1	4.6	5.4	5.7	5.3	5.9	4.0
Private consumption expenditure [1]	*bill. CZK*	**599**	**631**	**645**	**667**	**636**	**667**	**682**	**700**
	growth in %	6.6	6.3	6.1	5.9	6.1	5.7	5.8	4.9
Government consumption exp.	*bill. CZK*	**238**	**254**	**260**	**308**	**255**	**270**	**276**	**327**
	growth in %	9.7	8.7	11.6	8.2	6.9	6.5	6.3	6.0
Gross capital formation	*bill. CZK*	**274**	**339**	**390**	**364**	**299**	**363**	**402**	**364**
	growth in %	6.7	2.6	4.7	4.8	9.0	7.1	3.2	0.1
Gross fixed capital formation	*bill. CZK*	**296**	**331**	**357**	**383**	**316**	**344**	**375**	**395**
	growth in %	8.0	9.4	10.3	9.4	6.8	3.9	5.0	3.1
Change in stocks and valuables	*bill. CZK*	**-22**	**8**	**32**	**-19**	**-17**	**19**	**27**	**-31**
External balance	*bill. CZK*	**116**	**106**	**55**	**68**	**109**	**100**	**68**	**72**
Exports of goods and services	*bill. CZK*	**1 023**	**1 059**	**999**	**1 094**	**1 082**	**1 099**	**1 066**	**1 127**
	growth in %	-0.5	2.7	5.6	7.4	5.8	3.8	6.8	3.0
Imports of goods and services	*bill. CZK*	**907**	**952**	**944**	**1 026**	**973**	**999**	**998**	**1 055**
	growth in %	0.0	3.2	8.7	8.5	7.3	4.9	5.8	2.8

[1)] *The consumption of non-profit institutions serving households (NPISH) is included in the private consumption.*
Source: CZSO. Calculations of the MoF.

Graph 3.1.1: Gross Domestic Product (real)

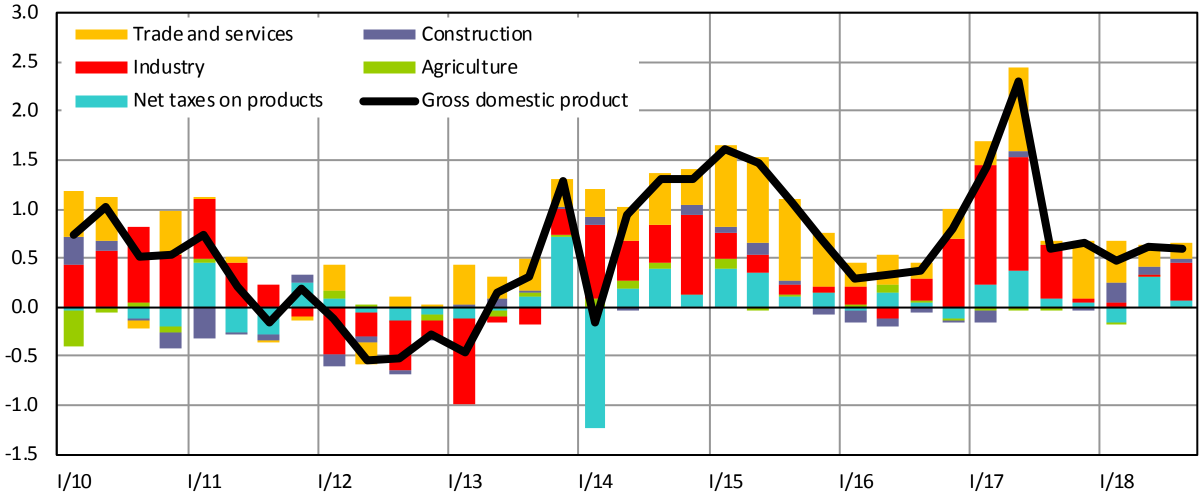
QoQ growth rate, in %, seasonally adjusted, past probability distribution reflects the actual distribution of data revisions, future probability distribution is based upon the MoF's forecasting performance



Source: CZSO. Calculations of the MoF.

Graph 3.1.2: Resources of Gross Domestic Product

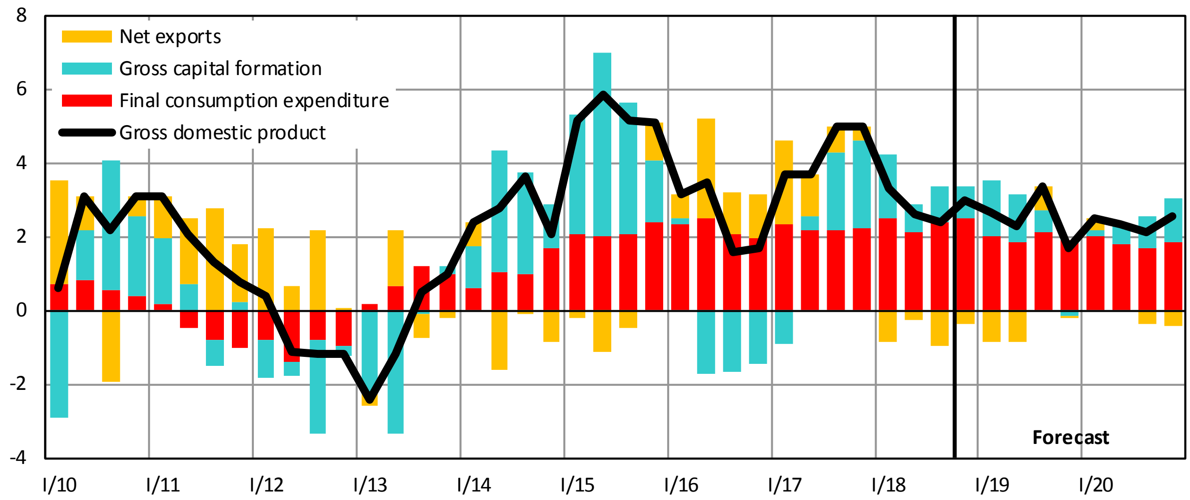
QoQ real growth rate of GDP in %, contributions of individual components in percentage points, seasonally adjusted



Source: CZSO. Calculations of the MoF.

Graph 3.1.3: Gross Domestic Product by Type of Expenditure

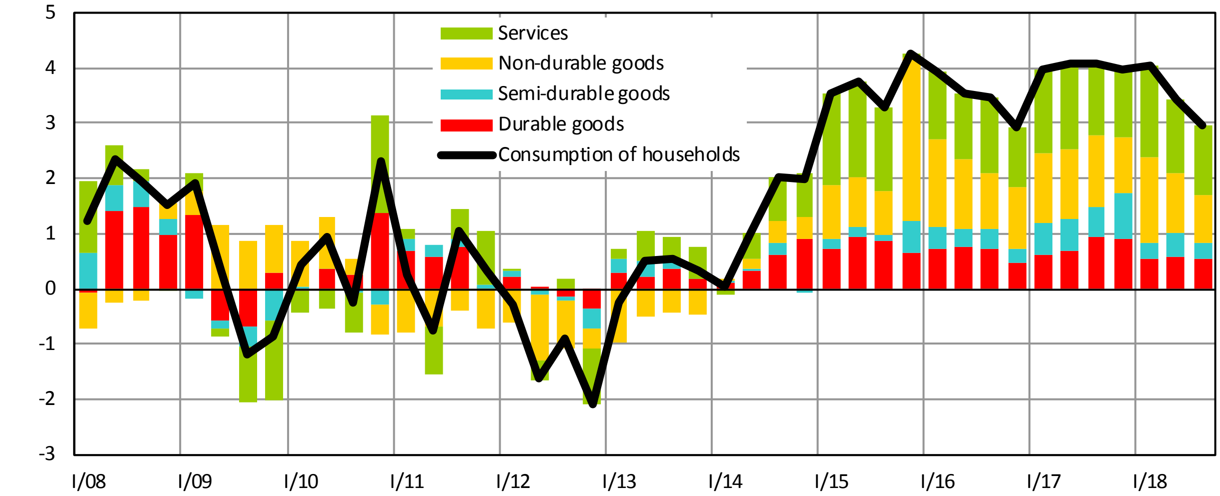
YoY real growth rate of GDP in %, contributions of individual components in percentage points



Source: CZSO. Calculations of the MoF.

Graph 3.1.4: Consumption of Households

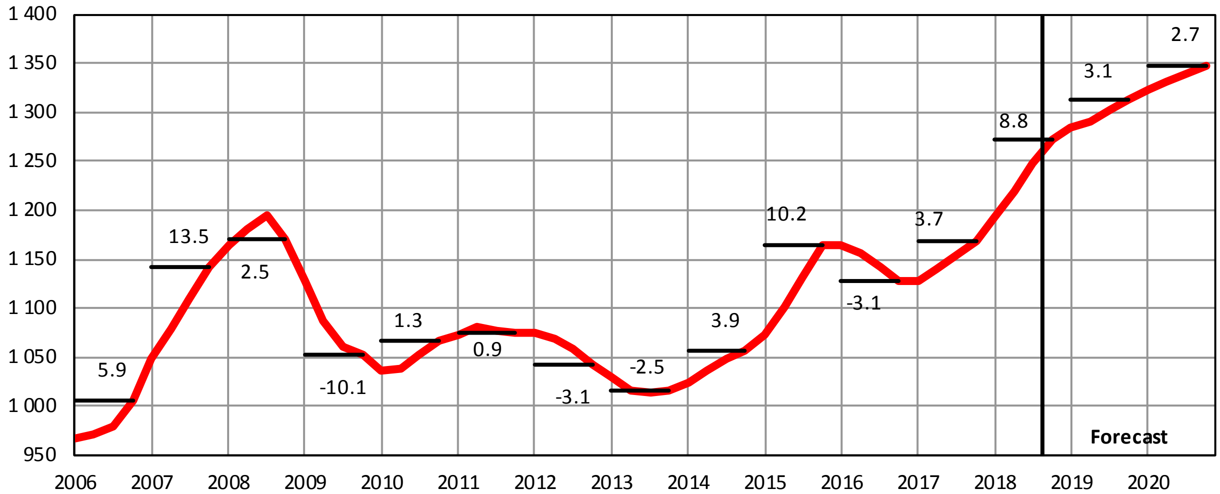
consumption of households in domestic concept, YoY real growth rate in %, contributions of individual components in percentage points



Source: CZSO. Calculations of the MoF.

Graph 3.1.5: Gross Fixed Capital Formation

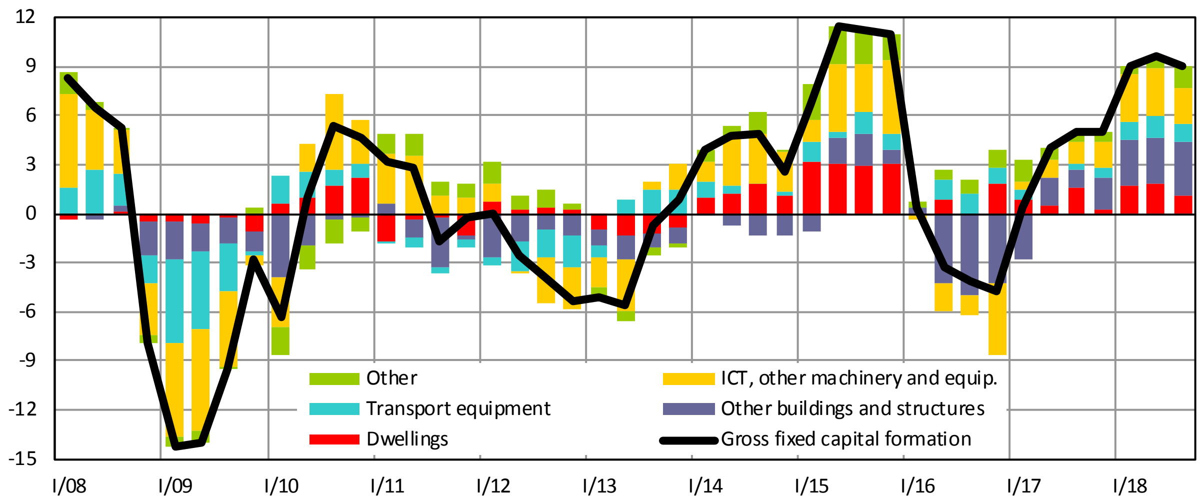
yearly moving sums, bill. CZK in const. prices of 2010, black lines with labels show the average level and growth rate in the given year



Source: CZSO. Calculations of the MoF.

Graph 3.1.6: Gross Fixed Capital Formation by Type of Expenditure

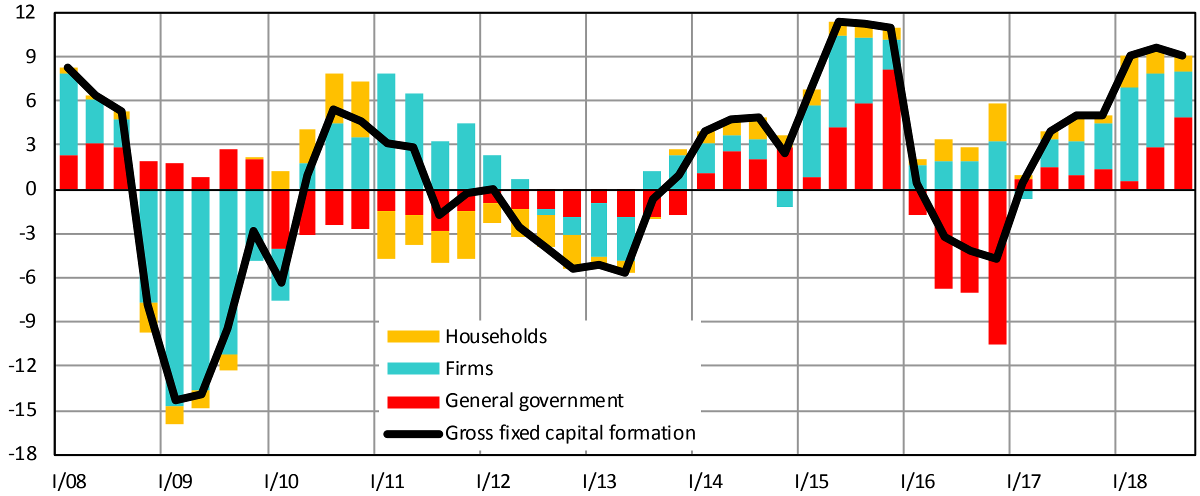
YoY real growth rate in %, contributions of individual components in percentage points



Source: CZSO. Calculations of the MoF.

Graph 3.1.7: Gross Fixed Capital Formation by Sector

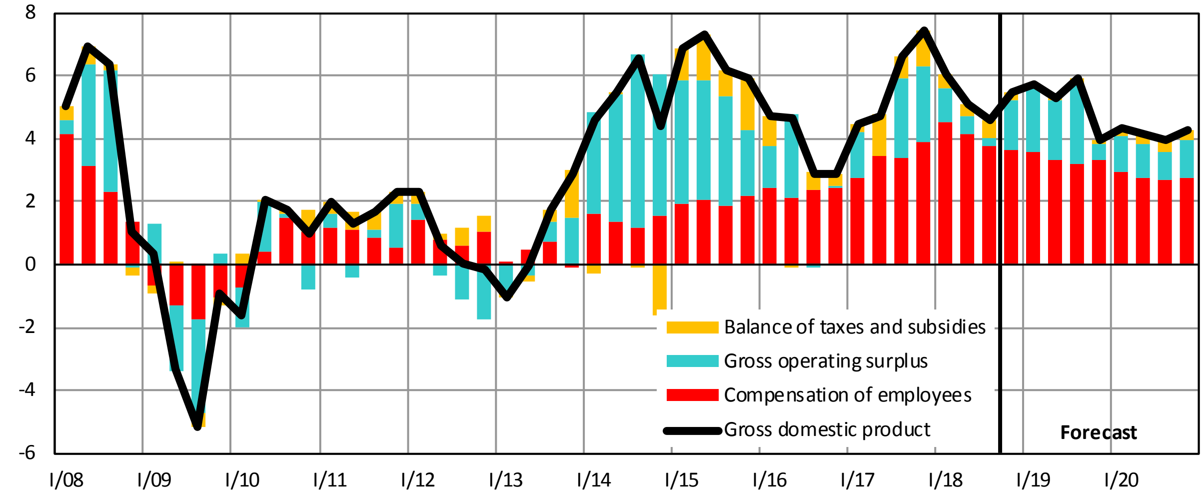
YoY real growth rate in %, contributions of individual sectors in percentage points



Source: CZSO. Calculations of the MoF.

Graph 3.1.8: Nominal Gross Domestic Product

YoY growth rate of GDP in %, contributions of individual components in percentage points



Source: CZSO. Calculations of the MoF.

Table 3.1.5: GDP by Type of Income – yearly

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
							Estimate	*Forecast*	*Forecast*	*Outlook*	*Outlook*
GDP	*bill. CZK*	**4 098**	**4 314**	**4 596**	**4 768**	**5 047**	**5 313**	**5 590**	**5 823**	**6 068**	**6 321**
	growth in %	0.9	5.3	6.5	3.7	5.9	5.3	5.2	4.2	4.2	4.2
Balance of taxes and subsidies	*bill. CZK*	**402**	**381**	**434**	**454**	**495**	**515**	**521**	**538**	**557**	**576**
	% of GDP	9.8	8.8	9.4	9.5	9.8	9.7	9.3	9.2	9.2	9.1
	growth in %	4.2	-5.1	13.8	4.7	9.0	4.0	1.1	3.4	3.4	3.4
Taxes on production and imports	*bill. CZK*	**528**	**518**	**571**	**595**	**637**	**.**	**.**	**.**	**.**	**.**
	growth in %	3.9	-1.8	10.1	4.3	7.0	.	.	.	.	.
Subsidies on production	*bill. CZK*	**126**	**137**	**137**	**141**	**142**	**.**	**.**	**.**	**.**	**.**
	growth in %	2.7	8.5	-0.1	3.3	0.4	.	.	.	.	.
Compensation of employees	*bill. CZK*	**1 676**	**1 735**	**1 821**	**1 928**	**2 089**	**2 291**	**2 468**	**2 623**	**2 777**	**2 927**
(domestic concept)	*% of GDP*	40.9	40.2	39.6	40.4	41.4	43.1	44.1	45.0	45.8	46.3
	growth in %	0.7	3.5	5.0	5.9	8.4	9.6	7.7	6.3	5.9	5.4
Wages and salaries	*bill. CZK*	**1 275**	**1 321**	**1 384**	**1 464**	**1 585**	**1 737**	**1 871**	**1 989**	**2 106**	**2 220**
	growth in %	0.5	3.6	4.8	5.7	8.3	9.6	7.7	6.3	5.9	5.4
Social security contributions	*bill. CZK*	**402**	**414**	**437**	**464**	**504**	**554**	**596**	**634**	**671**	**707**
	growth in %	1.4	3.1	5.5	6.4	8.6	9.7	7.7	6.3	5.9	5.4
Gross operating surplus	*bill. CZK*	**2 020**	**2 198**	**2 341**	**2 386**	**2 463**	**2 507**	**2 601**	**2 662**	**2 735**	**2 819**
	% of GDP	49.3	50.9	50.9	50.0	48.8	47.2	46.5	45.7	45.1	44.6
	growth in %	0.5	8.8	6.5	1.9	3.2	1.8	3.7	2.3	2.8	3.1
Consumption of capital	*bill. CZK*	**906**	**939**	**969**	**998**	**1 026**	**1 059**	**1 121**	**1 185**	**1 249**	**1 307**
	growth in %	3.0	3.6	3.2	3.0	2.9	3.2	5.9	5.7	5.4	4.6
Net operating surplus	*bill. CZK*	**1 114**	**1 259**	**1 372**	**1 388**	**1 436**	**1 449**	**1 480**	**1 477**	**1 486**	**1 512**
	growth in %	-1.4	13.0	9.0	1.2	3.5	0.9	2.2	-0.2	0.6	1.8

Source: CZSO. Calculations of the MoF.

Table 3.1.6: GDP by Type of Income – quarterly

		2018				2019			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		Prelim.	*Prelim.*	*Prelim.*	*Estimate*	*Forecast*	*Forecast*	*Forecast*	*Forecast*
GDP	*bill. CZK*	**1 227**	**1 330**	**1 349**	**1 407**	**1 298**	**1 401**	**1 428**	**1 462**
	growth in %	6.0	5.1	4.6	5.4	5.7	5.3	5.9	4.0
Balance of taxes and subsidies	*bill. CZK*	**108**	**133**	**142**	**132**	**109**	**134**	**144**	**134**
	growth in %	5.0	3.8	5.3	2.1	0.9	0.7	1.6	1.3
Compensation of employees	*bill. CZK*	**544**	**570**	**565**	**611**	**588**	**614**	**608**	**658**
(domestic concept)	*growth in %*	10.6	10.1	9.3	8.7	8.0	7.7	7.6	7.6
Wages and salaries	*bill. CZK*	**411**	**430**	**429**	**467**	**444**	**464**	**461**	**502**
	growth in %	10.5	10.1	9.3	8.7	8.0	7.7	7.6	7.6
Social security contributions	*bill. CZK*	**133**	**139**	**137**	**144**	**144**	**150**	**147**	**155**
	growth in %	11.2	9.9	9.3	8.7	8.0	7.7	7.6	7.6
Gross operating surplus	*bill. CZK*	**575**	**627**	**642**	**664**	**601**	**653**	**676**	**671**
	growth in %	2.2	1.2	0.6	3.3	4.5	4.1	5.4	1.2

Source: CZSO. Calculations of the MoF.

3.2 Prices

The average inflation rate in 2018 was 2.1% (*versus 2.2%*). The inflation was driven by factors both on the supply and demand side. The very low unemployment combined with a record-breaking number of job vacancies resulted in a rapid wage growth, which was reflected in a significant increase in unit labour costs. That, together with the rising crude oil price, created cost-push inflation. Demand-pull inflation was due to the growing household consumption in an environment of a positive output gap. In terms of consumer basket sections, a major factor was an increase in prices in the housing section, whose contribution to the average inflation rate was 0.7 pp. Administrative measures played a relatively small role in the last year's inflation; their contribution was 0.3 pp.

The year-on-year inflation was in the tolerance band of the 2% inflation target of the CNB in 2018 and was right at the target (*versus 2.4%*) in December. The forecast error was mainly due to the rapid drop in the price of oil. The contribution of administrative measures to the year-on-year inflation in December was 0.3 pp, of which 0.2 pp was due to the price of electricity. The housing section contributed 1 pp to December's consumer price inflation.

In some areas determining price developments the assumptions of the current macroeconomic forecast for 2019 differ significantly from the assumptions in the November forecast. It is in particular the assumed lower Brent oil price (see Chapter 1.2) and the weaker koruna exchange rate against both the euro and the US dollar (see Chapter 1.4.3). The forecast for 2019 also works with a higher contribution of administrative measures. It is also necessary to take into account the lower-than-predicted year-on-year inflation in December 2018. However, the price effects of these factors largely offset each other and, in summary, lead to a small reduction in the forecast for inflation in 2019.

In 2019, the same inflation as in the previous year can be expected. Administrative measures are likely to affect inflation more than in the last year. The growth of regulated prices should accelerate, among which an increase in electricity prices will probably have the most significant impact (0.3 pp). The only change in indirect taxes taken into account in the inflation forecast in 2019 is the reduction in VAT in public transport. We expect the contribution of administrative measures to the year-on-year increase in consumer prices in December 2019 to reach 0.5 pp (*vs −0.1 pp*).

A substantial anti-inflationary factor this year will be the estimated drop in the oil price by about a fifth. On the other hand, one needs to take into account the significant pro-inflationary effect of continued strong growth of unit labour costs and of the growth of household consumption in the still positive output gap environment. The exchange rate, according to current assumptions, should not have much impact on this year's inflation.

The year-on-year inflation will probably hover in the upper half of the CNB's tolerance band in the first half of 2019 before slowing down in the second half of the year. **In 2019**, the **average inflation rate** should reach 2.1% (*versus 2.3%*), with a year-on-year increase in consumer prices of 1.8% (*versus 1.9%*) in December.

In 2020, anti-inflationary effects of the crude oil price should fade out and the growth in unit labour costs should slow down. Demand-driven inflationary pressures should be slightly weaker than in 2019, given the expected development in household consumption and the output gap. The appreciation of the Czech koruna against both major world currencies should have a slightly anti-inflationary effect.

In the area of changes to indirect taxes in 2020, we assume that at the beginning of the year selected price representatives will be transferred to the second reduced VAT rate in connection with the expansion of electronic registration of sales. The November forecast expected this measure to be effective from mid-2019. However, its estimated technical price impact (−0.4 pp) will most likely not correspond to the effective impact, which will not be so significant. The effective price impact and the timing of this measure are associated with a considerable degree of uncertainty. We also expect that the VAT rate on heat will be reduced in early 2020. Administrative measures will thus contribute to lower inflation.

In line with the above, we expect both the average inflation rate in 2020 and the December 2020 year-on-year consumer price growth to slow down to 1.6%.

In Q3 2018 the **GDP deflator** increased by 2.1% (*versus 1.6%*), with the gross domestic expenditure deflator rising by 3.1% (*versus 2.4%*) and terms of trade deteriorating by 1.1% (*versus 0.9%*). Acceleration in the growth of the gross domestic expenditure deflator reflected the higher-than-expected growth in deflators of general government consumption, household consumption and gross fixed capital formation. The decline in terms of trade was due to higher dynamics of the import deflator relative to that of the export deflator.

GDP deflator should increase by 2.6% (*versus 2.2%*) in 2019 due to the growth in the gross domestic expenditure deflator. In 2020, GDP deflator growth could slow down to 1.7% (see Graph 3.2.5) due to the domestic price development.

The anticipated development of both export and import prices will be affected mainly by the expected appreciation of the *koruna* exchange rate and the dynamics of the oil price. As a result, the terms of trade could improve by 0.3% in 2019 (*versus 0.1%*), then increase by 0.4% in 2020.

Gross domestic expenditure deflator growth could be maintained at 2.5% (*versus 2.3%*) in 2019, with the slowdown in deflators of final consumption expenditures of households and of the general government sector offset by the acceleration of the gross capital formation deflator (see Graph 3.2.4). In 2020, the dynamics of the gross domestic expenditure deflator could drop more strongly to 1.5% as a result of the slowdown in all its components.

Table 3.2.1: Prices – yearly

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
							Estimate	*Forecast*	*Forecast*	*Outlook*	*Outlook*
Consumer Price Index											
Average of a year	*average 2015=100*	99.3	99.7	100.0	100.7	103.1	105.3	107.6	109.3	111.3	113.3
	growth in %	**1.4**	**0.4**	**0.3**	**0.7**	**2.5**	**2.1**	**2.1**	**1.6**	**1.8**	**1.8**
December	*average 2015=100*	99.4	99.5	99.5	101.5	103.9	106.0	107.9	109.7	111.6	113.6
	growth in %	**1.4**	**0.1**	**0.1**	**2.0**	**2.4**	**2.0**	**1.8**	**1.6**	**1.8**	**1.8**
Of which the contribution of:											
Administrative measures [1)]	*percentage points*	**1.0**	**-0.2**	**0.1**	**0.0**	**0.1**	**0.3**	**0.5**	**-0.1**	**0.3**	**0.3**
Market increase	*percentage points*	**0.4**	**0.3**	**0.0**	**2.0**	**2.3**	**1.7**	**1.2**	**1.8**	**1.5**	**1.5**
Harmonized index of consumer	*average 2015=100*	99.3	99.8	100.0	100.7	103.1	105.1	107.1	108.7	110.6	112.5
prices	*growth in %*	**1.4**	**0.4**	**0.3**	**0.6**	**2.4**	**2.0**	**1.9**	**1.5**	**1.8**	**1.7**
Offering prices of flats											
Czech Republic	*average 2010=100*	97.2	100.7	106.9	117.6	130.7	144.6	.	.	.	.
	growth in %	**1.1**	**3.6**	**6.2**	**10.0**	**11.1**	**10.6**	**.**	**.**	**.**	**.**
Czech Republic excluding Prague	*average 2010=100*	91.3	93.0	97.7	107.1	112.1	121.9	.	.	.	.
	growth in %	**-1.3**	**1.9**	**5.1**	**9.6**	**4.7**	**8.7**	**.**	**.**	**.**	**.**
Prague	*average 2010=100*	103.1	108.5	116.1	128.2	149.2	167.2	.	.	.	.
	growth in %	**3.5**	**5.2**	**7.0**	**10.4**	**16.4**	**12.1**	**.**	**.**	**.**	**.**
Deflators											
GDP	*average 2010=100*	102.9	105.5	106.7	108.1	109.6	112.2	115.2	117.2	119.4	121.7
	growth in %	**1.4**	**2.5**	**1.2**	**1.3**	**1.4**	**2.4**	**2.6**	**1.7**	**1.8**	**1.9**
Domestic final use	*average 2010=100*	103.5	104.6	105.7	106.5	109.1	112.0	114.7	116.5	118.6	120.8
	growth in %	**0.5**	**1.1**	**1.0**	**0.7**	**2.4**	**2.6**	**2.5**	**1.5**	**1.8**	**1.9**
Consumption of households	*average 2010=100*	104.9	105.5	105.6	106.2	108.7	111.5	114.1	115.9	118.1	120.2
	growth in %	**0.8**	**0.6**	**0.1**	**0.5**	**2.4**	**2.6**	**2.3**	**1.6**	**1.9**	**1.8**
Consumption of government	*average 2010=100*	102.8	104.6	106.7	108.1	112.6	118.8	123.8	126.6	129.6	132.6
	growth in %	**0.2**	**1.7**	**2.0**	**1.3**	**4.1**	**5.5**	**4.2**	**2.3**	**2.3**	**2.3**
Fixed capital formation	*average 2010=100*	101.1	102.7	104.5	105.4	106.9	107.4	109.0	109.9	111.3	113.1
	growth in %	**0.1**	**1.6**	**1.8**	**0.9**	**1.4**	**0.5**	**1.4**	**0.8**	**1.3**	**1.7**
Exports of goods and services	*average 2010=100*	105.6	109.8	108.4	105.8	105.1	104.7	106.3	106.3	106.4	106.6
	growth in %	**1.7**	**4.0**	**-1.3**	**-2.4**	**-0.6**	**-0.4**	**1.6**	**0.0**	**0.0**	**0.2**
Imports of goods and services	*average 2010=100*	106.6	109.2	107.4	103.7	104.2	103.8	105.1	104.7	104.5	104.5
	growth in %	**0.5**	**2.5**	**-1.7**	**-3.4**	**0.4**	**-0.4**	**1.2**	**-0.4**	**-0.1**	**0.0**
Terms of trade	*average 2010=100*	99.0	100.5	100.9	102.0	100.9	100.8	101.2	101.6	101.8	102.0
	growth in %	**1.2**	**1.5**	**0.4**	**1.0**	**-1.0**	**-0.1**	**0.3**	**0.4**	**0.2**	**0.2**

[1)] The contribution of increase in regulated prices and in indirect taxes to increase of December YoY consumer price inflation.
Source: CZSO, Eurostat. Calculations of the MoF.

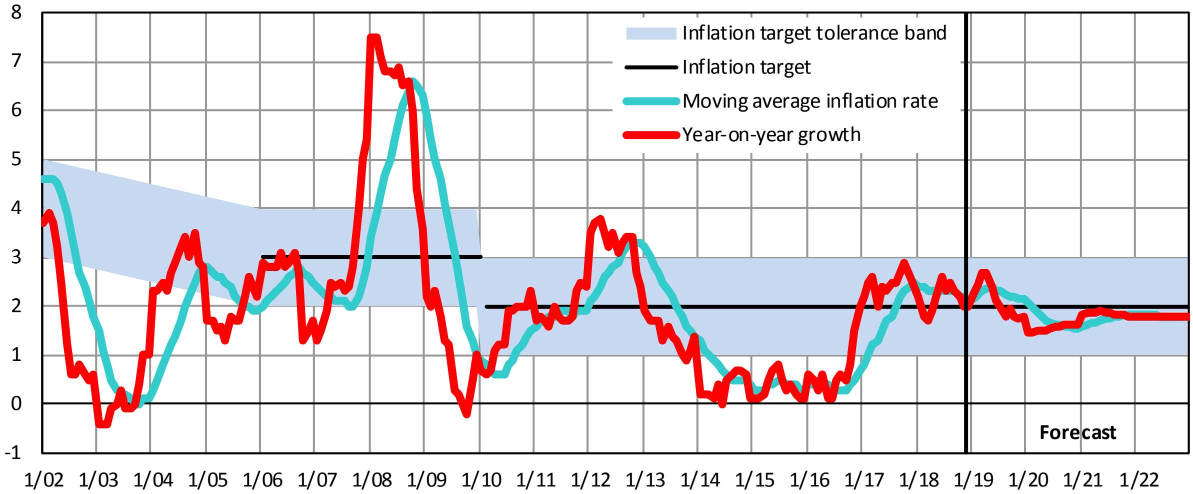
Table 3.2.2: Prices – quarterly

		2018				2019			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
					Estimate	*Forecast*	*Forecast*	*Forecast*	*Forecast*
Consumer Price Index	*average 2015=100*	104.5	105.2	105.8	106.0	107.1	107.7	107.8	107.8
	growth in %	**1.9**	**2.3**	**2.4**	**2.1**	**2.4**	**2.4**	**1.9**	**1.7**
Of which the contribution of:									
Administrative measures [1)]	*percentage points*	**0.2**	**0.3**	**0.3**	**0.3**	**0.6**	**0.5**	**0.5**	**0.5**
Market increase	*percentage points*	**1.7**	**2.0**	**2.1**	**1.8**	**1.9**	**1.9**	**1.4**	**1.2**
Harmonized index of consumer	*average 2015=100*	104.3	105.1	105.6	105.5	106.6	107.3	107.4	107.2
prices	*growth in %*	**1.7**	**2.1**	**2.3**	**1.8**	**2.1**	**2.1**	**1.7**	**1.6**
Offering prices of flats									
Czech Republic	*average 2010=100*	140.1	143.2	146.4	148.7	.	.	.	.
	growth in %	**12.8**	**12.2**	**9.5**	**8.5**	.	.	.	.
Czech Republic excluding Prague	*average 2010=100*	119.1	120.3	123.5	124.8	.	.	.	.
	growth in %	**10.0**	**9.5**	**7.8**	**8.1**	.	.	.	.
Prague	*average 2010=100*	161.1	166.0	169.2	172.7	.	.	.	.
	growth in %	**15.1**	**14.2**	**10.7**	**8.8**	.	.	.	.
Deflators									
GDP	*average 2010=100*	111.0	111.6	112.1	114.1	114.4	114.9	114.8	116.6
	growth in %	**2.6**	**2.4**	**2.1**	**2.4**	**3.0**	**3.0**	**2.4**	**2.2**
Domestic final use	*average 2010=100*	110.4	111.3	112.3	113.6	113.7	114.3	114.8	115.8
	growth in %	**2.4**	**2.5**	**3.1**	**2.5**	**3.0**	**2.8**	**2.2**	**2.0**
Consumption of households	*average 2010=100*	110.4	111.1	112.1	112.4	113.5	114.0	114.4	114.5
	growth in %	**2.4**	**2.7**	**2.9**	**2.5**	**2.7**	**2.6**	**2.0**	**1.9**
Consumption of government	*average 2010=100*	115.5	117.1	118.6	123.1	120.8	122.1	123.5	127.9
	growth in %	**6.8**	**5.9**	**6.1**	**3.8**	**4.6**	**4.3**	**4.1**	**3.9**
Fixed capital formation	*average 2010=100*	106.2	107.0	107.9	108.2	108.8	109.2	109.0	108.8
	growth in %	**-0.9**	**-0.2**	**1.2**	**1.5**	**2.5**	**2.0**	**1.0**	**0.6**
Exports of goods and services	*average 2010=100*	102.9	104.2	105.1	106.5	106.0	106.0	106.5	106.7
	growth in %	**-4.1**	**-1.8**	**1.1**	**3.2**	**3.0**	**1.8**	**1.3**	**0.2**
Imports of goods and services	*average 2010=100*	101.5	103.2	105.0	105.4	104.6	104.7	105.8	105.1
	growth in %	**-5.0**	**-2.1**	**2.2**	**3.5**	**3.1**	**1.5**	**0.8**	**-0.3**
Terms of trade	*average 2010=100*	101.4	100.9	100.1	101.0	101.3	101.2	100.6	101.6
	growth in %	**0.9**	**0.3**	**-1.1**	**-0.2**	**-0.1**	**0.3**	**0.5**	**0.5**

[1)] The contribution of increase in regulated prices and in indirect taxes to increase of December YoY consumer price inflation.
Source: CZSO, Eurostat. Calculations of the MoF.

Graph 3.2.1: Consumer Prices

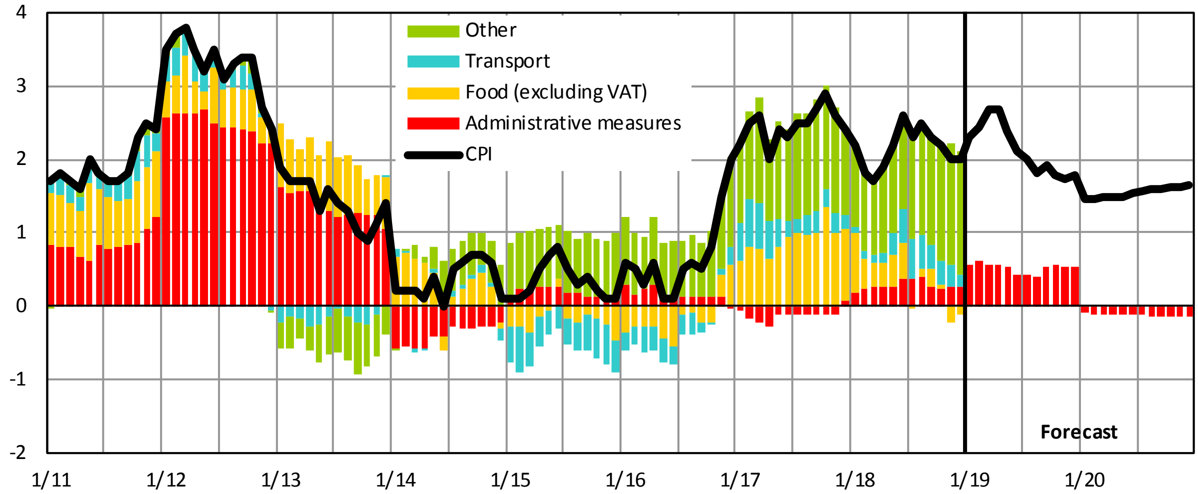
YoY growth rate, in %



Note: For the years 2002–2005 the highlighted area represents target band for headline inflation, whereas from 2006 on it is the tolerance band of the CNB's point target for headline inflation.
Source: CNB, CZSO. Calculations of the MoF.

Graph 3.2.2: Consumer Prices in Main Divisions

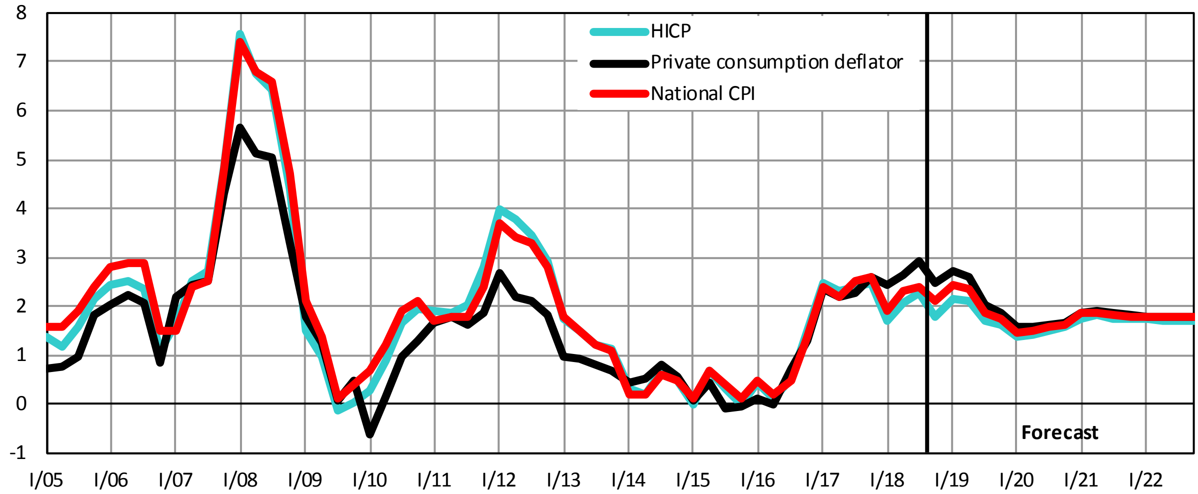
YoY growth of consumer price index, contributions in percentage points, Transport excluding administrative measures and excises



Source: CZSO. Calculations of the MoF.

Graph 3.2.3: Indicators of Consumer Prices

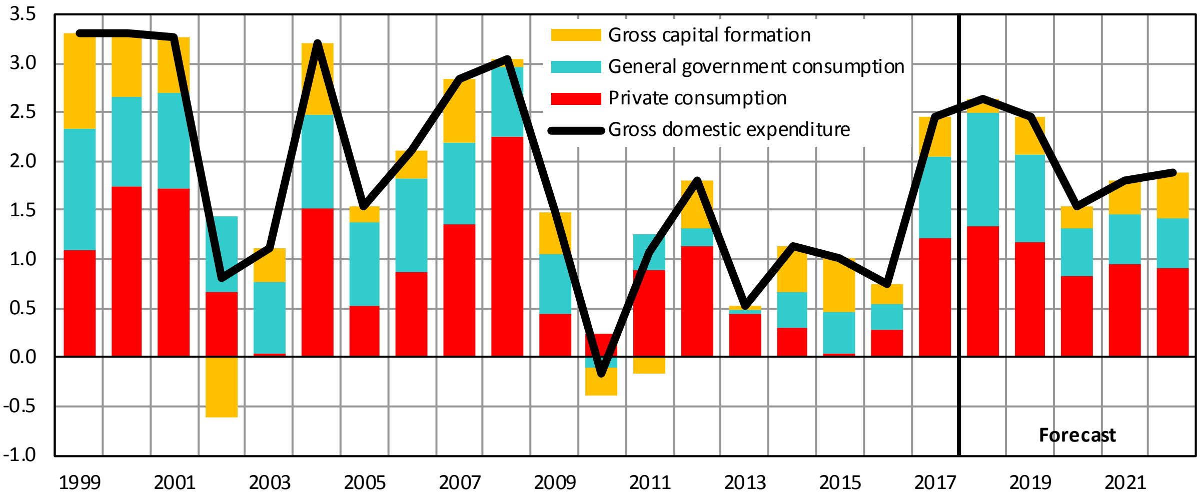
YoY growth rate, in %



Source: CZSO, Eurostat. Calculations of the MoF.

Graph 3.2.4: Gross Domestic Expenditure Deflator

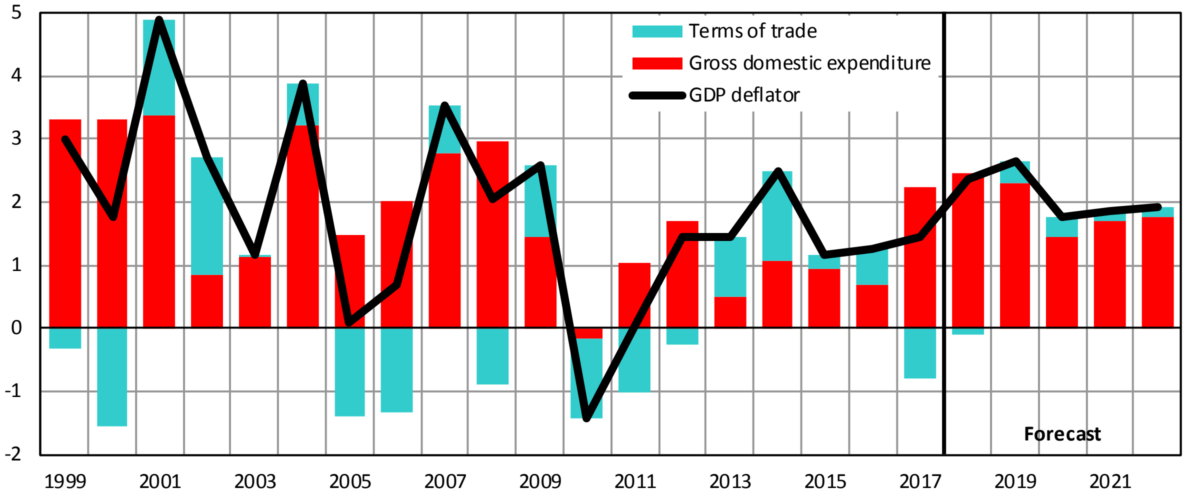
YoY growth rate in %, contributions of growth of deflators of individual components of gross domestic expenditure in percentage points



Source: CZSO. Calculations of the MoF.

Graph 3.2.5: GDP deflator

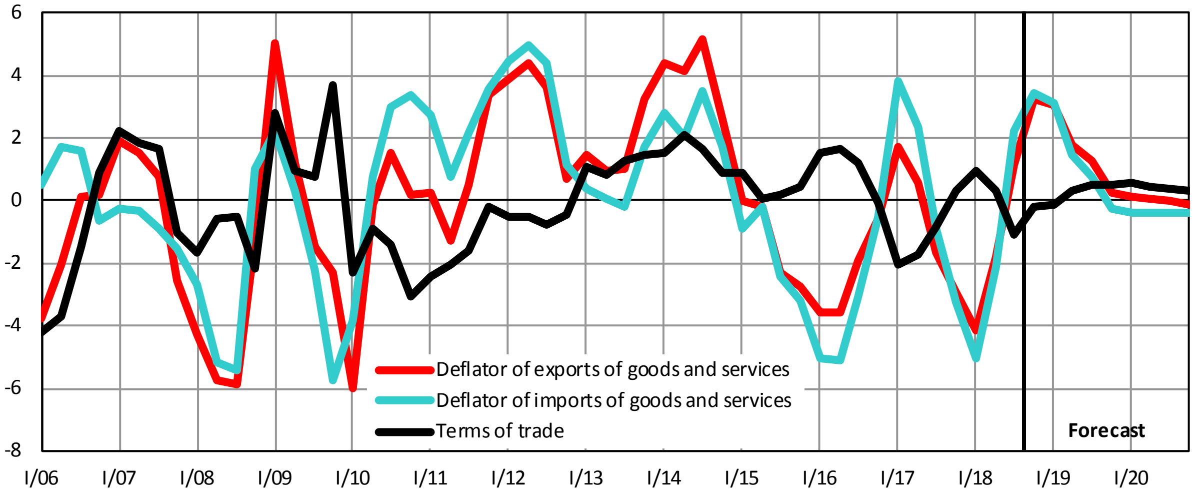
YoY change in %, contributions of growth of gross domestic expenditure deflator and change in terms of trade in percentage points



Source: CZSO. Calculations of the MoF.

Graph 3.2.6: Terms of Trade

YoY growth rate, in %



Source: CZSO. Calculations of the MoF.

3.3 Labour Market

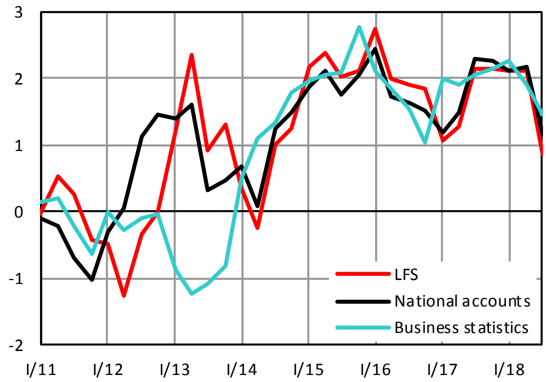
The labour market has long been showing signs of overheating. According to all available statistics, growth in employment continues. The seasonally adjusted internationally comparable unemployment rate dropped below 2% at the end of last year. Registered unemployment is further decreasing, while the number of vacancies has exceeded 300,000 for several months, and exceeds the previous 2008 highs more than twice. This development is in line with extreme growth in wages and salaries. Despite the expected slowdown in economic growth, it can be expected that the very tight labour market situation will continue to persist.

Employment (LFS) grew by 0.8% YoY (*versus 1.0%*) in Q3 2018. The number of employees rose by 0.9% (*versus 1.1%*), the number of entrepreneurs was up 0.7% (*versus 0.5%*). The number of entrepreneurs without employees decreased slightly (by 0.3%), whereas the number of entrepreneurs with employees increased by 3.6%.

From the sectoral point of view, wholesale and retail, education and manufacturing contributed the most to the growth of employment (according to business statistics). A decline continued in mining and quarrying, and a slight decrease in the number of employees (in a total of about 2 thousand persons) also occurred in several other sectors.

Graph 3.3.1: Employees in Different Statistics

YoY growth rate, in%



Source: CZSO.

Lack of workers has been evident for a long time in all sectors of the economy and in almost all regions (in December 2018, the number of vacancies exceeded the number of unemployed in nine regions). It constitutes an already significant barrier to economic growth (lack of employees was perceived as a barrier by approximately one third of industrial and construction companies in Q4 2018).

Due to the extremely low unemployment, further employment growth through this channel is very unlikely. Firms and institutions increasingly employ younger pensioners or hire foreign workers; the latter is, however, hindered by administrative barriers and the adaptability of these people to the local environment. In the long term, room is being created for the development of automation and robotization, and stronger orientation of the economy to less labour-intensive sectors with higher value added.

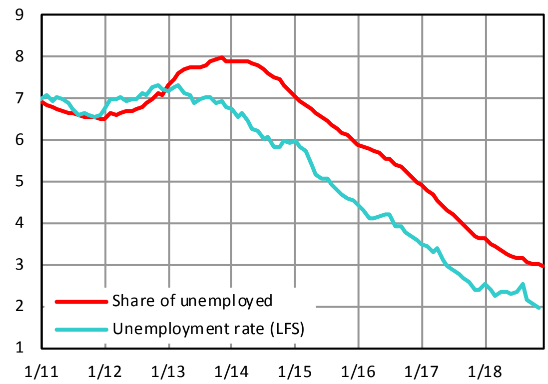
For 2018, we keep the estimate of total employment growth at 1.3%. For 2019, we now expect employment to grow by 0.3% (*versus 0.2%*), due to the projected increase in the number of employees in the general government sector (mainly in education). For 2020, we predict a similar slight increase of 0.2%.

The **unemployment rate** (LFS) reached 2.3% (*in line with the estimate*) in Q3 2018, but the October and November monthly data indicate a further decline. For Q4 2018, we now estimate 2.1% (*versus 2.3%*), keeping the forecast for the entire 2018 at 2.3%. Due to the decline at the end of 2018 to the new record low, the extreme number of job vacancies and the continued growth of the economy, we expect the unemployment rate to be 2.2% in 2019 (*versus 2.3%*) and 2020.

The year-on-year decline in the **share of unemployed persons** (Ministry of Labour and Social Affairs) keeps decreasing. We still assume, however, that for registered unemployment, contrary to the LFS, there is still major room for further decline. This can be explained, for example, by the fact that some job seekers have so-called non-colliding part-time jobs and are therefore likely to be able to leave the registration and take up a full-time job. Another aspect may be that many people subject to property seizures probably work in grey economy and may be motivated to become officially employed in the case of strong wage growth. For the whole year 2018, the share of the unemployed was 3.2% (*in line with the forecast*). For 2019, we expect a further decline in the share of the unemployed to 2.8% (*unchanged*) and then to 2.6% in 2020.

Graph 3.3.2: Indicators of Unemployment

seasonally adjusted data, in%



Note: Share of unemployed (Ministry of Labour and Social Affairs) is the share of available job seekers aged 15–64 years in the population of the same age.

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

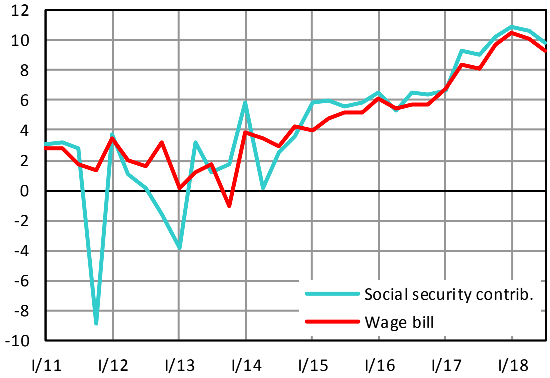
The **economic activity rate** (15–64 year-olds) grew by 0.5 pp YoY to 76.8% in Q3 2018 (*versus 77.0%*). The extremely high number of vacancies, coupled with strong wage growth, continues to lead to the inclusion in the work process of formerly economically inactive individuals or to people postponing retirement. We suppose there is still some room for growth in the participation rate, with demographic aspects in the form of an increasing weight of cohorts with a naturally high economic activity rate (especially of those aged 40–49 years) and gradual increases in the statutory as well as actual retirement age playing a crucial role.

We estimate that the participation rate increased by 0.6 pp to 76.5% in 2018 (*versus 76.7%*). It could increase to 76.9% (*versus 77.4%*) in 2019 and further to 77.3% in 2020.

The growth in the **wage bill** (national accounts, domestic concept) slowed down to 9.3% (*versus 9.5%*) in Q3 2018. From the sectoral point of view, the highest wage growth was recorded in real estate activities (by 13.9%), but the overall growth was mainly due to public administration and defence, education and health and social care, where salaries grew by 13%. Manufacturing recorded a slowdown in wage growth by 1.3 pp to 7.7%.

Graph 3.3.3: Collection of Social Security Contributions and the Wage Bill

YoY growth rate, in%



Source: CZSO, Ministry of Finance.

In Q4 2018, it is estimated that salary growth in the general government sector was slowing down, because the year-on-year development was negatively impacted by a significant increase in the salary scales of employees in the general government sector with effect from November 2017. The development of earnings, however, was also in late 2018 driven by the public sphere, also due to a faster growth in the number of employees compared to the private sector. The wage bill in Q4 2018 could have grown by 8.7% (*versus 7.9%*), and by 9.6% (*versus 9.5%*) for the entire 2018.

As of 1 January 2019, there was a further increase in the minimum wage (by 9.4%) and the lowest guaranteed wage levels, which is a slightly higher rate (by 1.2 pp) compared to the November forecast. In addition, earnings will continue to be affected by the very tight labour market situation. On the other hand, the dynamics of wages and salaries should be dampened by the expected slowdown in economic performance. Wages and salaries could thus increase by 7.7% (*versus 8.4%*) in 2019. In 2020, the wage and salary growth could slow to 6.3% in connection with lower economic growth rate.

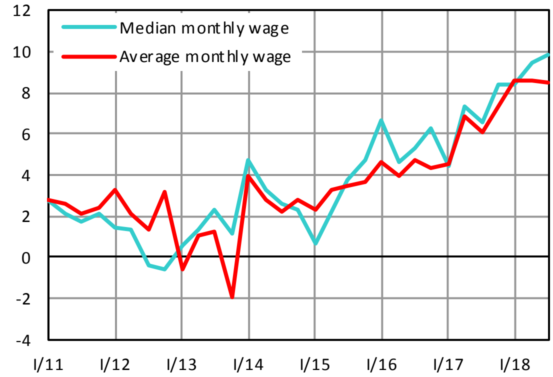
The **average wage** (business statistics, full-time equivalent) increased by 8.5% (*versus 8.8%*) in Q3 2018. The median wage grew by 9.8% over the same period, in line with the faster dynamics in middle-earning professions and a year-on-year rise in the minimum and guaranteed wages. Since as early as mid-2015, the wage median growth outpaced the growth in average wages (see Chart 3.3.4), which stimulates labour supply and helps balance social disparities.

In view of the above factors, the average wage could have increased by 8.1% (*versus 7.2%*) in Q4 2018 and by 8.4% (*versus 8.2%*) in the whole of 2018.

The labour shortage problem should be mitigated this year by the expected slowdown in the growth of the demand for labour. The average wage growth could thus slow down to 7.6% (*versus 8.1%*) in 2019 and further to 6.0% in 2020.

Graph 3.3.4: Nominal Monthly Wage

YoY growth rate, in%



Source: CZSO.

Table 3.3.1: Labour Market – yearly

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
							Estimate	*Forecast*	*Forecast*	*Outlook*	*Outlook*
Labour Force Survey											
Employment	*av. in thous.persons*	**4 937**	**4 974**	**5 042**	**5 139**	**5 222**	**5 288**	**5 302**	**5 313**	**5 318**	**5 319**
	growth in %	1.0	0.8	1.4	1.9	1.6	1.3	0.3	0.2	0.1	0.0
Employees	*av. in thous.persons*	**4 055**	**4 079**	**4 168**	**4 257**	**4 327**	**4 392**	**4 405**	**4 417**	**4 421**	**4 423**
	growth in %	1.5	0.6	2.2	2.1	1.7	1.5	0.3	0.3	0.1	0.0
Entrepreneurs and	*av. in thous.persons*	**882**	**895**	**874**	**882**	**894**	**897**	**896**	**896**	**896**	**896**
self-employed	*growth in %*	-1.3	1.5	-2.4	1.0	1.4	0.3	0.0	0.0	0.0	0.0
Unemployment	*av. in thous.persons*	**369**	**324**	**268**	**211**	**156**	**122**	**118**	**120**	**125**	**126**
Unemployment rate	*average in %*	**7.0**	**6.1**	**5.1**	**4.0**	**2.9**	**2.3**	**2.2**	**2.2**	**2.3**	**2.3**
Long-term unemployment [1]	*av. in thous.persons*	**163**	**141**	**127**	**89**	**54**	**.**	**.**	**.**	**.**	**.**
Labour force	*av. in thous.persons*	**5 306**	**5 298**	**5 310**	**5 350**	**5 377**	**5 410**	**5 420**	**5 433**	**5 442**	**5 445**
	growth in %	0.9	-0.2	0.2	0.8	0.5	0.6	0.2	0.2	0.2	0.1
Population aged 15–64	*av. in thous.persons*	**7 154**	**7 081**	**7 026**	**6 968**	**6 917**	**6 879**	**6 844**	**6 812**	**6 787**	**6 774**
	growth in %	-1.0	-1.0	-0.8	-0.8	-0.7	-0.5	-0.5	-0.5	-0.4	-0.2
Employment/Pop. 15–64	*average in %*	**69.0**	**70.2**	**71.8**	**73.7**	**75.5**	**76.9**	**77.5**	**78.0**	**78.4**	**78.5**
Employment rate 15–64 [2]	*average in %*	**67.7**	**69.0**	**70.2**	**72.0**	**73.6**	**74.7**	**75.2**	**75.6**	**75.9**	**76.0**
Labour force/Pop. 15–64	*average in %*	**74.2**	**74.8**	**75.6**	**76.8**	**77.7**	**78.6**	**79.2**	**79.8**	**80.2**	**80.4**
Participation rate 15–64 [3]	*average in %*	**72.9**	**73.5**	**74.0**	**75.0**	**75.9**	**76.5**	**76.9**	**77.3**	**77.7**	**77.8**
Registered unemployment											
Unemployment	*av. in thous.persons*	**564**	**561**	**479**	**406**	**318**	**242**	**206**	**188**	**185**	**186**
Share of unemployed [4]	*average in %*	**7.7**	**7.7**	**6.6**	**5.6**	**4.3**	**3.2**	**2.8**	**2.6**	**2.5**	**2.6**
Wages and salaries											
Average monthly wage [5]											
Nominal	*CZK*	25 035	25 768	26 591	27 764	29 496	32 000	34 400	36 500	38 600	40 700
	growth in %	**-0.1**	**2.9**	**3.2**	**4.4**	**6.2**	**8.4**	**7.6**	**6.0**	**5.8**	**5.4**
Real	*CZK 2005*	25 211	25 846	26 591	27 571	28 609	30 400	32 000	33 400	34 700	35 900
	growth in %	**-1.5**	**2.5**	**2.9**	**3.7**	**3.8**	**6.1**	**5.4**	**4.4**	**3.8**	**3.5**
Median monthly wage	*CZK*	21 110	21 786	22 414	23 692	25 292	.	.	.	.	.
	growth in %	**1.4**	**3.2**	**2.9**	**5.7**	**6.8**	**.**	**.**	**.**	**.**	**.**
Wage bill	*growth in %*	**0.5**	**3.6**	**4.8**	**5.7**	**8.3**	**9.6**	**7.7**	**6.3**	**5.9**	**5.4**
Labour productivity	*growth in %*	**-0.8**	**2.2**	**3.8**	**0.8**	**2.8**	**1.4**	**2.2**	**2.2**	**2.2**	**2.2**
Unit labour costs [6]	*growth in %*	**0.5**	**0.4**	**-0.8**	**3.1**	**3.6**	**6.4**	**5.1**	**3.8**	**3.4**	**3.1**
Compens. of employees / GDP	*%*	**40.9**	**40.2**	**39.6**	**40.4**	**41.4**	**43.1**	**44.1**	**45.0**	**45.8**	**46.3**

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

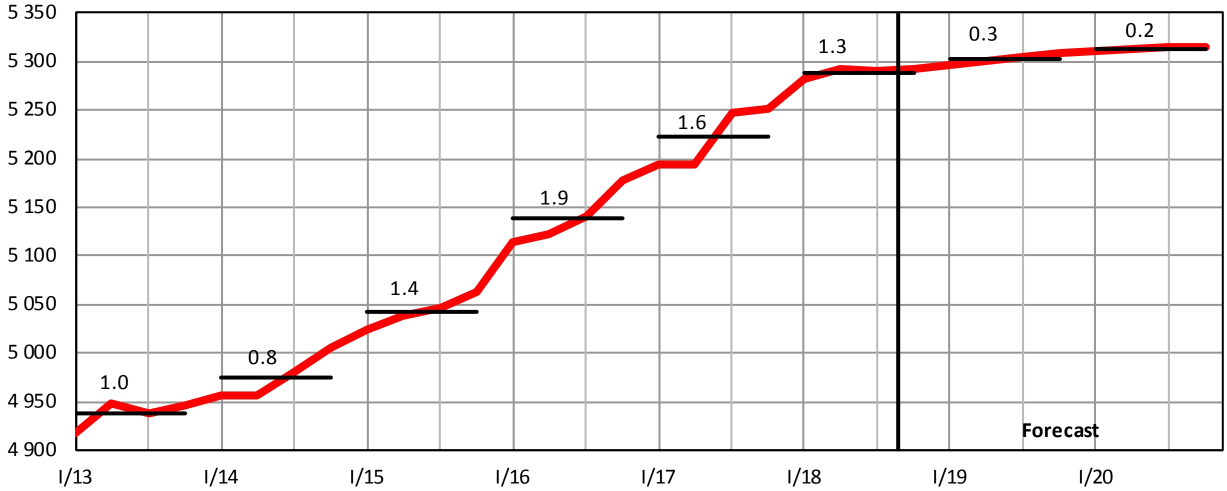
Table 3.3.2: Labour Market – quarterly

		2018				2019			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
					Estimate	*Forecast*	*Forecast*	*Forecast*	*Forecast*
Labour Force Survey									
Employment	*av. in thous. persons*	**5 258**	**5 289**	**5 301**	**5 305**	**5 272**	**5 297**	**5 316**	**5 321**
	YoY growth in %	1.7	1.8	0.8	0.8	0.3	0.2	0.3	0.3
	QoQ growth in %	0.6	0.2	0.0	0.1	0.1	0.1	0.1	0.1
Employees	*av. in thous. persons*	**4 367**	**4 389**	**4 398**	**4 413**	**4 382**	**4 398**	**4 413**	**4 429**
	growth in %	2.1	2.1	0.9	0.9	0.3	0.2	0.3	0.4
Entrepreneurs and	*av. in thous. persons*	**891**	**900**	**903**	**892**	**891**	**899**	**903**	**893**
self-employed	*growth in %*	-0.2	0.1	0.7	0.5	-0.1	-0.1	0.0	0.1
Unemployment	*av. in thous.persons*	**130**	**118**	**127**	**112**	**121**	**114**	**120**	**118**
Unemployment rate	*average in %*	**2.4**	**2.2**	**2.3**	**2.1**	**2.2**	**2.1**	**2.2**	**2.2**
Long-term unemployment [1)]	*av. in thous.persons*	**41**	**36**	**37**	**.**	**.**	**.**	**.**	**.**
Labour force	*av. in thous. persons*	**5 388**	**5 407**	**5 429**	**5 417**	**5 393**	**5 411**	**5 436**	**5 439**
	growth in %	0.6	1.0	0.4	0.5	0.1	0.1	0.1	0.4
Population aged 15–64	*av. in thous. persons*	**6 894**	**6 883**	**6 873**	**6 867**	**6 858**	**6 849**	**6 839**	**6 830**
	growth in %	-0.6	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Employment/Pop. 15–64	*average in %*	**76.3**	**76.8**	**77.1**	**77.3**	**76.9**	**77.3**	**77.7**	**77.9**
	increase over a year	1.7	1.7	1.1	1.0	0.6	0.5	0.6	0.7
Employment rate 15–64 [2)]	*average in %*	**74.2**	**74.7**	**74.9**	**75.0**	**74.6**	**75.1**	**75.4**	**75.6**
	increase over a year	1.4	1.4	0.8	0.7	0.4	0.4	0.5	0.5
Labour force/Pop. 15–64	*average in %*	**78.2**	**78.6**	**79.0**	**78.9**	**78.6**	**79.0**	**79.5**	**79.6**
	increase over a year	1.0	1.2	0.7	0.7	0.5	0.4	0.5	0.7
Participation rate 15–64 [3)]	*average in %*	**76.1**	**76.4**	**76.8**	**76.6**	**76.4**	**76.7**	**77.1**	**77.3**
	increase over a year	0.6	0.8	0.5	0.4	0.3	0.3	0.4	0.6
Registered unemployment									
Unemployment	*av. in thous. persons*	**280.7**	**238.7**	**228.7**	**219.5**	**236**	**204**	**195**	**190**
Share of unemployed [4)]	*average in %*	**3.8**	**3.1**	**3.0**	**2.9**	**3.2**	**2.7**	**2.6**	**2.6**
Wages and salaries									
Average monthly wage [5)]									
Nominal	*CZK*	30 285	31 866	31 516	34 200	32 700	34 400	33 900	36 800
	growth in %	**8.6**	**8.6**	**8.5**	**8.1**	**8.0**	**7.8**	**7.4**	**7.4**
Real	*CZK 2005*	28 981	30 291	29 788	32 302	30 551	31 901	31 409	34 103
	growth in %	**6.7**	**6.1**	**5.9**	**5.9**	**5.4**	**5.3**	**5.4**	**5.6**
Median monthly wage	*CZK*	25 691	27 249	27 719	.	.	.	.	.
	growth in %	**8.4**	**9.5**	**9.8**	**.**	**.**	**.**	**.**	**.**
Wage bill	*growth in %*	**10.5**	**10.1**	**9.3**	**8.7**	**8.0**	**7.7**	**7.6**	**7.6**

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

Graph 3.3.5: Employment (LFS)

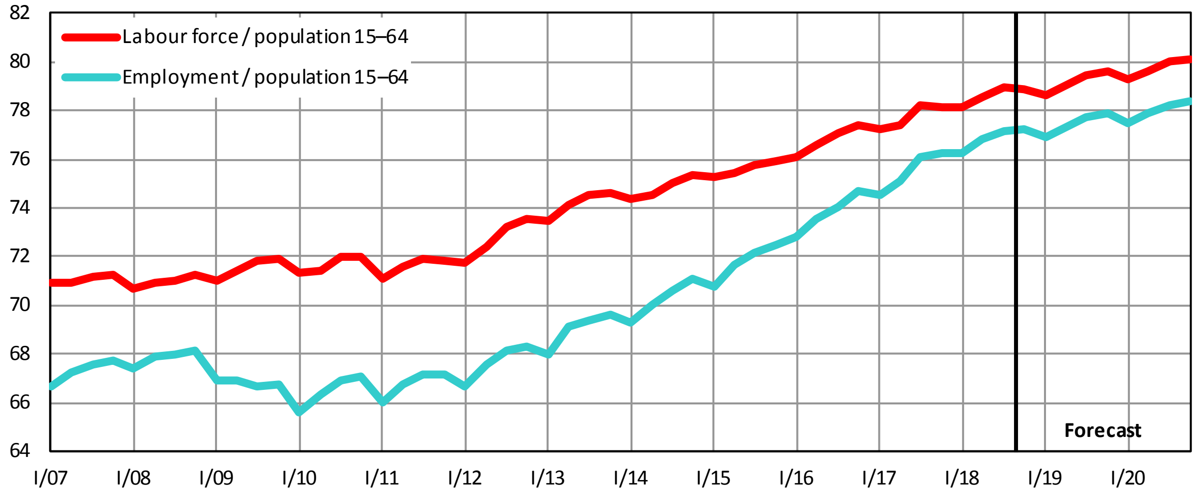
seasonally adjusted data, in thousands of persons, black lines with labels show the average level and growth rate in the given year



Source: CZSO. Calculations of the MoF.

Graph 3.3.6: Ratio of Labour Force and Employment to Population Aged 15–64

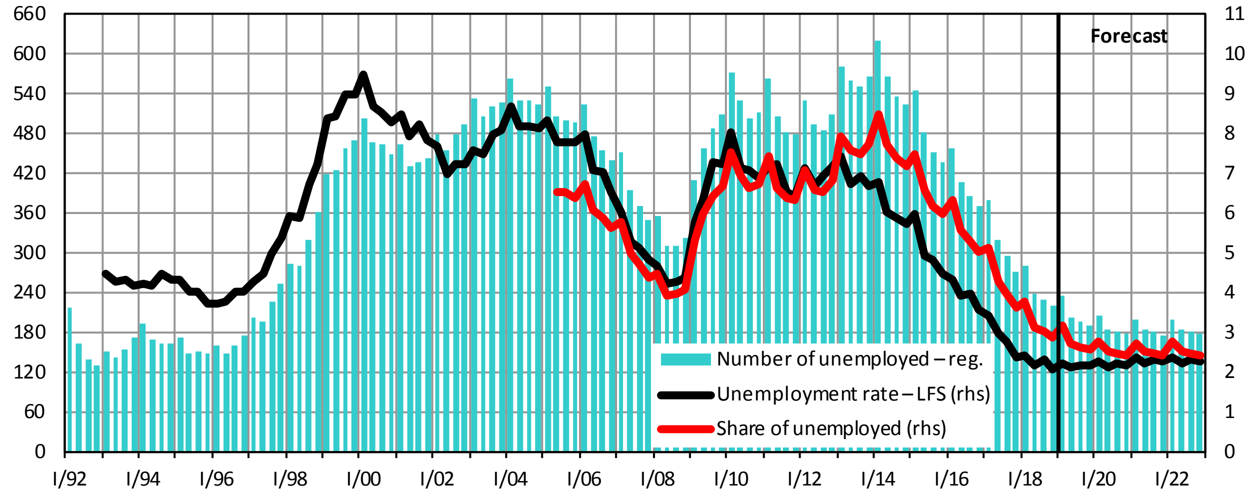
in %



Source: CZSO. Calculations of the MoF.

Graph 3.3.7: Unemployment

quarterly average, in thousands of persons, in % (rhs)

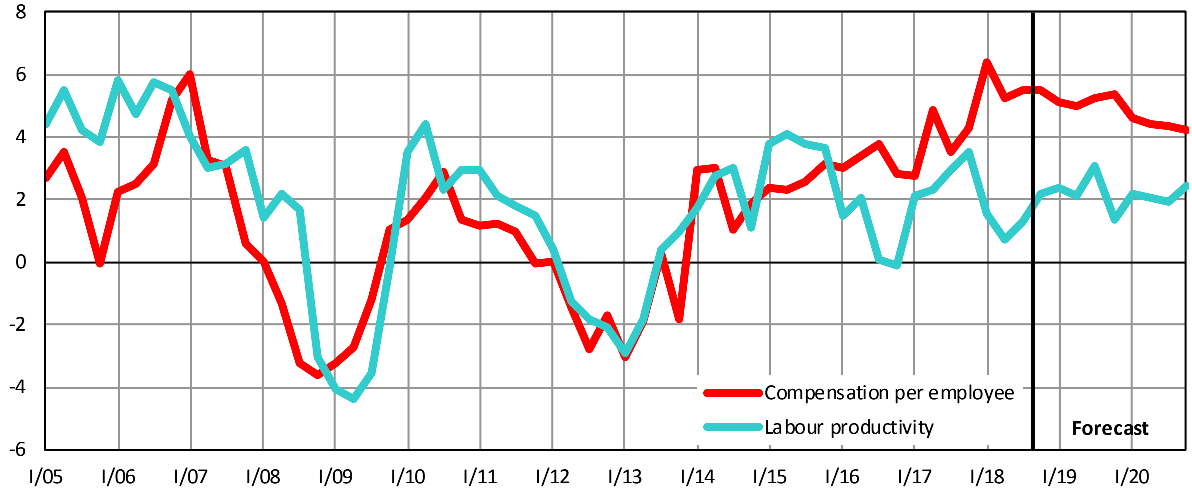


Note: Share of unemployed (Ministry of Labour and Social Affairs) is defined as a share of available job seekers aged 15 to 64 years in the population of the same age.

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

Graph 3.3.8: Compensation per Employee and Real Productivity of Labour

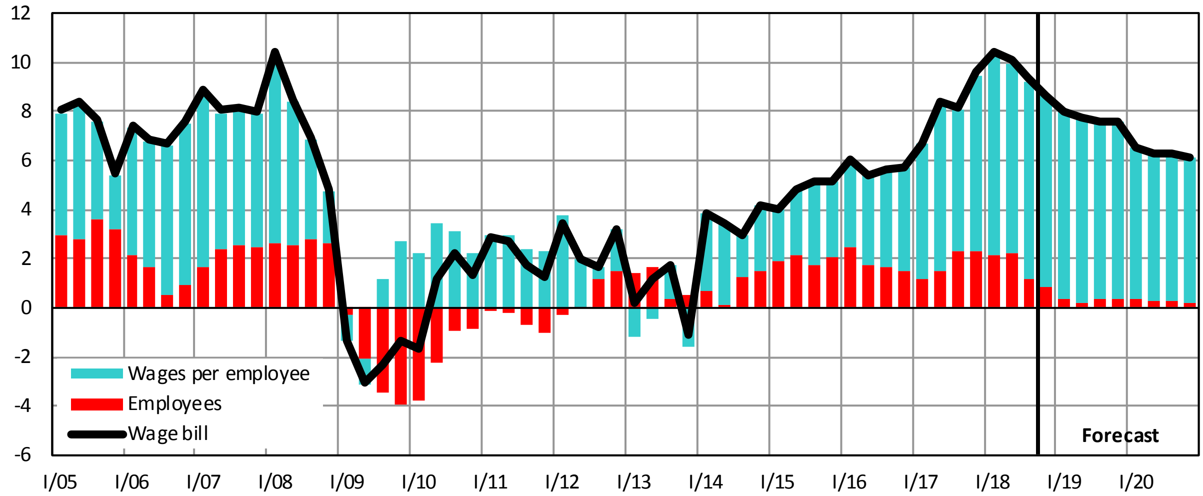
YoY growth rate, in %



Source: CZSO. Calculations of the MoF.

Graph 3.3.9: Nominal Wage Bill

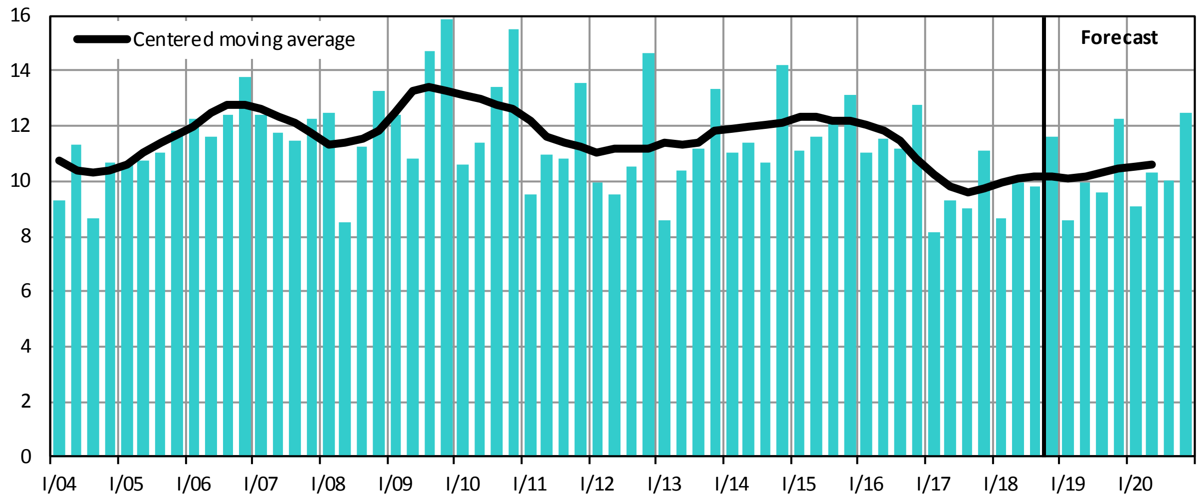
YoY growth rate, in %, domestic concept of the wage bill



Source: CZSO. Calculations of the MoF.

Graph 3.3.10: Gross Savings Rate of Households

in % of disposable income



Source: CZSO. Calculations of the MoF.

Table 3.3.3: Income and Expenditures of Households – yearly

SNA methodology – national concept

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
									Estimate	*Forecast*	*Forecast*
Current income											
Compensation of employees	*bill.CZK*	**1 627**	**1 669**	**1 692**	**1 760**	**1 852**	**1 964**	**2 127**	**2 322**	**2 497**	**2 652**
	growth in %	2.5	2.6	1.3	4.0	5.3	6.0	8.3	9.2	7.5	6.2
Gross operating surplus	*bill.CZK*	**674**	**654**	**645**	**662**	**691**	**711**	**728**	**763**	**790**	**803**
and mixed income	*growth in %*	-1.7	-2.9	-1.3	2.6	4.3	2.9	2.5	4.7	3.5	1.7
Property income received	*bill.CZK*	**153**	**147**	**158**	**166**	**166**	**175**	**165**	**181**	**189**	**199**
	growth in %	-0.6	-4.0	7.8	5.1	-0.4	5.7	-5.8	9.4	4.9	5.2
Social benefits not-in-kind	*bill.CZK*	**553**	**566**	**563**	**576**	**591**	**606**	**623**	**657**	**702**	**745**
	growth in %	2.1	2.4	-0.6	2.2	2.6	2.6	2.8	5.5	6.8	6.1
Other current transfers received	*bill.CZK*	**139**	**151**	**146**	**160**	**181**	**217**	**244**	**266**	**283**	**300**
	growth in %	-0.5	8.6	-3.1	9.2	13.3	19.4	12.8	9.0	6.4	6.0
Current expenditure											
Property income paid	*bill.CZK*	**21**	**15**	**21**	**16**	**14**	**14**	**16**	**29**	**31**	**34**
	growth in %	-8.5	-27.2	40.5	-24.3	-10.7	0.2	8.3	83.7	8.2	8.7
Curr. taxes on income and property	*bill.CZK*	**156**	**158**	**166**	**177**	**183**	**203**	**226**	**236**	**265**	**283**
	growth in %	8.1	1.6	4.9	6.9	3.2	11.1	11.0	4.5	12.4	6.8
Social contributions	*bill.CZK*	**640**	**654**	**670**	**696**	**732**	**775**	**836**	**912**	**979**	**1032**
	growth in %	3.1	2.3	2.4	3.8	5.3	5.8	7.8	9.1	7.4	5.4
Other current transfers paid	*bill.CZK*	**145**	**154**	**140**	**150**	**168**	**205**	**235**	**258**	**274**	**290**
	growth in %	3.2	6.2	-9.3	6.9	11.9	22.5	14.7	9.6	6.2	5.8
Gross disposable income	*bill.CZK*	**2 184**	**2 206**	**2 208**	**2 285**	**2 383**	**2 474**	**2 576**	**2 755**	**2 912**	**3 061**
	growth in %	0.2	1.0	0.1	3.5	4.3	3.8	4.1	6.9	5.7	5.1
Final consumption	*bill.CZK*	**1 952**	**1 970**	**1 997**	**2 044**	**2 125**	**2 213**	**2 361**	**2 507**	**2 648**	**2 772**
	growth in %	2.0	0.9	1.3	2.4	3.9	4.1	6.7	6.2	5.6	4.7
Change in share in pension funds	*bill.CZK*	**16**	**15**	**35**	**35**	**33**	**31**	**32**	**33**	**36**	**38**
Gross savings	*bill.CZK*	**248**	**250**	**246**	**276**	**291**	**292**	**247**	**281**	**299**	**327**
Capital transfers											
(income (-) / expenditure (+))	*bill.CZK*	**-25**	**-21**	**-13**	**-32**	**-12**	**-14**	**-11**	**-15**	**-22**	**-24**
Gross capital formation	*bill.CZK*	**198**	**183**	**181**	**195**	**208**	**228**	**242**	**259**	**269**	**277**
	growth in %	-13.9	-7.8	-1.3	8.3	6.6	9.6	5.9	7.1	3.8	3.1
Change in financial assets and liab.	*bill.CZK*	**73**	**87**	**77**	**110**	**93**	**76**	**15**	**36**	**52**	**73**
Real disposable income	*growth in %*	**-1.5**	**-1.2**	**-0.8**	**2.9**	**4.2**	**3.3**	**1.7**	**4.2**	**3.3**	**3.4**
Gross savings rate	*%*	**11.3**	**11.3**	**11.0**	**11.9**	**12.1**	**11.6**	**9.5**	**10.1**	**10.2**	**10.5**

Source: CZSO. Calculations of the MoF.

3.4 External Relations

The current account balance to GDP ratio[5] was 0.3% in Q3 2018 (*versus 0.5%*), thus having deteriorated by 0.2% of GDP on the previous quarter.

The export market growth[6] slowed down to 3.4% (*versus 3.8%*) in Q3 2018. The lower-than-estimated dynamics reflects the slower GDP growth of trading partners of the CR (especially Germany). That was partly due to lower production of the automotive industry in connection with the transition to a new emission standard and a global slowdown in international trade growth, including within the EU. We estimate that export markets increased by 3.7% in 2018 (*versus 4.1%*). Given the lowered expectations about economic growth in most of our main trading partners (see Chapter 1.1) and their import intensity, we expect the export market growth to slow down further to 2.7% (*versus 3.9%*) this year and then accelerate marginally to 2.8% in 2020.

Export performance increased by 1.2% (*versus 1.0%*) in Q3 2018. This development may be related to the weakening of the koruna's exchange rate against the euro and maintained growth in labour productivity. We estimate that export performance increased by 0.9% in 2018 (*versus 0.4%*). We expect that its growth will slow down to 0.4% (*versus 0.3%*) in 2019 and to 0.3% in 2020. The export performance growth slowdown reflects the increasing unit labour costs, the appreciation of the koruna and the shortage of suitable workforce.

As regards foreign trade (in the balance of payments methodology), a steady gradual decline in the surplus of the **goods balance** has continued since Q1 2017. According to current data, it reached 4.3% of GDP (*in line with the estimate*) in Q3 2018. The declining balance was due to factors on the import side, especially strong demand for investment goods stemming from the position of the economy in the economic cycle.

On the export side, there was growth in commodity classes significant for the Czech economy, with the exception of industrial consumer goods. In terms of weight, the most significant growth was recorded in the category of machinery and transport equipment, especially machinery and electrical equipment, which reflect strong investment activity abroad.

Mineral fuel prices remain an important factor affecting the **terms of trade** of foreign trade in goods. In Q3 2018, the deficit on the fuel balance reached 2.7% of GDP (*versus 2.8% of GDP*); for 2018, we expect a deficit of 2.8% of GDP (*versus 2.9% of GDP*) following the development of crude oil prices at the end of the last year. With regard to the projected oil price, we expect the deficit to decrease to 2.3% of GDP (*versus 2.9% of GDP*) in 2019 and further to 2.2% of GDP in 2020.

We estimate that the surplus on the **balance of goods** reached 4.2% of GDP (*versus 4.0% of GDP*) in 2018, with the change in the forecast reflecting the result of foreign trade in November 2018. The positive balance should decrease to 4.0% of GDP (*versus 3.7% of GDP*) in 2019 and further to 3.9% of GDP in 2020. Despite the worse expected development of export markets and export performance, we raise the forecast for the goods balance, mainly due to a lower deficit in the fuel part of the balance. Carmakers' ongoing problems with the implementation of the new emission standard, the slowdown in the German economy, and fears of higher tariff barriers after the UK's withdrawal from the EU will act against further improvement in the goods balance in the first half of this year.

The **balance of services** recorded a surplus of 2.3% of GDP (*versus 2.5% of GDP*) in Q3 2018, which has been the first deterioration of the balance since Q1 2015. The worse outcome is related to the unexpectedly strong growth in imports of research and consultancy services. We estimate that the balance of services was 2.2% of GDP in 2018 (*versus 2.5% of GDP*). Given the expected slower economic growth abroad, we expect a lower surplus on the balance of services than in the previous forecast. It should remain at 2.2% of GDP in this (*vs 2.5% of GDP*) and next year.

In addition to the above-mentioned decrease in the net exports balance of 0.7% of GDP, the year-on-year decline in the current account surplus in Q3 2018 by 0.5% of GDP was also due to a deterioration of **the primary income balance** by 0.1% of GDP. This balance recorded a deficit of 5.4% of GDP (*in line with the estimate*) in Q3 2018, and the deficit for the entire 2018 could have been 5.3% of GDP (*versus 5.2% of GDP*). The deterioration was due to higher outflow of income from direct investments in the form of dividends, based on the increased profitability of foreign-owned companies. The primary income shows a high volatility over time related to the cyclical development of the economy. In view of the tight labour market situation and the ongoing wage pressures and thus the shift in GDP distribution from corporate net profits to compensation of employees, a decrease in profitability can be expected also for foreign-controlled companies. For this and next year, we expect a steady deficit of primary incomes at 5.2% of GDP (*vs 5.1% of GDP in 2019*).

In this context, we estimate that the **current account of the balance of payments** showed a slight surplus of 0.3% GDP in 2018 (*versus 0.4% of GDP*). The balance should have the same ratio to GDP also this year (*versus 0.4% of GDP*), and in 2020 the surplus could slightly decrease to 0.2% of GDP.

[5] All quarterly figures relative to GDP are listed in annual moving totals.

[6] The most important trading partners (according to the national statistics of foreign trade in goods) in 2017 included Germany with a share in Czech exports of 32.2%, Slovakia with 9.0%, Poland with 6.4%, France with 5.1%, the United Kingdom with 4.8%, and Austria with 4.4%.

Table 3.4.1: Balance of Payments – yearly

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
									Estimate	*Forecast*	*Forecast*
Goods and services	*bill.CZK*	157	201	237	276	266	353	363	341	346	355
	% GDP	**3.9**	**5.0**	**5.8**	**6.4**	**5.8**	**7.4**	**7.2**	**6.4**	**6.2**	**6.1**
Goods	*bill.CZK*	75	124	167	220	188	246	241	224	221	226
	% GDP	**1.9**	**3.0**	**4.1**	**5.1**	**4.1**	**5.2**	**4.8**	**4.2**	**4.0**	**3.9**
Services	*bill.CZK*	81	78	70	56	78	108	122	118	124	129
	% GDP	**2.0**	**1.9**	**1.7**	**1.3**	**1.7**	**2.3**	**2.4**	**2.2**	**2.2**	**2.2**
Primary income	*bill.CZK*	-223	-238	-249	-261	-255	-252	-261	-281	-291	-303
	% GDP	**-5.5**	**-5.9**	**-6.1**	**-6.0**	**-5.5**	**-5.3**	**-5.2**	**-5.3**	**-5.2**	**-5.2**
Secondary income	*bill.CZK*	-18	-27	-10	-7	0	-27	-48	-43	-40	-39
	% GDP	**-0.5**	**-0.7**	**-0.2**	**-0.2**	**0.0**	**-0.6**	**-1.0**	**-0.8**	**-0.7**	**-0.7**
Current account	*bill.CZK*	-85	-63	-22	8	11	74	54	18	15	13
	% GDP	**-2.1**	**-1.6**	**-0.5**	**0.2**	**0.2**	**1.6**	**1.1**	**0.3**	**0.3**	**0.2**
Capital account	*bill.CZK*	13	53	82	32	102	54	46	30	40	50
	% GDP	**0.3**	**1.3**	**2.0**	**0.7**	**2.2**	**1.1**	**0.9**	**0.6**	**0.7**	**0.9**
Net lending/borrowing	*bill.CZK*	-72	-10	61	40	113	128	101	48	55	63
	% GDP	**-1.8**	**-0.3**	**1.5**	**0.9**	**2.5**	**2.7**	**2.0**	**0.9**	**1.0**	**1.1**
Financial account	*bill.CZK*	-75	12	68	64	175	117	117	.	.	.
Direct investments	*bill.CZK*	-47	-121	7	-80	50	-187	-135	.	.	.
Portfolio investments	*bill.CZK*	-6	-55	-93	90	-164	-170	-268	.	.	.
Financial derivatives	*bill.CZK*	4	-9	-5	-6	-5	11	-14	.	.	.
Other investments	*bill.CZK*	-9	116	-30	-13	-57	-102	-712	.	.	.
Reserve assets	*bill.CZK*	-17	80	188	73	351	564	1246	.	.	.
International investment position	*bill.CZK*	-1 823	-1 864	-1 695	-1 577	-1 513	-1 283	-1 337	.	.	.
	% GDP	**-45.2**	**-45.9**	**-41.4**	**-36.6**	**-32.9**	**-26.9**	**-26.5**	.	.	.
Gross external debt	*bill.CZK*	2 312	2 434	2 733	2 947	3 119	3 498	4 372	.	.	.
	% GDP	**57.3**	**60.0**	**66.7**	**68.3**	**67.9**	**73.4**	**86.6**	.	.	.

Source: CNB, CZSO. Calculations of the MoF.

Table 3.4.2: Balance of Payments – quarterly

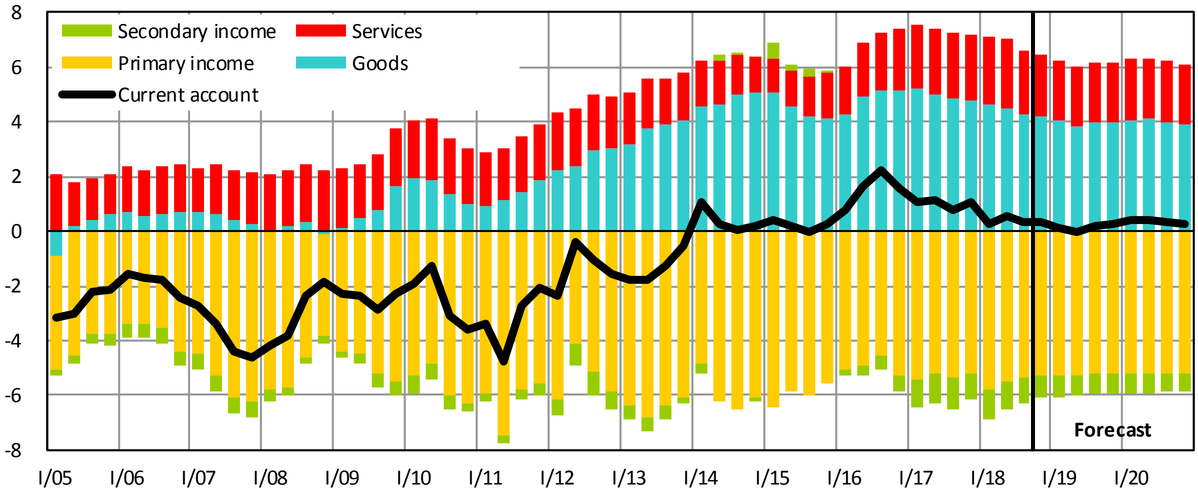
moving sums of the latest 4 quarters

		2018				2019			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
					Estimate	*Forecast*	*Forecast*	*Forecast*	*Forecast*
Goods and services	*bill.CZK*	363	365	346	341	334	328	341	346
	% GDP	**7.1**	**7.0**	**6.6**	**6.4**	**6.2**	**6.0**	**6.2**	**6.2**
Goods	*bill.CZK*	236	234	224	224	217	211	219	221
	% GDP	**4.6**	**4.5**	**4.3**	**4.2**	**4.0**	**3.9**	**4.0**	**4.0**
Services	*bill.CZK*	127	130	122	118	117	117	122	124
	% GDP	**2.5**	**2.5**	**2.3**	**2.2**	**2.2**	**2.1**	**2.2**	**2.2**
Primary income	*bill.CZK*	-297	-285	-281	-281	-284	-287	-289	-291
	% GDP	**-5.8**	**-5.5**	**-5.4**	**-5.3**	**-5.3**	**-5.3**	**-5.2**	**-5.2**
Secondary income	*bill.CZK*	-53	-51	-47	-43	-42	-41	-40	-40
	% GDP	**-1.0**	**-1.0**	**-0.9**	**-0.8**	**-0.8**	**-0.8**	**-0.7**	**-0.7**
Current account	*bill.CZK*	12	28	18	18	8	0	12	15
	% GDP	**0.2**	**0.5**	**0.3**	**0.3**	**0.2**	**0.0**	**0.2**	**0.3**
Capital account	*bill.CZK*	47	38	34	30	32	35	37	40
	% GDP	**0.9**	**0.7**	**0.6**	**0.6**	**0.6**	**0.6**	**0.7**	**0.7**
Net lending/borrowing	*bill.CZK*	59	66	52	48	40	35	49	55
	% GDP	**1.2**	**1.3**	**1.0**	**0.9**	**0.8**	**0.6**	**0.9**	**1.0**
Financial account	*bill.CZK*	66	38	12	.	.	.	.	.
Direct investments	*bill.CZK*	-82	-87	-78	.	.	.	.	.
Portfolio investments	*bill.CZK*	36	178	23	.	.	.	.	.
Financial derivatives	*bill.CZK*	-15	-16	-9	.	.	.	.	.
Other investments	*bill.CZK*	5	-53	79	.	.	.	.	.
Reserve assets	*bill.CZK*	123	17	-3	.	.	.	.	.
International investment position	*stock in bill.CZK*	-1 309	-1 244	-1 336	.	.	.	.	.
	% GDP	**-25.6**	**-24.0**	**-25.5**	.	.	.	.	.
Gross external debt	*stock in bill.CZK*	4 315	4 376	4 370	.	.	.	.	.
	% GDP	**84.3**	**84.4**	**83.4**	.	.	.	.	.

Source: CNB, CZSO. Calculations of the MoF.

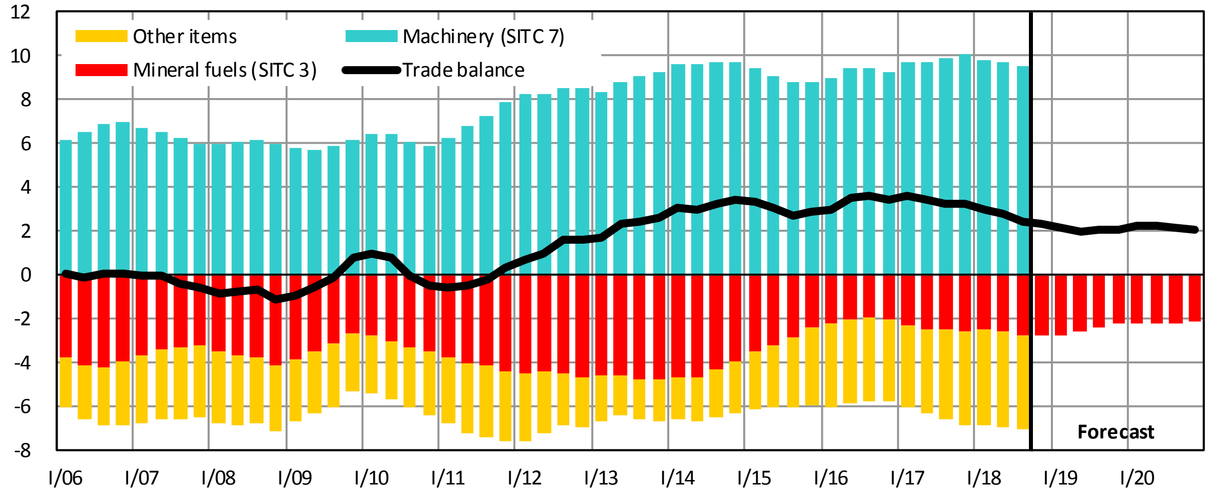
Graph 3.4.1: Current Account

moving sums of the latest 4 quarters, in % of GDP, trade and service balances in BoP definitions



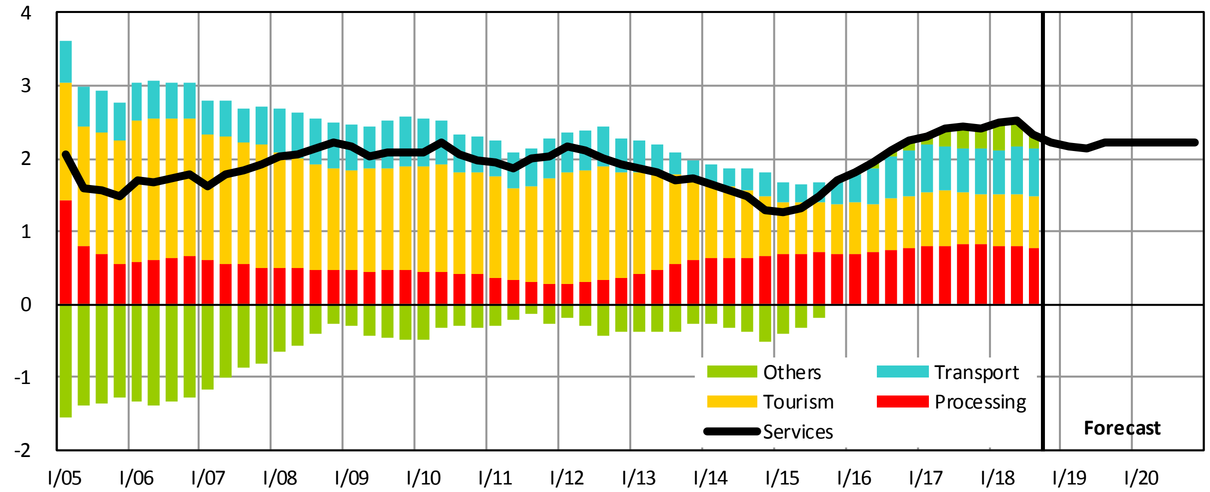
Source: CNB, CZSO. Calculations of the MoF.

Graph 3.4.2: Balance of Trade (national concept)
moving sums of the latest 4 quarters, in % of GDP, in cross-border definitions



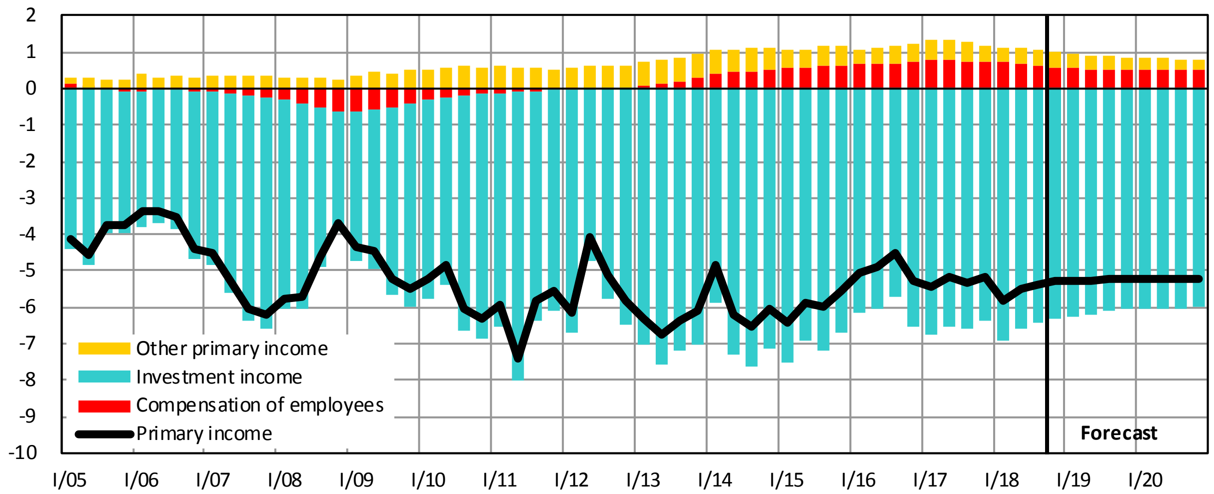
Note: The data in the graph show imports in cif methodology. For this reason, the graph is not comparable with Tables 3.4.1 and 3.4.2, where imports are in fob methodology. Trade balance in the national concept (unlike in the BoP methodology in Table 3.4.1) does not include the import of JAS-39 Gripen fighter jets in the fourth quarter of 2015 amounting to CZK 9.9 bill., i.e. 0.2% of GDP.
Source: CZSO. Calculations of the MoF.

Graph 3.4.3: Balance of Services
moving sums of the latest 4 quarters, in % of GDP



Source: CNB, CZSO. Calculations of the MoF.

Graph 3.4.4: Balance of Primary Income
moving sums of the latest 4 quarters, in % of GDP



Source: CNB, CZSO. Calculations of the MoF.

Table 3.4.3: Decomposition of Exports of Goods – yearly

seasonally adjusted

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
									Estimate	*Forecast*	*Forecast*
GDP [1]	*average of 2005=100*	103.4	104.4	105.3	107.7	110.0	112.5	115.6	118	121	123
	growth in %	**3.4**	**1.0**	**0.9**	**2.2**	**2.2**	**2.3**	**2.8**	**2.3**	**2.0**	**2.0**
Import intensity [2]	*average of 2005=100*	104.0	103.1	104.6	107.2	110.7	113.0	116.3	118	119	120
	growth in %	**4.0**	**-0.8**	**1.4**	**2.5**	**3.3**	**2.0**	**3.0**	**1.3**	**0.7**	**0.8**
Export markets [3]	*average of 2005=100*	107.5	107.7	110.2	115.5	121.8	127.1	134.5	139	143	147
	growth in %	**7.5**	**0.1**	**2.3**	**4.8**	**5.5**	**4.3**	**5.8**	**3.7**	**2.7**	**2.8**
Export performance	*average of 2005=100*	102.4	106.8	105.0	109.5	109.4	109.2	110.5	112	112	112
	growth in %	**2.4**	**4.2**	**-1.6**	**4.2**	**-0.1**	**-0.2**	**1.3**	**0.9**	**0.4**	**0.3**
Real exports	*average of 2005=100*	110.2	115.0	115.7	126.4	133.3	138.8	148.7	156	161	166
	growth in %	**10.2**	**4.4**	**0.6**	**9.2**	**5.4**	**4.1**	**7.2**	**4.6**	**3.2**	**3.1**
1 / NEER	*average of 2005=100*	97.0	101.2	103.0	108.6	109.9	106.9	103.9	100	100	98
	growth in %	**-3.0**	**4.4**	**1.7**	**5.5**	**1.2**	**-2.8**	**-2.8**	**-3.6**	**-0.3**	**-1.8**
Prices on foreign markets	*average of 2005=100*	103.9	102.7	102.6	101.0	98.3	98.3	100.5	103	106	108
	growth in %	**3.9**	**-1.1**	**-0.1**	**-1.6**	**-2.6**	**0.0**	**2.2**	**2.9**	**2.1**	**1.8**
Exports deflator	*average of 2005=100*	100.8	104.0	105.6	109.6	108.1	105.1	104.3	104	105	105
	growth in %	**0.8**	**3.2**	**1.5**	**3.8**	**-1.4**	**-2.8**	**-0.7**	**-0.7**	**1.8**	**0.0**
Nominal exports	*average of 2005=100*	111.0	119.6	122.2	138.6	144.0	145.8	155.1	161	169	175
	growth in %	**11.0**	**7.7**	**2.2**	**13.4**	**3.9**	**1.2**	**6.4**	**3.9**	**5.0**	**3.2**

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

Table 3.4.4: Decomposition of Exports of Goods – quarterly

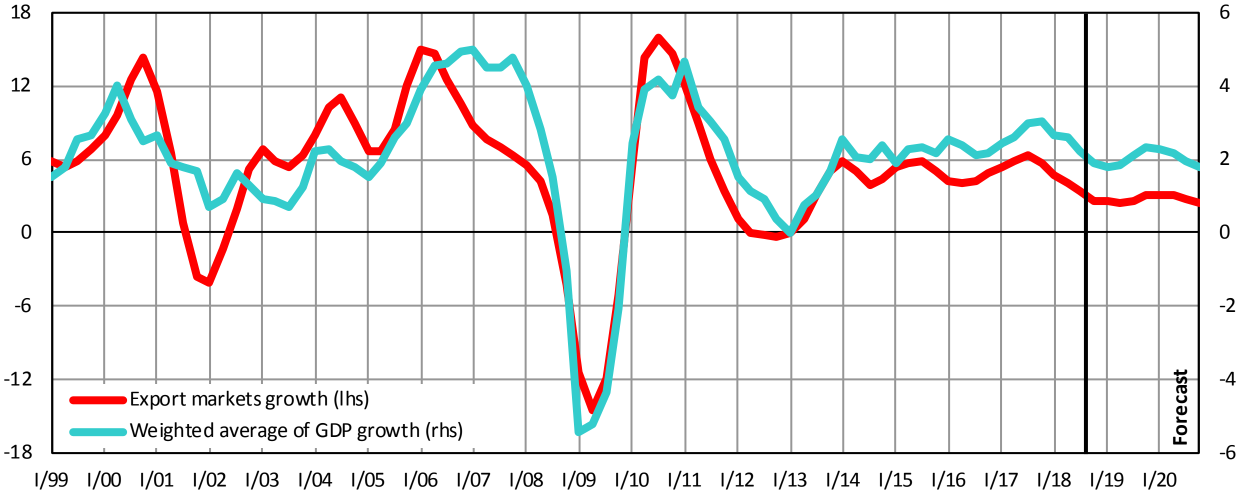
seasonally adjusted

		2018				2019			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
					Estimate	*Forecast*	*Forecast*	*Forecast*	*Forecast*
GDP [1]	*average of 2010=100*	117.5	118.2	118.6	119	120	120	121	122
	growth in %	**2.7**	**2.6**	**2.2**	**1.9**	**1.8**	**1.8**	**2.1**	**2.3**
Import intensity [2]	*average of 2010=100*	117.4	117.7	118.1	118	118	118	119	119
	growth in %	**1.9**	**1.4**	**1.1**	**0.7**	**0.8**	**0.7**	**0.5**	**0.7**
Export markets [3]	*average of 2010=100*	138.0	139.1	140.1	141	142	143	144	145
	growth in %	**4.6**	**4.1**	**3.4**	**2.6**	**2.7**	**2.5**	**2.6**	**3.1**
Export performance	*average of 2010=100*	111.5	111.6	110.7	112	112	112	111	113
	growth in %	**1.2**	**-0.4**	**1.2**	**1.7**	**0.5**	**0.5**	**0.5**	**0.3**
Real exports	*average of 2010=100*	153.8	155.3	155.2	158	159	160	160	163
	growth in %	**5.9**	**3.7**	**4.6**	**4.4**	**3.2**	**3.0**	**3.2**	**3.4**
1 / NEER	*average of 2010=100*	99.5	100.2	100.1	101	101	100	100	99
	growth in %	**-7.4**	**-4.8**	**-2.1**	**0.3**	**1.1**	**-0.1**	**-0.5**	**-1.7**
Prices on foreign markets	*average of 2010=100*	102.3	102.7	103.8	105	105	105	106	107
	growth in %	**2.6**	**2.8**	**3.0**	**3.3**	**2.2**	**2.2**	**2.0**	**2.0**
Exports deflator	*average of 2010=100*	101.8	102.9	103.9	106	105	105	105	106
	growth in %	**-5.0**	**-2.2**	**0.8**	**3.6**	**3.3**	**2.1**	**1.5**	**0.3**
Nominal exports	*average of 2010=100*	156.5	159.8	161.2	167	167	168	169	173
	growth in %	**0.6**	**1.4**	**5.5**	**8.1**	**6.5**	**5.1**	**4.7**	**3.7**

See notes to Table 3.4.3.
Source: CNB, CZSO, Eurostat. Calculations of the MoF.

Graph 3.4.5: GDP and Imports of Goods in Main Partner Countries

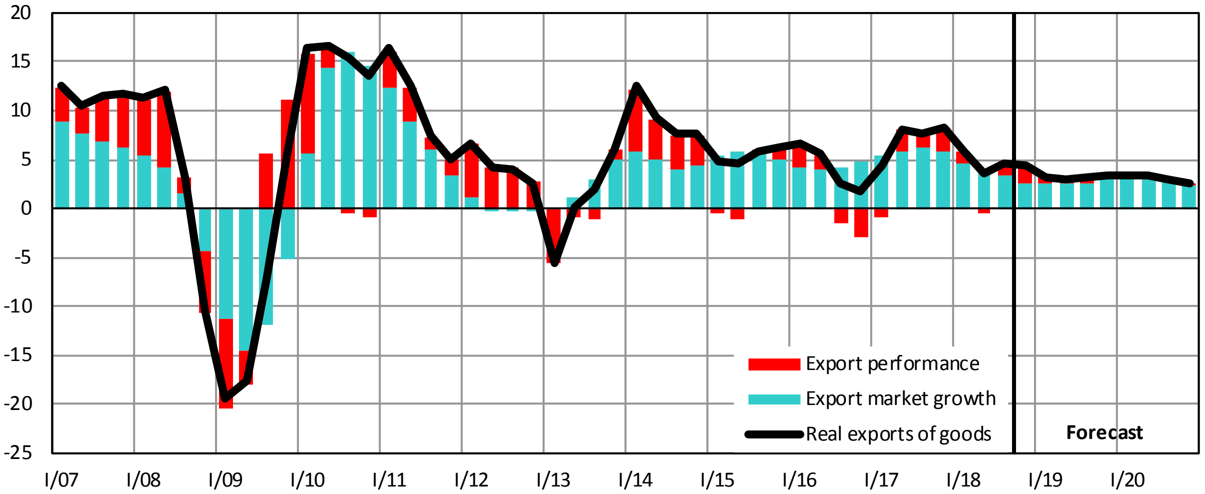
YoY growth rate, in %, seasonally adjusted



Source: Eurostat. Calculations of the MoF.

Graph 3.4.6: Real Exports of Goods

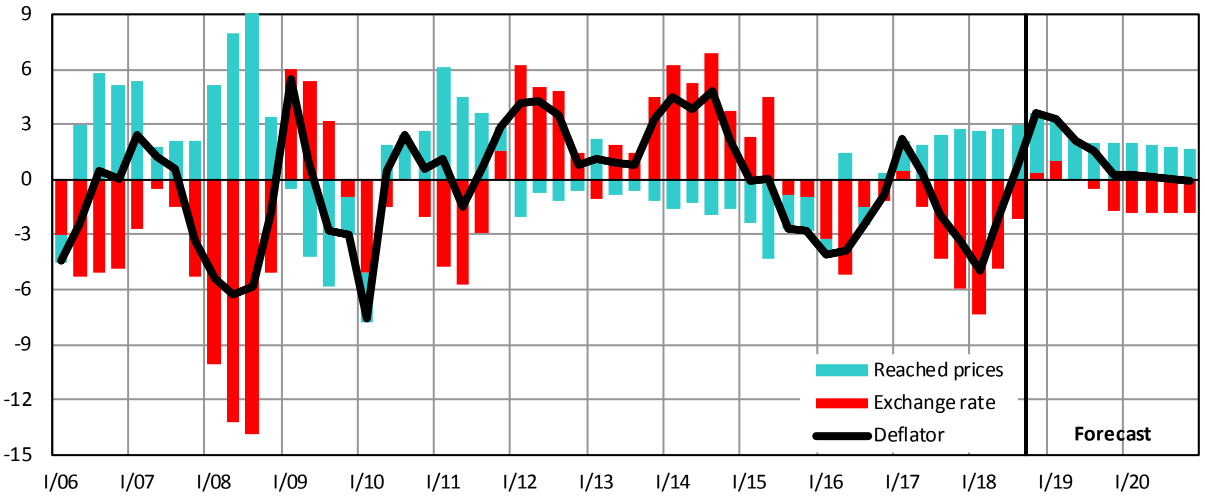
decomposition of YoY growth, in %, seasonally adjusted



Source: CZSO, Eurostat. Calculations of the MoF.

Graph 3.4.7: Deflator of Exports of Goods

decomposition of YoY growth, in %



Source: CNB, CZSO. Calculations of the MoF.

3.5 International Comparisons

Comparisons for the period up to and including 2017 are based on Eurostat statistics. Since 2018, our own calculations on the basis of real exchange rates have been used.

In 2017, the GDP per capita **in current purchasing power parity** increased in all of the monitored countries[7], although in that year a slight decrease in relative terms compared to the EA19 was recorded in Italy, Greece, Slovakia and Portugal. In the Czech Republic, the purchasing power parity was 17.75 CZK/PPS against the EU28 and 17.21 CZK/EUR against the EA19. The economic level was circa 26,900 PPS, corresponding to 84% of the economic level in the EA19. The relative economic level of the Czech Republic should gradually rise towards 87% of the EA19 average in 2020 thanks to the stable economic growth, and thus approach the level of Spain.

GDP per capita, recalculated using the current **exchange rate** was approx. 18,100 EUR in the CR in 2017, that is, 55% of the EA19 level. The stable economic growth and gradual appreciation of the exchange rate should result in a gradual increase in the relative level to 61% of the EA19 average in 2020.

As far as comparison of price levels is concerned, the **comparative price level of GDP** in the Czech Republic again slightly increased in 2017 and reached 65% of the EA19 average. In the coming years, it should increase gradually to up to 70% in 2020. However, this increase should not jeopardize the competitiveness of the Czech economy.

Through the decomposition[8] of GDP per capita into individual components (labour productivity, labour market component and demographic component) it is possible to determine in detail the sources of economic growth. The results of the analysis are summarised in Graphs 3.5.5 and 3.5.6.

Labour productivity measured as the GDP/hours worked ratio has long been increasing in the monitored countries, though its level is still relatively low compared to the EA19average. Although the economic crisis slowed down labour productivity growth, its absolute level did not decrease, in 2008-2017, in any of the monitored countries except Greece. In the given period, however, a decrease in the relative level of labour productivity to the EA19 countries was also seen, in addition to Greece, in Italy, Portugal, Slovenia and Spain, whereas increases in the relative level in Latvia, Poland and Lithuania exceeded 9 pp in the given period. In the Czech Republic, the relative level of labour productivity to the average of EA19 countries increased slightly to 67% in 2017.

In the case of the **labour market component**, which gives the number of hours worked per working-age person, the situation is mostly opposite. In 2017, the relative level of the labour market component exceeded the average of the EA19 countries in all states except Slovakia, Spain, Croatia and Italy. In Estonia, the Czech Republic, Latvia, Poland, Portugal and Lithuania the difference was more than 20 pp. In 2008–2017, the absolute level of the labour force component dropped in Greece, Croatia, Spain, Latvia, Italy and Portugal, with Greece recording a fall of 12% in the aforementioned years as a result of a 17% drop in the number of hours worked.

The share of the working-age population, captured by the **demographic component**, reached its peak in most monitored countries during the first decade of the 21st century and is now decreasing due to population ageing. In 2008–2017, the sharpest decrease of 5.7 pp was recorded in the Czech Republic. Compared to the EA19 average, however, the demographic component is still higher in all monitored countries except Poland, Latvia, Greece and Italy; in Slovakia it exceeded the EA19 average by 8 pp in 2017.

[7] Among the countries surveyed are the Czech Republic, Estonia, Croatia, Italy, Lithuania, Latvia, Hungary, Poland, Portugal, Greece, Slovakia, Slovenia and Spain.

[8] GDP per capita can be written as follows:

$$GDP\ per\ capita = \frac{GDP}{number\ of\ inhabit.} =$$

$$= \frac{GDP}{no.\ of\ hours\ worked} * \frac{no.\ of\ hours\ worked}{population\ aged\ 15-64} * \frac{population\ aged\ 15-64}{no.\ of\ inhabit.} =$$

$$= labour\ productivity * labour\ market\ component * demographic\ component$$

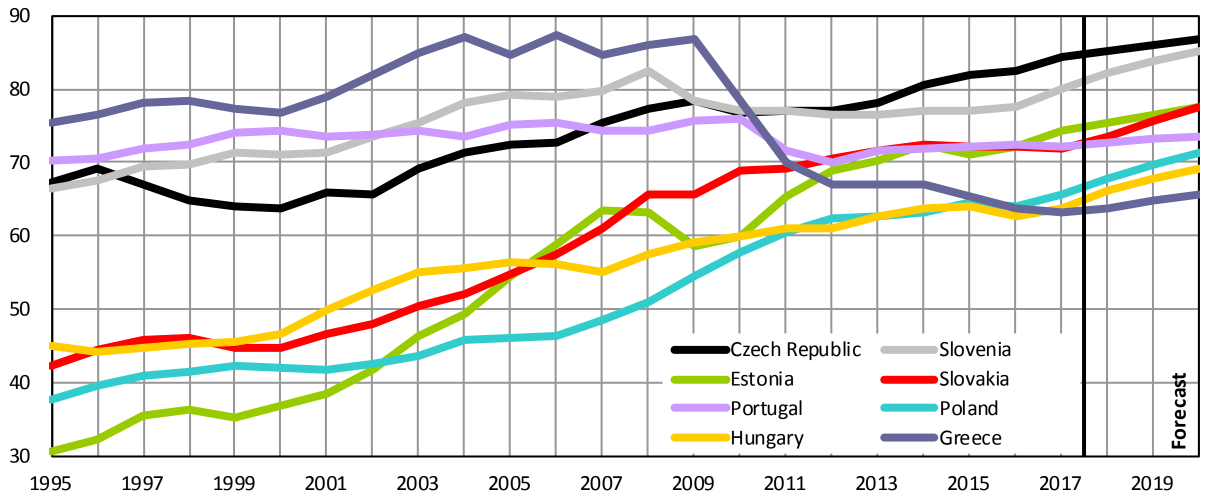
Table 3.5.1: GDP per Capita – Using Current Purchasing Power Parities

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
									Estimate	*Forecast*	*Forecast*
Italy	*PPS*	27 100	27 000	26 400	26 600	27 700	28 400	28 900	29 700	30 500	31 500
	EA19=100	96	95	92	90	90	91	91	90	90	90
Spain	*PPS*	24 200	24 200	24 000	24 900	26 300	26 700	27 600	28 600	29 600	30 600
	EA19=100	86	85	84	84	85	86	87	87	88	88
Czech Republic	*PPS*	21 700	22 000	22 400	23 800	25 300	25 600	26 900	27 900	29 100	30 300
	EA19=100	77	77	78	81	82	82	84	85	86	87
Slovenia	*PPS*	21 700	21 800	21 900	22 700	23 800	24 100	25 500	27 000	28 400	29 700
	EA19=100	77	76	76	77	77	78	80	82	84	85
Lithuania	*PPS*	17 200	18 600	19 600	20 800	21 700	22 000	23 500	24 900	26 300	27 700
	EA19=100	61	65	68	70	70	71	74	76	78	79
Estonia	*PPS*	18 500	19 600	20 200	21 300	22 000	22 500	23 600	24 800	25 900	27 000
	EA19=100	65	69	70	72	71	72	74	75	77	77
Slovakia	*PPS*	19 500	20 100	20 500	21 300	22 300	22 500	22 900	24 200	25 600	27 000
	EA19=100	69	71	72	72	72	72	72	74	76	77
Portugal	*PPS*	20 200	20 000	20 500	21 200	22 300	22 600	23 000	23 900	24 700	25 600
	EA19=100	72	70	72	72	72	73	72	73	73	73
Poland	*PPS*	17 000	17 800	17 900	18 600	19 900	19 900	20 900	22 300	23 600	24 900
	EA19=100	60	62	63	63	64	64	66	68	70	71
Hungary	*PPS*	17 200	17 500	18 000	18 800	19 800	19 500	20 300	21 700	22 900	24 100
	EA19=100	61	61	63	64	64	63	64	66	68	69
Latvia	*PPS*	14 900	16 100	16 700	17 500	18 600	18 800	20 000	21 400	22 600	23 900
	EA19=100	53	56	58	59	60	60	63	65	67	69
Greece	*PPS*	19 700	19 100	19 200	19 800	20 200	19 800	20 200	21 000	21 900	22 900
	EA19=100	70	67	67	67	65	64	63	64	65	66
Croatia	*PPS*	15 600	16 000	16 000	16 300	17 300	17 900	18 500	19 400	20 400	21 400
	EA19=100	55	56	56	55	56	57	58	59	60	61

Source: AMECO, CZSO, Eurostat. Calculations of the MoF.

Graph 3.5.1: GDP per Capita – Using Current Purchasing Power Parities

EA19=100



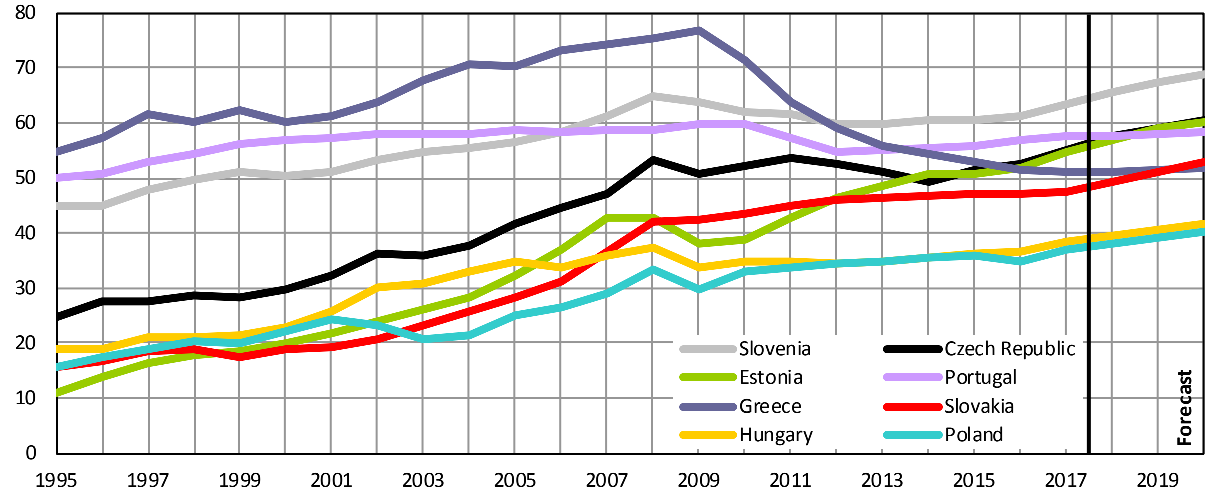
Source: AMECO, CZSO, Eurostat. Calculations of the MoF.

Table 3.5.2: GDP per Capita – Using Current Exchange Rates

			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
										Estimate	*Forecast*	*Forecast*
Italy		*EUR*	**27 300**	**26 700**	**26 500**	**26 700**	**27 200**	**27 900**	**28 500**	**29 200**	**29 900**	**30 800**
		EA19=100	93	91	90	89	88	88	87	86	86	86
	Comparative price level	*EA19=100*	**97**	**97**	**98**	**98**	**98**	**96**	**96**	**95**	**95**	**95**
Spain		*EUR*	**22 900**	**22 200**	**22 000**	**22 300**	**23 300**	**24 100**	**25 100**	**26 000**	**26 900**	**27 700**
		EA19=100	78	76	75	74	75	76	76	77	77	77
	Comparative price level	*EA19=100*	**92**	**90**	**89**	**88**	**88**	**88**	**88**	**88**	**88**	**88**
Slovenia		*EUR*	**18 000**	**17 500**	**17 600**	**18 200**	**18 800**	**19 500**	**20 800**	**22 200**	**23 500**	**24 800**
		EA19=100	62	60	60	61	61	61	63	65	67	69
	Comparative price level	*EA19=100*	**80**	**78**	**78**	**79**	**79**	**79**	**79**	**80**	**80**	**81**
Czech Republic		*EUR*	**15 600**	**15 400**	**15 000**	**14 900**	**16 000**	**16 700**	**18 100**	**19 500**	**20 600**	**21 800**
		EA19=100	54	53	51	49	51	52	55	58	59	61
	Comparative price level	*EA19=100*	**70**	**68**	**65**	**61**	**63**	**64**	**65**	**68**	**69**	**70**
Estonia		*EUR*	**12 500**	**13 500**	**14 300**	**15 200**	**15 700**	**16 500**	**18 000**	**19 300**	**20 500**	**21 700**
		EA19=100	43	46	49	51	51	52	55	57	59	60
	Comparative price level	*EA19=100*	**66**	**67**	**69**	**70**	**71**	**72**	**74**	**76**	**77**	**78**
Portugal		*EUR*	**16 700**	**16 000**	**16 300**	**16 600**	**17 400**	**18 100**	**18 900**	**19 600**	**20 300**	**20 900**
		EA19=100	57	55	55	55	56	57	57	58	58	58
	Comparative price level	*EA19=100*	**80**	**78**	**77**	**77**	**77**	**78**	**80**	**80**	**79**	**79**
Greece		*EUR*	**18 600**	**17 300**	**16 500**	**16 400**	**16 400**	**16 400**	**16 700**	**17 300**	**17 900**	**18 600**
		EA19=100	64	59	56	55	53	51	51	51	51	52
	Comparative price level	*EA19=100*	**91**	**88**	**84**	**81**	**81**	**81**	**81**	**80**	**79**	**79**
Slovakia		*EUR*	**13 100**	**13 400**	**13 700**	**14 000**	**14 600**	**15 000**	**15 600**	**16 700**	**17 800**	**19 000**
		EA19=100	45	46	46	47	47	47	47	49	51	53
	Comparative price level	*EA19=100*	**65**	**65**	**65**	**65**	**65**	**65**	**66**	**67**	**68**	**68**
Lithuania		*EUR*	**10 300**	**11 200**	**11 800**	**12 500**	**12 900**	**13 500**	**14 900**	**16 000**	**17 200**	**18 500**
		EA19=100	35	38	40	41	41	43	45	47	49	51
	Comparative price level	*EA19=100*	**58**	**58**	**59**	**59**	**59**	**60**	**62**	**62**	**63**	**65**
Latvia		*EUR*	**9 800**	**10 800**	**11 300**	**11 800**	**12 300**	**12 800**	**13 900**	**15 200**	**16 100**	**17 200**
		EA19=100	34	37	38	39	40	40	42	45	46	48
	Comparative price level	*EA19=100*	**64**	**66**	**66**	**66**	**66**	**67**	**67**	**69**	**69**	**70**
Hungary		*EUR*	**10 200**	**10 000**	**10 300**	**10 700**	**11 300**	**11 600**	**12 700**	**13 400**	**14 100**	**15 000**
		EA19=100	35	34	35	36	36	36	39	40	41	42
	Comparative price level	*EA19=100*	**57**	**56**	**56**	**56**	**57**	**58**	**60**	**60**	**60**	**61**
Poland		*EUR*	**9 900**	**10 100**	**10 300**	**10 700**	**11 200**	**11 100**	**12 200**	**12 900**	**13 600**	**14 500**
		EA19=100	34	35	35	36	36	35	37	38	39	40
	Comparative price level	*EA19=100*	**56**	**55**	**56**	**56**	**56**	**54**	**56**	**56**	**56**	**57**
Croatia		*EUR*	**10 500**	**10 300**	**10 300**	**10 200**	**10 600**	**11 200**	**11 800**	**12 600**	**13 200**	**13 800**
		EA19=100	36	35	35	34	34	35	36	37	38	39
	Comparative price level	*EA19=100*	**65**	**63**	**62**	**62**	**61**	**61**	**62**	**63**	**63**	**63**

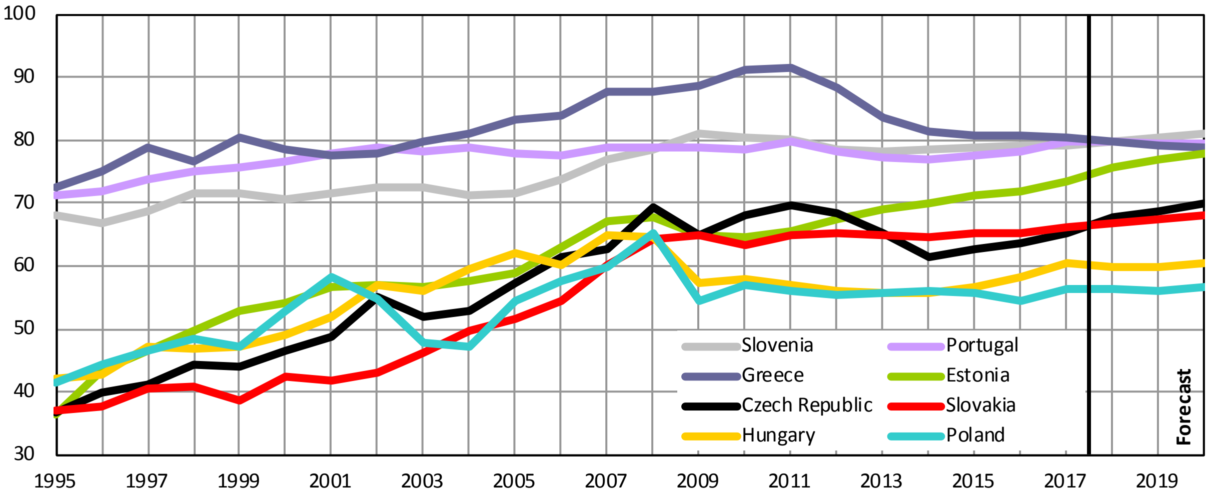
Source: AMECO, CZSO, Eurostat. Calculations of the MoF.

Graph 3.5.2: GDP per Capita – Using Current Exchange Rates
EA19=100



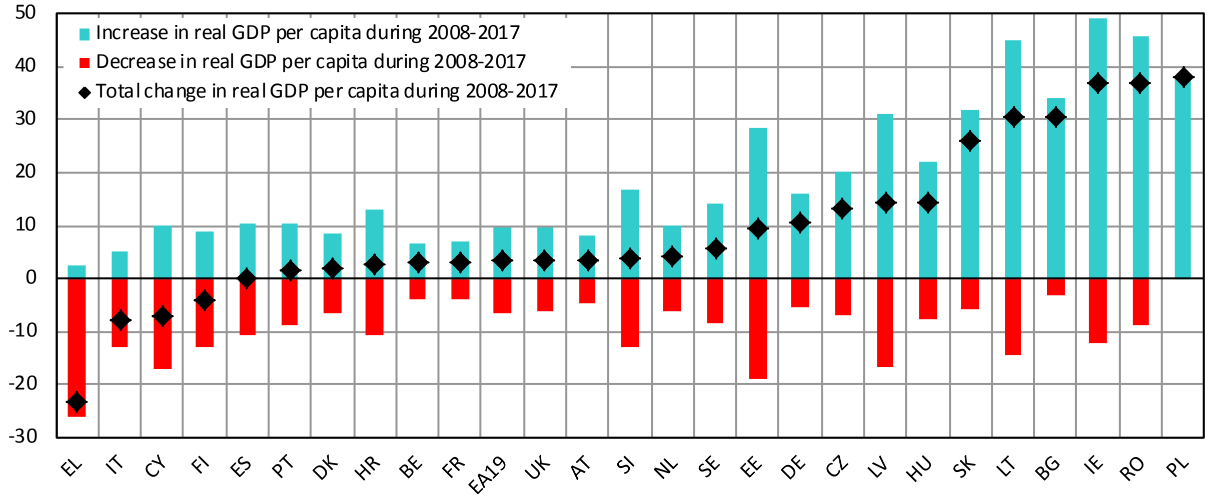
Source: AMECO, CZSO, Eurostat. Calculations of the MoF.

Graph 3.5.3: Comparative Price Level of GDP per Capita
EA19=100



Source: AMECO, CZSO, Eurostat. Calculations of the MoF.

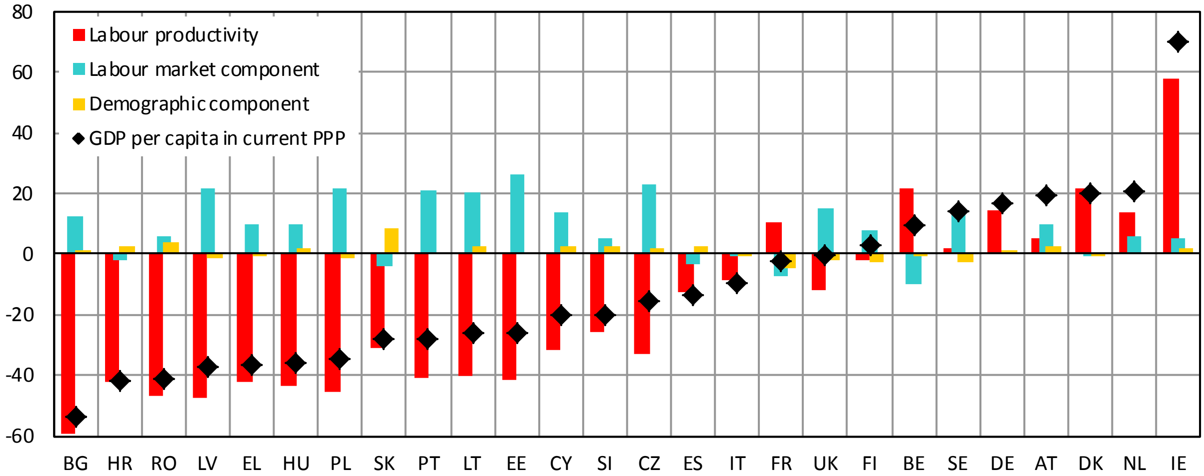
Graph 3.5.4: Change in Real GDP per Capita during 2008–2017
growth in %



Source: Eurostat. Calculations of the MoF.

Graph 3.5.5: Current PPP Adjusted GDP per Capita Level Relative to the EA19 Average in 2017

in percentage points

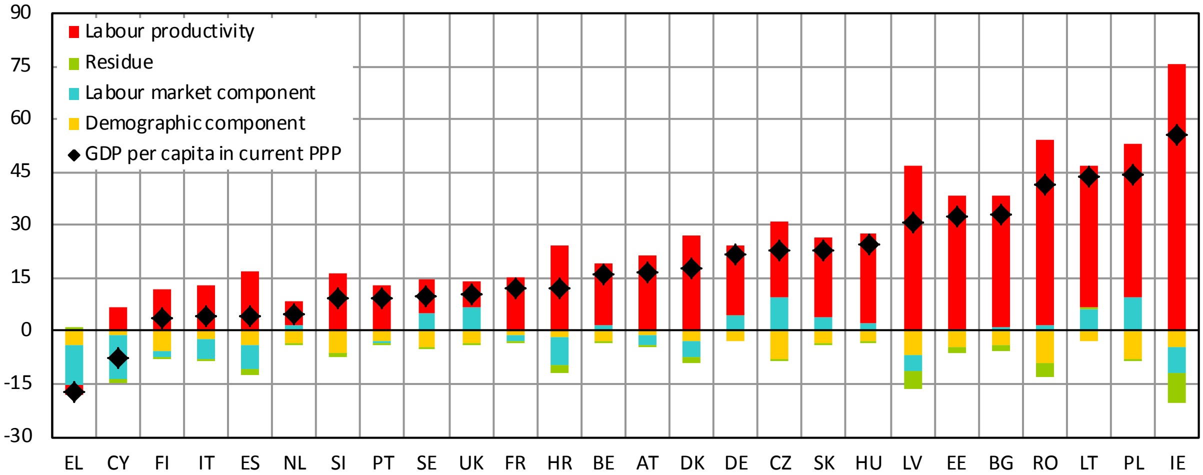


Note: The labour market component is defined as the ratio of total hours worked to working-age (15–64) population, the demographic component is the ratio of the working-age to total population.

Source: Eurostat. Calculations of the MoF.

Graph 3.5.6: Change in Current PPP Adjusted GDP per Capita during 2008–2017

growth in %



Source: Eurostat. Calculations of the MoF.

4 Monitoring of Other Institutions' Forecasts

The Ministry of Finance of the Czech Republic monitors macroeconomic forecasts of other institutions engaged in forecasting the future development of the Czech economy. Publicly available forecasts of 16 institutions are monitored. Out of these, 11 institutions are domestic (CNB, Ministry of Labour and Social Affairs, Chamber of Commerce, domestic banks and investment companies) and the others are foreign entities (European Commission, OECD, IMF etc.). The forecasts are summarised in Table 4.1.

Table 4.1: Summary of the Monitored Forecasts

		January 2019			January 2019
		min.	*max.*	*average*	*MoF forecast*
Gross domestic product (2019)	*growth in %, const.pr.*	2.6	3.3	2.9	2.5
Gross domestic product (2020)	*growth in %, const.pr.*	2.0	3.3	2.6	2.4
Average inflation rate (2019)	*%*	2.0	2.6	2.3	2.1
Average inflation rate (2020)	*%*	1.5	2.3	2.0	1.6
Average monthly wage (2019)	*growth in %*	6.5	8.1	7.1	7.6
Average monthly wage (2020)	*growth in %*	2.7	5.6	4.8	6.0
Current account / GDP (2019)	*%*	-0.9	1.4	0.5	0.3
Current account / GDP (2020)	*%*	0.1	1.5	0.8	0.2

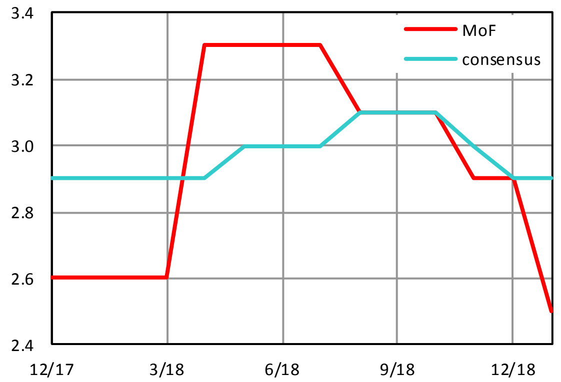
Source: Forecasts of individual institutions. Calculations of the MoF.

According to estimates of the institutions surveyed, real GDP should increase by 2.9% in 2019 and by 2.6% in the following year. The price level growth should reach 2.3% in 2019 and it should slow down to 2.0% in 2020, in line with the CNB's inflation target. The dynamic growth of the average wage by 7.1% in 2019 should then slightly cool down and the average wage could only increase by 4.8% in 2020. The surplus on the current account of the balance payments should be below 1% of GDP in 2019 and 2020.

Compared to the average of the monitored institutions, the Ministry of Finance expects a slightly lower dynamics of economic activity, due to the deteriorated development of the external environment. Thus, GDP growth could be around 2.5% in 2019 and 2020. Also, the average inflation rate should be lower, according to the Ministry of Finance, mainly due to the sharp drop in the price of oil in Q4 2018. Conversely, the forecast of the Ministry of Finance anticipates a slightly more dynamic growth in the average wage; the high growth in 2019 is largely influenced by the increase in the minimum wage by CZK 1,150. According to the estimate of the Ministry of Finance, the current account of the balance of payments should be in a slight surplus in both years.

Graph 4.1: Forecasts for Real GDP Growth in 2019

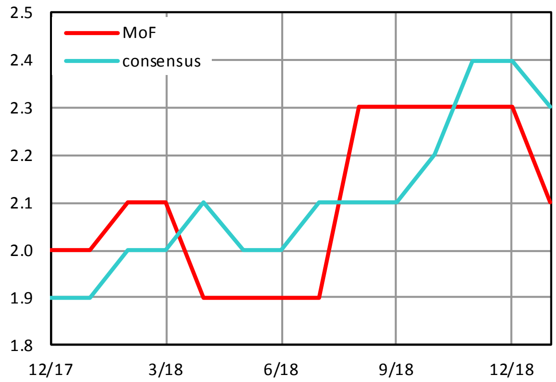
in %; the month, in which the monitoring was conducted on the horizontal axis



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

Graph 4.2: Forecasts for Average Inflation Rate in 2019

in %; the month, in which the monitoring was conducted on the horizontal axis



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

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