

# **Macroeconomic Forecast of the Czech Republic**

**January 2016**

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# **Macroeconomic Forecast**

## **of the Czech Republic**

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The Macroeconomic Forecast is prepared by the Economic Policy Department (as of 1 January 2016, Financial Policy Department was renamed to Economic Policy Department) of the Czech Ministry of Finance on a quarterly basis. It contains a forecast for the current and the following year (i.e. until 2017) and for certain indicators an outlook for another 2 years (i.e. until 2019). As a rule, it is published in the second half of the first month of each quarter and is also available on the Ministry of Finance website at:

***[www.mfcr.cz/macroforecast](http://www.mfcr.cz/macroforecast)***

Any comments or suggestions that would help us improve the quality of our publication and closer satisfy the needs of its users are welcome. Please send any comments to the following email address:

***[macroeconomic.forecast@mfcr.cz](mailto:macroeconomic.forecast@mfcr.cz)***

## List of Abbreviations

const.pr. ....	constant prices
CNB.....	Czech National Bank
CPI .....	consumer price index
curr.pr.....	current prices
CZSO .....	Czech Statistical Office
EA12 .....	euro zone consisting of the 12 original countries
EC.....	European Commission
ECB .....	European Central Bank
ESI.....	Economic Sentiment Indicator
EU27 .....	EU28 excluding Croatia
EU28 .....	EU consisting of 28 countries
Fed.....	Federal Reserve System
GDP.....	gross domestic product
GVA.....	gross value added
HICP .....	harmonised index of consumer prices
IMF .....	International Monetary Fund
LFS .....	Labour Force Survey
MFI .....	monetary financial institutions
pp .....	percentage points
rev. ....	revisions
SITC.....	Standard International Trade Classification
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	estimate of past numbers which for various reasons were not available at the time of preparing the publication, e.g. previous quarter's GDP
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 **13 January 2016**.

## Notes

Published aggregate data may not match sums of individual items to the last decimal place due to rounding.

Data from the previous forecast (October 2015) are indicated by italics. Data relating to the years 2018 and 2019 are an extrapolation scenario that indicates only the direction of possible developments, and as such are not commented upon in the following text.



# Summary of and Risks to the Forecast

Dynamic growth of the Czech economy continues. **Real GDP increased by 0.7% QoQ in the third quarter of 2015.** In YoY terms, growth reached 4.1%, exceeding 4% for the third quarter in a row. **Real gross value added even increased by 1.2% QoQ in the third quarter of 2015.** Growth structure was more balanced this time, with manufacturing, construction and the section of trade and transportation making the biggest contributions.

Economic growth remains driven exclusively by **domestic demand**. Its most quickly increasing component is gross fixed capital formation where an effort to maximize the use of the EU funds manifested itself with strong YoY growth of 6.8%. There was a dynamic increase in consumption of both the government (by 4.4%) and households (by 2.7%). In foreign trade, the stable growth of the CR's main trading partners' economies and increased imports, which reflect the accelerated growth of domestic demand and high import content of Czech exports, roughly offset each other. Strong economic growth is seen in a balanced macroeconomic environment.

**The inflation rate** reached only 0.3% in 2015, marking the lowest figure since 2003 and the second lowest in the history of the independent Czech Republic. Low inflation is mainly caused by a deep decline in world prices of mineral fuels and generally low inflation on the global scale.

On the **labour market**, the economic upswing is reflected in the favourable development of employment, the YoY growth rate of which has now exceeded 1% for four quarters in a row, and unemployment. The unemployment rate (LFS) decreased to 4.8% in the third quarter of 2015, marking the second lowest value in the EU, after Germany (4.4%).

**The surplus on the current account** of the balance of payments probably reached 1.2% of GDP in 2015, which would be the highest value in the history of the independent Czech Republic.

Evaluation of the known facts has led to a minor revision to the **estimate for real GDP growth in 2015** from 4.5% to 4.6%.

However, many of the causes of the high growth of the Czech economy in 2015 can be identified as one-off or temporary factors. They mainly concern the impulse in the form of the **utilisation of the EU funds** from the programming period 2007–2013, which could only be used by the end of 2015. Preliminary data indicate that the final result was better than assumed in the October Forecast. We estimate that the contribution of this factor to GDP growth was 0.8 pp. At the beginning of 2015, GDP growth was increased by another one-off factor, namely by transferring a part of accrual revenue

from excise duty on tobacco products from 2014, resulting from the restricted time validity of tobacco stamps (the contribution to GDP growth of approximately 0.2 pp). These factors increased GDP growth in 2015 by approximately 1 pp and they will decrease it to a similar extent this year due to higher comparison base. Last but not least, a positive supply shock in the form of a **slump in the koruna price of oil** had a favourable impact on economic growth in 2015. Thanks to this factor, real GDP growth was probably 0.9 pp higher.

Low price of oil should support the economy also in this year, though to a much smaller extent – its contribution to GDP growth is estimated at 0.3 pp, as the koruna price of oil could start increasing (in YoY terms) in the second half of the year. However, the results of model simulations show that if the price of oil remained, until the end of 2017, at the levels of the beginning of this year, economic growth in this and the next year could be higher by additional 0.2–0.3 pp.

**The forecast for real GDP growth in 2016** remains at 2.7%. We expect economic growth of 2.6% in 2017.

As regards the expected tax revenues, it can be stated that the **forecast of the most important tax bases**, i.e. the nominal wage bill, nominal consumption of households and net operating surplus, **remains virtually unchanged** in the whole forecasting period.

We consider **risks to the forecast** to be **tilted to the downside**, in particular due to the risks in the external environment.

**The slowdown in China's economic growth**, which will most probably continue in the future, represents a major risk for the further development of world trade. However, this factor should not be crucial for the Czech Republic, despite the fact that the interconnectedness of the Czech and the Chinese economy is higher than suggested by data on their mutual foreign trade, due to their involvement in the global supply chains. A risk is also the continued **increased volatility and uncertainty on the financial markets**, to which negative data on the development of the second biggest world economy, in addition to an ongoing decrease in commodity prices (partially due to the development in China), has recently made a significant contribution. A specific problem in this connection is the question of information content of the Chinese official statistics.

Another unfavourable factor is **geopolitical risks**. Conflicts in the Middle East and Northern Africa caused a deep **migration crisis**, the economic impact of which on the individual EU states cannot be estimated yet. Provided that the number of applicants for asylum in the Czech Republic does not increase, direct impacts on the Czech economy should be negligible.

With respect to the structure of the Czech economy and strong trade interconnectedness with Germany, a negative risk could also be the further development in the case regarding the emissions level of some diesel engines in the cars of the **Volkswagen** concern. However, for the time being we do not expect that the impact on the Czech Republic would be too significant from the macroeconomic perspective.

Last but not least, a risk for the Czech economy could be the **continuation of more significant pressures on**

**the appreciation of the Czech koruna exchange rate** below 27 CZK/EUR. However, the CNB can intervene basically without limitation against these tendencies; moreover, for the time being the amount of foreign exchange reserves as a percentage of GDP is at a low level.

A positive risk for economic growth is, on the contrary, the possibility of the **continuation of the current low prices of commodities**.

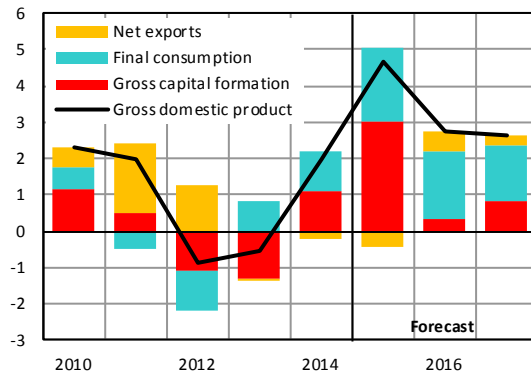
**Table: Main Macroeconomic Indicators**

		2011	2012	2013	2014	2015	2016	2017	2015	2016
		Current forecast							Previous forecast	
Gross domestic product	bill. CZK	4 023	4 042	4 077	4 261	4 495	4 657	4 831	4 482	4 642
Gross domestic product	growth in %, const.pr.	2.0	-0.9	-0.5	2.0	4.6	2.7	2.6	4.5	2.7
Consumption of households	growth in %, const.pr.	0.3	-1.5	0.7	1.5	2.9	3.1	2.6	2.9	2.5
Consumption of government	growth in %, const.pr.	-3.0	-1.8	2.3	1.8	3.2	2.1	1.5	2.2	2.0
Gross fixed capital formation	growth in %, const.pr.	1.1	-3.2	-2.7	2.0	8.3	1.5	3.3	8.2	2.9
Contr. of foreign trade to GDP growth	p.p., const.pr.	1.9	1.3	0.0	-0.2	-0.4	0.5	0.3	-0.2	0.3
Contr. of increase in stocks to GDP growth	p.p., const.pr.	0.2	-0.2	-0.6	0.6	1.0	0.0	0.0	0.7	0.0
GDP deflator	growth in %	-0.2	1.4	1.4	2.5	0.8	0.8	1.1	0.7	0.9
Average inflation rate	%	1.9	3.3	1.4	0.4	0.3	0.5	1.6	0.4	1.1
Employment (LFS)	growth in %	0.4	0.4	1.0	0.8	1.3	0.3	0.1	1.3	0.3
Unemployment rate (LFS)	average in %	6.7	7.0	7.0	6.1	5.1	4.7	4.6	5.2	4.9
Wage bill (domestic concept)	growth in %, curr.pr.	2.2	2.5	0.4	1.9	4.1	4.5	4.6	4.2	4.3
Current account balance	% of GDP	-2.1	-1.6	-0.5	0.6	1.2	1.2	0.6	0.7	0.2
General government balance	% of GDP	-2.7	-4.0	-1.3	-1.9	-1.1	.	.	-1.9	.
<u>Assumptions:</u>										
Exchange rate CZK/EUR		24.6	25.1	26.0	27.5	27.3	27.0	26.7	27.3	27.1
Long-term interest rates	% p.a.	3.7	2.8	2.1	1.6	0.6	0.7	1.0	0.7	1.2
Crude oil Brent	USD/barrel	111	112	109	99	52	44	54	54	59
GDP in Eurozone (EA-12)	growth in %, const.pr.	1.6	-0.9	-0.3	0.9	1.4	1.5	1.6	1.4	1.6

Source: CNB, CZSO, Eurostat, U. S. Energy Information Administration, own calculations

### GDP growth should be driven by domestic demand

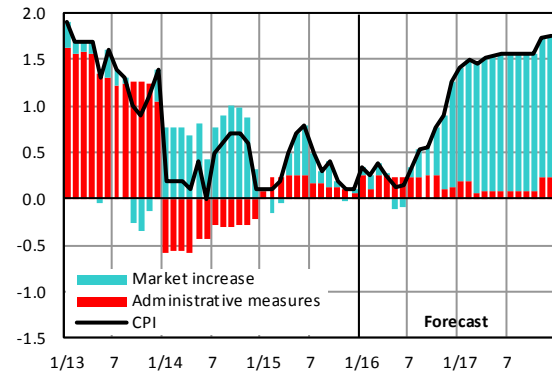
YoY growth rate of real GDP in %, contributions of individual expenditure components in percentage points



Source: CZSO, own calculations

### Inflation should exceed 1% at the end of 2016

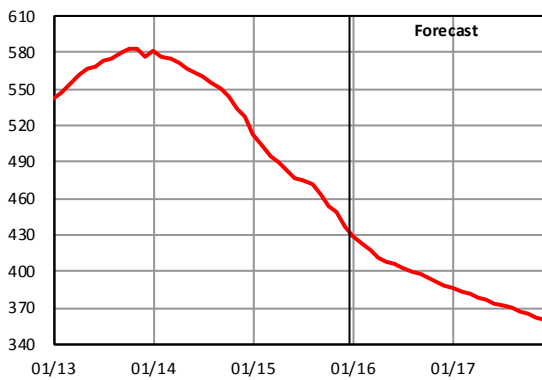
decomposition of YoY growth of CPI, contributions in pp



Source: CZSO, own calculations

### Unemployment should continue to decline

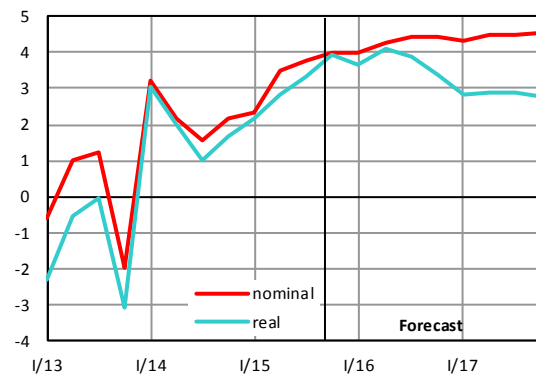
registered unemployment, in thousands of persons, seasonally adjusted



Source: Ministry of Labour and Social Affairs, own calculations

### Growth rate of the real wage should remain high

average gross monthly wage, YoY growth rate, in %



Source: CZSO, own calculations

# A Forecast Assumptions

## A.1 External Environment

The growth rate of the global economy continues to be at a level slightly exceeding 3%. The outlook has not changed considerably compared to the last forecast; the developments in individual regions remain diverse. While the US economy is experiencing a period of strong economic growth, recovery in the EU is still fragile. Some large emerging economies remain the problem segment of the global economy, for example Russia and Brazil, which are going through a deep recession.

The economic situation in China is unclear and opaque. The Chinese economy, which – given its size – makes the highest contribution to global growth reported by international organisations, is still showing very high, though gradually decreasing, growth rates of real GDP (see Table A.1.1). However, these data are not confirmed by other statistics and information.

A decline in nominal imports of 14.4% YoY in the third quarter of 2015 largely reflects weak domestic demand. A decrease in producer prices, reaching nearly 6% in the fourth quarter of 2015, strengthens deflation pressures not only in the Chinese economy but also on a global scale. A YoY decrease in foreign exchange reserves of USD 108 billion (approx. 3%) in December 2015, which was the highest in the whole history covered by relevant data, gives evidence of efforts of the People's Bank of China to stabilize the yuan exchange rate. In spite of a number of measures taken by the government to try to stabilize the stock market during the second half of 2015, the Chinese stock exchanges again experienced a decline at the beginning of 2016. The Shanghai Composite Stock Market Index declined by more than 40% between 12 June 2015, when it reached its maximum, and the Forecast's cut-off date. The shortage of transparent information on the Chinese economy creates uncertainty among investors which can be transferred to the financial markets all around the world, owing to the importance of the Chinese market.

Geopolitical tensions in Eastern Ukraine persist. In December 2015, sanctions against Russia from the USA were further expanded and prolonged by the EU. The sanctions and mainly a decline in commodity prices are considerably contributing to the Russian recession and the weakening of the rouble. However, neither Russia nor Ukraine represent important export markets for the Czech Republic; no direct macroeconomic impacts were recorded.

### A.1.1 USA

The growth rate of the US economy slowed down slightly in the third quarter of 2015, with real GDP increasing by 0.5% QoQ (*versus 0.6%*). Growth was driven exclusively by domestic demand, in particular by household consumption and, to a lesser extent, by investments. On the contrary, the contributions of change in inventories and net exports slightly weighed on economic growth. Strong domestic currency, together with slowing economic growth of important export markets, resulted in the stagnation of exports, while imports increased slightly.

The good state of the US economy is also confirmed by the turning point in the monetary policy. The Fed considers the economic growth to be adequate and the improvement of the labour market situation during 2015 to be significant. Therefore, it decided to increase the interest rates from 0–0.25%, where the rates were from the end of 2008, to 0.25–0.50%. It also promised that further increases in rates will be performed slowly and gradually with regard to the future inflation development. In November 2015, YoY growth of the price level accelerated slightly to 0.5%. However, the Fed expects that inflation will approach the 2% target as late as in the medium-term horizon, in relation to the disappearing of the effects of low prices of energies and imports and a further improvement of the labour market situation.

We expect the economic growth to continue in a rather moderate rate, with household consumption remaining the driver of the economy. In the short term, it will continue to be supported by low energy prices, and by an improving labour market situation in the long-term horizon. In December 2015, the unemployment rate stagnated for the second month in a row at 5.0%, and the pressure on the growth of wages already started to manifest itself. In particular, exports will weigh on economic growth. The situation in emerging economies should gradually start improving, but the strong US dollar and the possibility of its further appreciation will remain a risk.

We estimate that GDP growth reached 2.5% in 2015 (*versus 2.6%*). For 2016, we expect the economic growth rate to be 2.6% (*versus 2.8%*), identically as for the following year.

### A.1.2 EU

The economic recovery in the European Union remains very fragile and insignificant. QoQ growth of real GDP in the EU28 and the EA12 again slowed negligibly in the third quarter of 2015, reaching 0.4% (*versus 0.3%*)

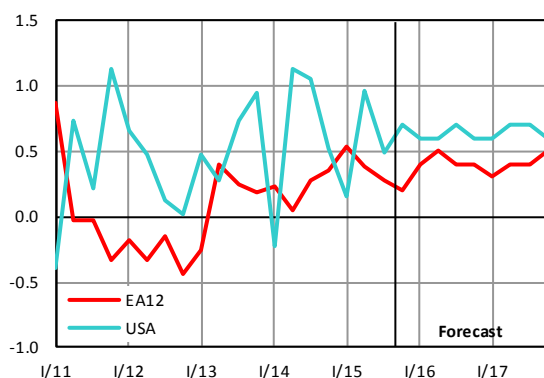
in the EU28 and 0.3% (*in line with the estimate*) in the EA12. In a YoY comparison, GDP increased by 1.9% (*versus 1.8%*), while GDP of the EA12 increased by 1.6% (*in line with the estimate*). The developments in individual countries remain considerably differentiated. In many countries, structural problems of economies are still weighing on the recovery.

The ECB is also trying to support economic recovery in the euro zone by a further easing of its monetary policy. Since September 2014, it has been maintaining the main refinancing rate at 0.05%, and in December 2015 it further decreased the deposit rate by 10 basis points to -0.30% in order to increase activity on the interbank market. At the same time, it extended the asset purchase programme until the end of March 2017, or beyond, and included euro-denominated marketable debt instruments issued by regional and local governments located in the euro area in the assets purchased within the programme. The aim of the further easing of monetary conditions is to ensure that inflation, through an increase in investment and consumption, returns to the target (inflation below, but close to, 2%). Despite the ECB's efforts, however, YoY growth of HICP in the EA12 reached only 0.2% in November 2015, in particular due to a decrease in crude oil and energy prices.

In connection with the economic recovery, the labour market situation is also gradually improving. Unemployment rate in the EU28 and the EA12 has been slowly decreasing since mid-2013. In November 2015, it reached 9.1% (YoY decrease of 0.9 pp) in the EU28 and 10.6% (0.9 pp YoY less) in the EA12. However, enormous differences still persist among individual economies. The worst situation is still in Greece, where the unemployment rate stood at 24.6% in September 2015. Of the EU28 countries for which data for November 2015 was available as of the cut-off date, the highest unemployment rate was in Spain (21.4%), Croatia (16.6%) and Cyprus (15.8%); on the other hand, the lowest rate was recorded in Germany (4.5%) and the Czech Republic (4.6%).

**Graph A.1.1: Growth of GDP in EA12 and in the USA**

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



Source: Eurostat, own calculations

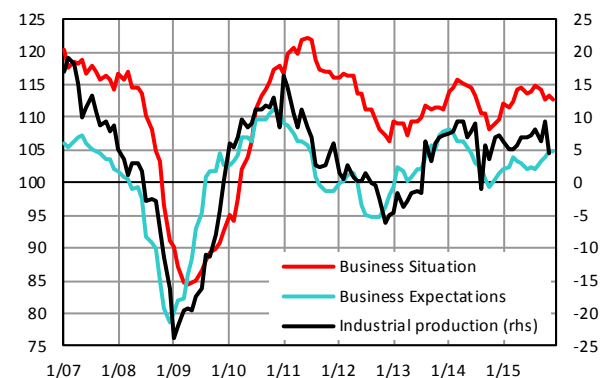
Economic activity should continue to grow at a moderate pace. In some countries, however, high debts of both private and the government sector will weigh on growth. The main recovery factor will probably remain expenditures on private consumption, which will be supported by the improving labour market situation and lower energy prices. The weaker exchange rate and low interest rate will positively influence investments. We assume that GDP of the EA12 increased by 1.4% (*unchanged*) in 2015 and we expect to see a slight acceleration in its growth to 1.5% (*versus 1.6%*) in 2016 and 1.6% in 2017.

GDP of **Germany** increased by 0.3% QoQ (*in line with the estimate*) in the third quarter of 2015; economic growth thus remained slow. It was driven exclusively by domestic demand, in particular by private and government consumption expenditure. Low price of crude oil and a favourable labour market situation mainly contributed to an increase in private consumption; the massive inflow of applicants for asylum contributed to an increase in government consumption. On the contrary, investments posted a slight decrease when companies restricted investments in further expansion of their production capacities due to a decrease in foreign orders. The contribution of net exports also weighed on economic growth as imports were increasing dramatically, while exports basically stagnated due to weak demand of emerging economies.

The labour market situation is developing favourably. The growth rate of real wages is gradually increasing and employment is continually growing despite the introduction of a minimal wage in January 2015; however, the impact of the arrival of migrants has not manifested itself on the labour market yet. The values of the Ifo and PMI (Purchasing Managers Index) indicators show optimism (which is also good news e.g. for Czech manufacturing – see Graph A.1.2); the positive development of the labour market contributes to the favourable evaluation of future developments. The six-month decrease of the consumer confidence index (GfK) stopped.

**Graph A.1.2: Ifo and Czech Industrial Production**

2005=100 (Ifo), YoY growth of the seasonally adjusted industrial production index in the Czech manufacturing sector, in %



Source: CESifo, CZSO

The main growth driver should remain domestic demand. The consumption expenditures of households will be supported by low oil prices, expansionary monetary policy of the ECB, more dynamic growth of wages and tax credits for families with children. The increase in final consumption expenditure of the government sector is caused in particular by an increase in investment in transport and digital infrastructure, energetic effectiveness and environmental protection, and last but not least, also by an increase in costs related to the inflow of migrants. Foreign trade will weigh on economic growth in the short term. In spite of the euro exchange rate depreciation, the growth of imports (due to strong domestic demand) will exceed the growth of exports, which will be negatively affected by a decrease in foreign demand. We estimate that GDP increased by 1.5% (*unchanged*) in 2015. For 2016 and 2017, we expect its growth of 1.8% (*unchanged*) or 1.9% respectively.

After its stagnation in the second quarter of 2015, the **French** economy recorded GDP growth of 0.3% (*versus* 0.2%) in the third quarter of 2015. Growth was driven exclusively by domestic demand, the dominant growth factor being a change in inventories. However, the positive contribution of this factor was completely offset by a negative contribution of net exports. Growth of (household and government) consumption remains weak, while investment in fixed capital has been basically stagnating since the end of 2014. Business climate has been gradually improving since the beginning of 2015. The increase in the value of the PMI index in industry is caused by an increase in new orders; exports should be stimulated further by the weak euro. We estimate that GDP increased by 1.1% (*versus* 1.0%) in 2015. We expect growth of 1.3% (*versus* 1.5%) in 2016 and a slight acceleration to 1.5% in 2017. A more dynamic economic recovery is prevented in particular by the low non-price competitiveness of French companies.

**Poland** was among the most quickly growing countries in the EU also in the third quarter of 2015 when its GDP increased by 0.9% QoQ (*versus* 0.8%). Its growth was driven by both domestic and foreign demand. The main pro-growth component was expenditure on private consumption supported by growing employment and positive sentiment of households. Gross fixed capital formation also contributed to economic growth; however, the lower absorption capacity for the utilisation of the EU funds and uncertainty related to the future developments in emerging economies probably cause the slowdown of investment growth. The political party Law and Justice won in the October parliamentary election and intends to strengthen the role of

the state and increase social expenditures and investments in economic growth and innovations. We assume that the further economic development will continue to be relatively stable and the economic growth will be driven by household consumption. In connection with the drawdown of the EU funds from the programming period 2007–2013, however, the investment growth should slow. We estimate that GDP increased by 3.5% (*unchanged*) in 2015. We expect growth of 3.4% (*unchanged*) in 2016 and the same figure also in 2017.

Economic growth of the **Slovak economy** continued at a very solid rate. GDP increased by 0.9% (*in line with the estimate*) in the third quarter of 2015, i.e. in the same way as in the previous three quarters. Growth was driven mainly by domestic demand, in particular by investments of both the private and public sectors to which the efforts to draw down quickly the EU funds from the programming period 2007–2013 contributed considerably. A slight decrease in the price level and the improving labour market situation (unemployment rate decreased by 1.5 pp YoY to 10.8% in November 2015) contribute to the growth of household consumption. The expected decline in investments in the government sector should be partially offset by the construction of a new factory of the British car producer Jaguar Land Rover; construction works should be started in April 2016 and production in 2018. Private investments will be supported by low interest rates and private consumption by a growth of wages and a decrease in VAT for selected types of foodstuffs. We assume that GDP increased by 3.4% (*versus* 3.2%) in 2015. We expect growth of 3.2% (*unchanged*) in 2016 and a slight acceleration to 3.3% in 2017.

#### A.1.3 Commodity Prices

The global as well as the Czech economy is influenced by a decline in the prices of primary commodities.

The price of Brent crude oil averaged USD 43.6/barrel (*versus* USD 51/barrel) in the fourth quarter of 2015, marking the lowest value since the third quarter of 2004. As of the cut-off date of the Forecast, Brent crude oil traded even below USD 35/barrel.

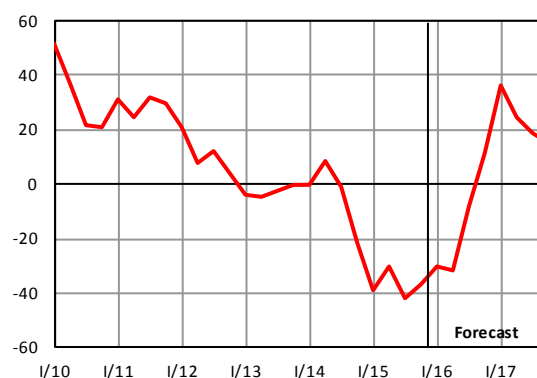
Mismatches between supplied and demanded quantity, which result in an increase in inventories, are reflected in very low crude oil prices. In this situation, moreover, the Organisation of the Petroleum Exporting Countries (OPEC) did not set any extraction limits at its meeting held at the beginning of December 2015. On the markets, the aforementioned circumstances led to a further decrease in the price (by USD 6.9 USD/barrel QoQ in the fourth quarter of 2015), which is also reflected in a major downward revision to the forecast.

In line with the situation on the financial derivatives markets (a positive slope of the futures price curve), we assume a gradual increase in the Brent crude oil price. In 2016, it should average USD 44/barrel (*versus* USD 59/barrel). In 2017, we assume further growth of the price to the average value of USD 54/barrel.

An extremely deep YoY decline in the CZK crude oil price by more than a third (see Graph A.1.3) provided an extraordinary growth stimulus to the Czech economy in 2015 of approximately 0.9 pp. In 2016, this situation should gradually dissipate and the CZK crude oil price should return to YoY growth in the fourth quarter of 2016. The impact on the economic growth in 2016 can be estimated at approximately 0.3 pp.

**Graph A.1.3: Koruna Prices of Brent Crude Oil**

YoY change in %



Source: CNB, U. S. Energy Information Admin., own calculations

**Table A.1.1: Real Gross Domestic Product – yearly**

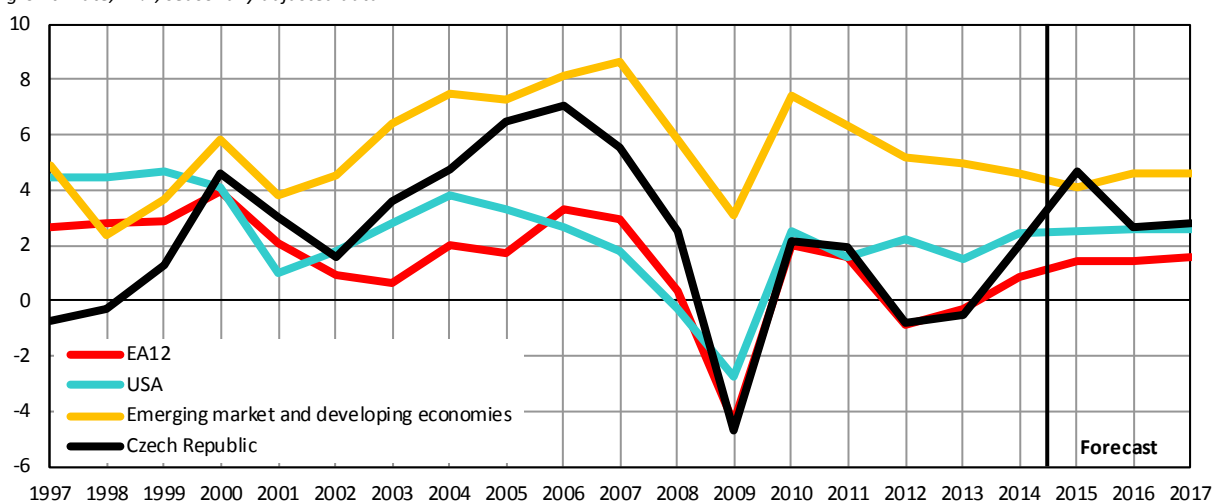
growth rate, in %, seasonally adjusted data (except for the Czech Republic)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
								Estimate	Forecast	Forecast
World	3.1	0.0	5.4	4.2	3.4	3.3	3.4	3.2	3.6	3.7
USA	-0.3	-2.8	2.5	1.6	2.2	1.5	2.4	2.5	2.6	2.6
China	9.6	9.2	10.4	9.3	7.7	7.7	7.3	6.8	6.3	6.1
EU28	0.4	-4.3	2.0	1.8	-0.4	0.3	1.4	1.8	1.9	2.0
EA12	0.3	-4.4	2.0	1.6	-0.9	-0.3	0.9	1.4	1.5	1.6
Germany	0.8	-5.6	3.9	3.7	0.6	0.4	1.6	1.5	1.8	1.9
France	0.1	-2.9	1.9	2.1	0.2	0.7	0.2	1.1	1.3	1.5
United Kingdom	-0.5	-4.2	1.5	2.0	1.2	2.2	2.9	2.2	2.0	2.3
Austria	1.2	-3.6	1.8	3.0	0.7	0.3	0.5	0.8	1.4	1.6
Hungary	0.6	-6.4	0.7	1.8	-1.7	2.0	3.6	2.5	2.2	2.3
Poland	3.9	2.5	3.7	5.0	1.7	1.2	3.3	3.5	3.4	3.4
Slovakia	5.7	-5.5	5.1	2.8	1.5	1.4	2.5	3.4	3.2	3.3
Czech Republic	2.7	-4.8	2.3	2.0	-0.9	-0.5	2.0	4.6	2.7	2.6

Source: CZSO, Eurostat, IMF, NBS China, own calculations

**Graph A.1.4: Real Gross Domestic Product**

YoY growth rate, in %, seasonally adjusted data



Note: Emerging market and developing economies comprising 154 countries (according to the IMF's classification)

Source: Eurostat, IMF, own calculations

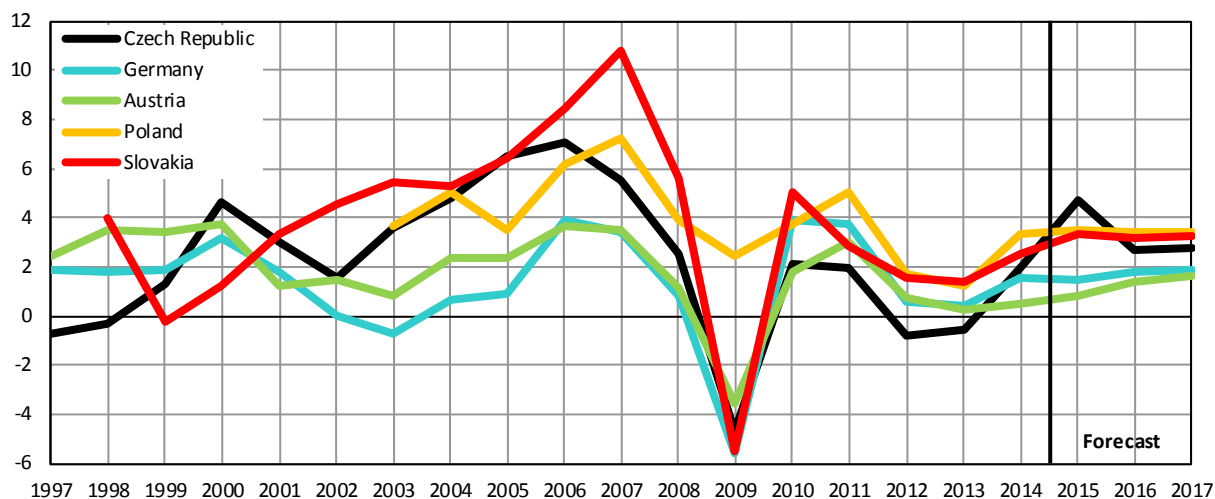
**Table A.1.2: Real Gross Domestic Product – quarterly**  
growth rate, in %, seasonally adjusted data

		2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
					Estimate	Forecast	Forecast	Forecast	Forecast
USA	QoQ	0.2	1.0	0.5	0.7	0.6	0.6	0.7	0.6
	YoY	2.9	2.7	2.1	2.3	2.8	2.4	2.6	2.5
China	QoQ	1.3	1.8	1.8	1.5	1.4	1.5	1.5	1.5
	YoY	6.9	6.9	6.8	6.6	6.7	6.3	6.0	6.0
EU28	QoQ	0.6	0.5	0.4	0.3	0.5	0.6	0.5	0.5
	YoY	1.7	1.9	1.9	1.7	1.6	1.8	1.9	2.1
EA12	QoQ	0.5	0.4	0.3	0.2	0.4	0.5	0.4	0.4
	YoY	1.2	1.6	1.6	1.4	1.3	1.4	1.5	1.7
Germany	QoQ	0.3	0.4	0.3	0.4	0.4	0.5	0.6	0.5
	YoY	1.1	1.6	1.7	1.5	1.5	1.6	1.9	2.0
France	QoQ	0.7	0.0	0.3	0.2	0.3	0.4	0.5	0.4
	YoY	0.9	1.1	1.1	1.2	0.8	1.2	1.4	1.6
United Kingdom	QoQ	0.4	0.5	0.4	0.4	0.5	0.6	0.5	0.5
	YoY	2.5	2.3	2.1	1.8	1.9	2.0	2.0	2.1
Austria	QoQ	0.7	0.3	0.1	0.2	0.4	0.5	0.5	0.4
	YoY	0.3	0.9	0.9	1.3	1.0	1.2	1.6	1.8
Hungary	QoQ	0.5	0.5	0.6	0.5	0.6	0.6	0.5	0.5
	YoY	3.1	2.4	2.3	2.1	2.2	2.3	2.2	2.2
Poland	QoQ	0.9	0.8	0.9	0.8	0.8	0.9	0.9	0.8
	YoY	3.6	3.5	3.7	3.4	3.4	3.5	3.4	3.4
Slovakia	QoQ	0.9	0.9	0.9	0.8	0.7	0.8	0.8	0.7
	YoY	3.0	3.3	3.6	3.5	3.4	3.2	3.1	3.0
Czech Republic	QoQ	2.5	1.0	0.7	1.0	0.4	0.5	0.6	0.6
	YoY	4.1	4.6	4.7	5.3	3.2	2.7	2.6	2.2

Source: Eurostat, NBS China, own calculations

**Graph A.1.5: Real Gross Domestic Product – Czech Republic and the neighbouring states**

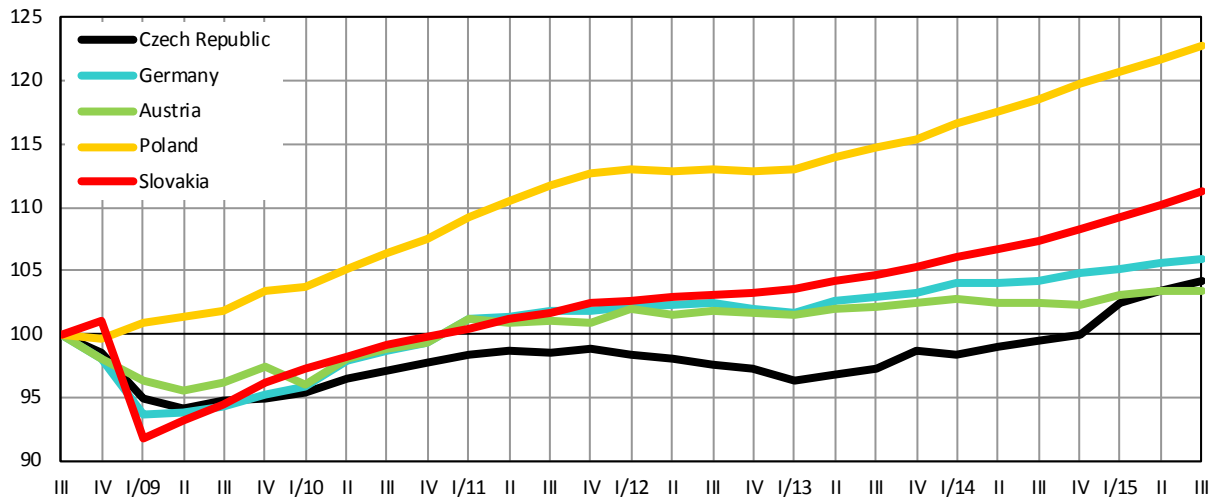
YoY growth rate, in %, seasonally adjusted data



Source: Eurostat, own calculations

**Graph A.1.6: Real Gross Domestic Product – Czech Republic and the neighbouring states**

Q3 2008=100, seasonally adjusted data



Source: Eurostat, own calculations

**Table A.1.3: Prices of Selected Commodities – yearly**

spot prices

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
										Forecast	Forecast
Crude oil Brent	USD/barrel	96.9	61.5	79.6	111.3	111.6	108.6	99.0	52.4	44	54
	growth in %	34.0	-36.5	29.3	39.9	0.3	-2.6	-8.8	-47.1	-16.7	24.5
Crude oil Brent index (in CZK)	2005=100	106.7	76.1	100.0	129.5	143.8	139.9	134.6	84.8	71	87
	growth in %	11.1	-28.6	31.4	29.5	11.0	-2.7	-3.8	-37.0	-16.8	23.0
Wheat	USD/t	287.0	190.1	194.5	280.0	276.1	265.8	242.5	185.6	.	.
	growth in %	26.5	-33.7	2.3	44.0	-1.4	-3.8	-8.8	-23.5	.	.
Wheat price index (in CZK)	2005=100	130.8	98.5	100.0	133.6	146.4	140.6	135.7	123.3	.	.
	growth in %	6.2	-24.7	1.5	33.6	9.6	-4.0	-3.5	-9.1	.	.

Source: IMF, U. S. Energy Information Administration, own calculations

**Table A.1.4: Prices of Selected Commodities – quarterly**

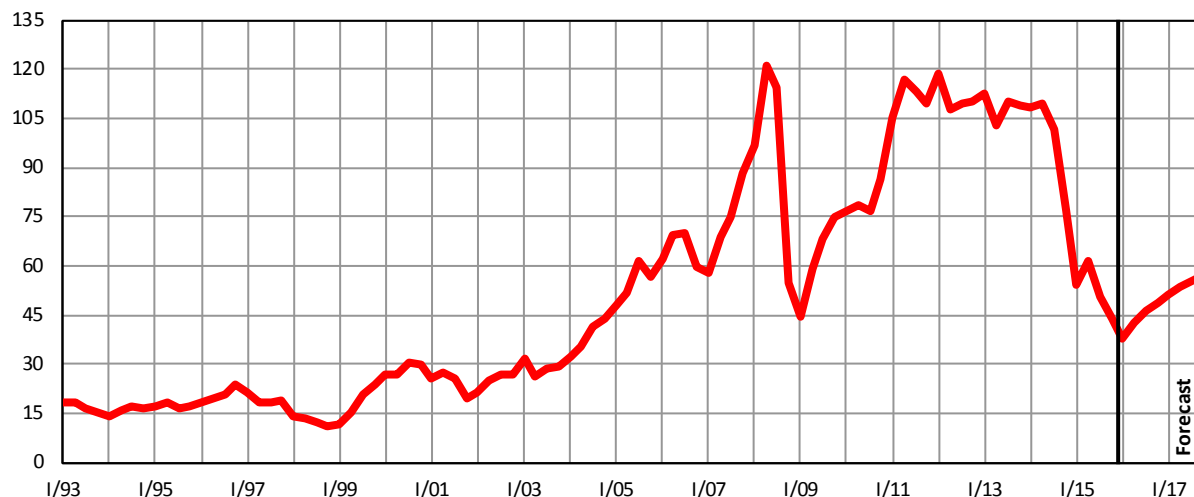
spot prices

		2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
						Forecast	Forecast	Forecast	Forecast
Crude oil Brent	USD/barrel	54.0	61.7	50.4	43.6	38	42	46	49
	growth in %	-50.1	-43.8	-50.5	-43.0	-30.5	-31.1	-8.6	11.7
Crude oil Brent index (in CZK)	2005=100	87.3	100.7	80.9	70.5	61	69	74	79
	growth in %	-38.8	-30.4	-42.2	-36.6	-30.5	-31.8	-7.9	11.4
Wheat price	USD/t	205.0	196.3	178.8	162.3	.	.	.	.
	growth in %	-17.6	-28.4	-21.0	-26.4	.	.	.	.
Wheat price index (in CZK)	2005=100	136.1	131.6	117.7	107.9	.	.	.	.
	growth in %	0.9	-11.4	-7.7	-18.1	.	.	.	.

Source: IMF, U. S. Energy Information Administration, own calculations

**Graph A.1.7: Dollar Prices of Oil**

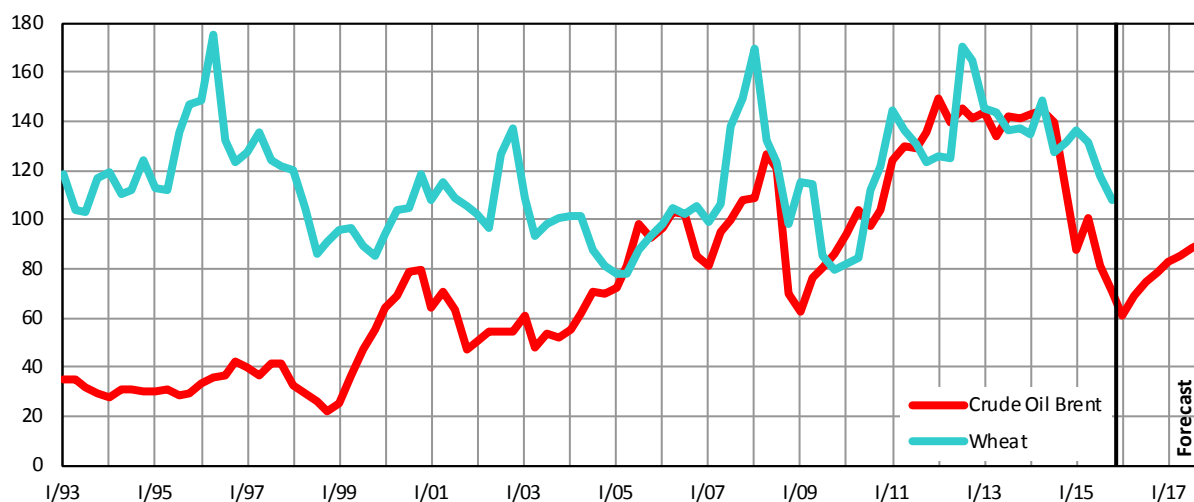
USD/barrel



Source: U. S. Energy Information Administration, own calculations

**Graph A.1.8: Koruna Indices of Prices of Selected Commodities**

index 2010=100



Source: IMF, U. S. Energy Information Administration, own calculations

## A.2 Fiscal Policy

On the basis of information available to date, we estimate that the general government sector deficit reached 1.1% of GDP in 2015. That is a significant YoY improvement of 0.8 pp. In case of the structural balance, the out-turn of 2015 should be close to 2014 level.

Compared with the October forecast, the estimated deficit is 0.8 pp lower. However, the outturn of 2015 is still an estimate, because all the data required for its compilation are not available at the moment. Only the data for the first three quarters of 2015 are now accessible, but the fourth quarter has usually the biggest impact on the final balance and is less predictable than the remaining quarters. The CZSO will release the actual outturn on 1 April 2016.

The revision of the estimate results from the already known state budget balance (cash basis). The state budget deficit amounted to CZK 62.8 bill., which was the best result since 2008. Apart from the cash balance of the state budget itself, we expect a significant impact of the balance of revenues from the EU and expenditure co-financed by the EU and carried out within the state budget. With respect to the fact that on a cash basis the EU expenditure were higher than revenues from the EU by more than CZK 20 bill., going from cash to accrual basis requires the deficit (accrual basis) to be lowered by this amount.

On the revenue side of the general government balance, the revenues from taxes and social security contributions were unusually high, owing both to strong economic growth and possibly improved efficiency of the tax administration. Tax revenues increased in spite of the introduction of a whole range of one-off measures that lowered these revenues (e.g. the introduction of a second lowered VAT rate of 10%, reintroduction of a basic discount for working pensioners etc.). In the first three quarters of 2015, revenues from indirect taxes (accrual basis) increased by more than 9% YoY, with revenues from VAT rising by almost 4%. In case of income taxes, an increase of 3.6% was recorded, while revenues from social security and health care contributions increased by 4.5%, which corresponded to the dynamics of the total wage bill in the economy.

On the basis of general government sector quarterly data, one can expect that the original assumption of the Ministry of Finance that the drawdown of EU funds from the 2007–2013 programming period would sharply increase was correct. On the expenditure side, this increase manifested itself mainly as government invest-

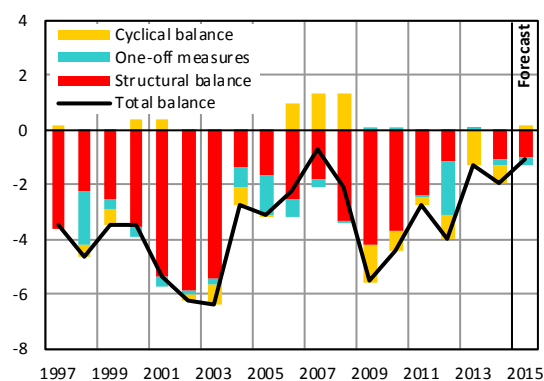
ment. In the last year when the drawdown from the previous programming period was possible, the strong acceleration of the EU co-financed expenditure contributed, to a relatively large extent, to growth of total gross fixed capital formation. Rising government investment thus supported the growth of economic output, without exerting an upward pressure on the general government deficit.

On the expenditure side, there was a positive development primarily of interest expenses, which fell by more than 12% YoY in the first three quarters of 2015. This results not only from the stabilisation of the general government debt, but also from favourable conditions on financial markets. In 2015, the Ministry of Finance was even able to issue bonds with a negative yield to maturity. Social benefits other than in kind recorded a very modest increase (around 1%), in spite of a higher valorisation of pensions that compensated the restriction of previous years.

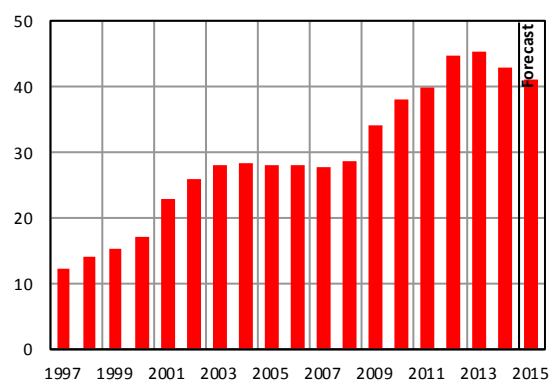
Robust growth of nominal GDP in 2015 was also supported by general government consumption, which rose by 4.8% in the first three quarters of 2015 and was driven by both a relatively big increase of 4.9% in intermediate consumption and by the wage bill (increase of 5%). A part of the increase in intermediate consumption could be attributed to the state-owned health care institutions, which were newly included into the sector, and the same holds for the general government wage bill (see Fiscal Outlook, November 2015). The increase in final consumption expenditure of the general government is also due to current expenditure financed from the EU 2007–2013 programming period.

With respect to the current estimate of the general government balance in 2015, the forecast of the general government deficit in 2016 is also very likely to be revised. The reason for this revision is not only the expected growth of the macroeconomic bases relevant for tax revenues but also the introduction of new instruments preventing tax evasion. The forecast for 2016, which will be presented in the April Convergence Programme, will be based on the actual out-turn of 2015 (as released by the CZSO), as well as on the available fiscal data from the general government sector units for 2016.

Similarly to the previous Macroeconomic Forecast, we estimate the government sector debt to have remained at almost the same level as in 2014. In relative terms, the debt quota decreased by 1.8 pp YoY in 2015.

**Graph A.2.1: Decomposition of the Government Balance***in % of GDP*

Source: CZSO, own calculations

**Graph A.2.2: Government Debt***in % of GDP*

Source: CZSO, own calculations

**Table A.2.1: Net Lending/Borrowing and Debt**

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
											<i>Estimate</i>
<b>General government balance <sup>1)</sup></b>	% GDP	-2.3	-0.7	-2.1	-5.5	-4.4	-2.7	-4.0	-1.3	-1.9	-1.1
	bill. CZK	-79	-27	-85	-216	-175	-110	-160	-51	-83	-49
<b>Cyclical balance</b>	% GDP	1.0	1.4	1.3	-1.4	-0.7	-0.3	-0.8	-1.3	-0.6	0.2
<b>Cyclically adjusted balance</b>	% GDP	-3.2	-2.1	-3.4	-4.2	-3.7	-2.5	-3.1	0.1	-1.3	-1.3
<b>One-off measures <sup>2)</sup></b>	% GDP	-0.7	-0.3	-0.1	0.0	0.0	-0.1	-2.0	0.0	-0.3	-0.3
<b>Structural balance</b>	% GDP	-2.5	-1.8	-3.3	-4.2	-3.7	-2.4	-1.2	0.0	-1.1	-1.0
<b>Fiscal effort <sup>3)</sup></b>	percent. points	-0.9	0.7	-1.5	-0.9	0.5	1.4	1.2	1.2	-1.1	0.1
<b>Interest expenditure</b>	% GDP	1.0	1.1	1.0	1.2	1.3	1.3	1.4	1.3	1.3	1.2
<b>Primary balance</b>	% GDP	-1.2	0.4	-1.1	-4.3	-3.1	-1.4	-2.5	0.1	-0.6	0.1
<b>Cyclically adjusted primary balance</b>	% GDP	-2.2	-1.0	-2.4	-2.9	-2.4	-1.2	-1.7	1.4	0.0	-0.1
<b>General government debt</b>	% GDP	27.9	27.8	28.7	34.1	38.2	39.9	44.7	45.2	42.7	41.0
	bill. CZK	979	1 066	1 151	1 336	1 509	1 606	1 806	1 842	1 821	1 841
<b>Change in debt-to-GDP ratio</b>	percent. points	-0.1	-0.1	0.9	5.4	4.1	1.8	4.7	0.5	-2.4	-1.8

1) General government net lending (+)/borrowing (-)

2) 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.

3) Change in structural balance.

Source: CZSO, own calculations

## A.3 Monetary Policy, Financial Sector and Exchange Rates

### A.3.1 Monetary Policy

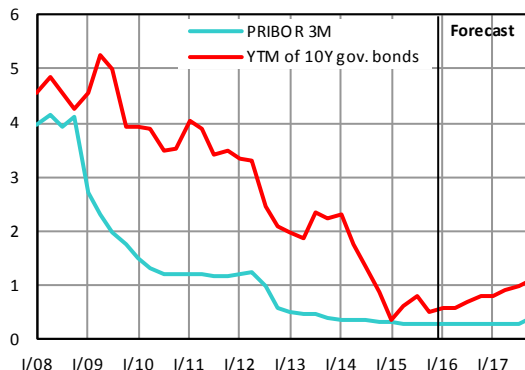
The CNB's monetary policy can be characterised as eased for a long time. Since November 2012, the two-week repo rate has been set at 0.05%, i.e. technically at the zero lower bound. Since November 2013, the CNB has also been using the exchange rate as an additional monetary policy instrument, through the commitment not to allow the koruna to strengthen below 27 CZK/EUR. In the second half of 2015, the CNB intervened on the foreign exchange market in order to defend its exchange rate commitment. Between July and November 2015 (no data were available for December 2015 as of the cut-off date) the volume of interventions reached approximately EUR 7.5 billion in total. The CNB can intervene against pressures for the koruna appreciation basically without limits; the percentage of foreign exchange reserves in GDP is, for the time being, at a relatively low level.

### A.3.2 Financial Sector and Interest Rates

In the fourth quarter of 2015, the **3M** (3-month) **PRIBOR** interbank market rate averaged 0.3% (*consistent with the forecast*). With respect to the expected development of monetary policy rates, the 3M PRIBOR should remain at this level also during 2016; we now expect its slight increase as late as at the end of 2017.

**Graph A.3.1: Interest Rates**

in % p.a.



Source: CNB, own calculations

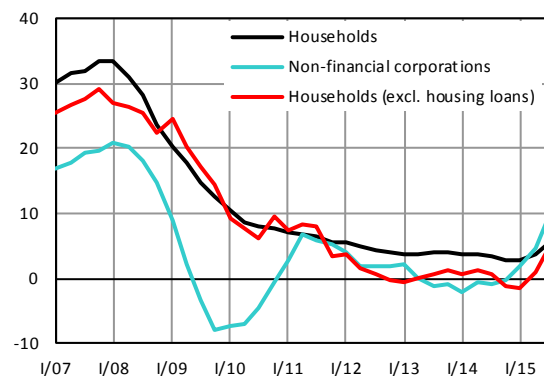
With respect to the practically zero reference interest rates of the CNB and continuing very weak inflation pressures, long-term interest rates continue to be at extremely low values. **The yield to maturity on 10-year government bonds** for convergence purposes reached only 0.5% (*versus 0.9%*) in the fourth quarter of 2015 and 0.6% (*versus 0.7%*) on average for the whole year 2015. Yields on bonds with shorter maturities have been in the negative territory for a longer time. With

respect to the expected development of inflation, we forecast only a slight increase in long-term interest rates to 0.7% (*versus 1.2%*) in 2016 and to 1.0% in 2017.

In October 2015, the CNB conducted another bank lending survey. The survey concluded that in the third quarter of 2015 the credit standards eased further for consumer loans and loans to non-financial corporation and did not change for housing loans to households. For the fourth quarter of 2015, banks expected a further easing of the credit standards for consumer loans to households and for loans to non-financial corporations; however, a part of the market expected their tightening for housing loans to households. The last stress tests of banks, the results of which were published by the CNB in November 2015, confirmed sufficient resilience of the banking sector to eventual negative shocks.

**Graph A.3.2: Loans**

YoY growth rate, in %

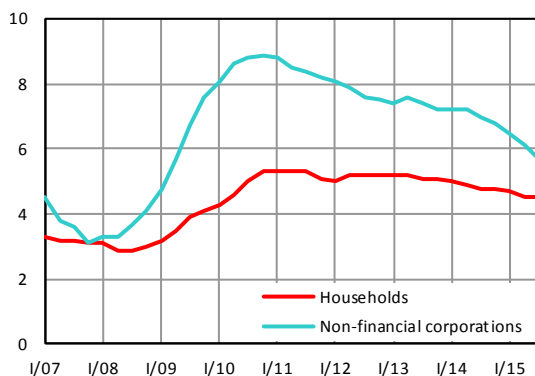


Source: CNB, own calculations

The growth of loans to households, the dynamics of which is mostly influenced by housing loans (in volume terms, housing loans are the most important loan category – see Graph A.3.5) remains considerably below the long-term average. Since mid-2015, consumer loans have been showing considerable growth (in the third quarter of 2015, growth of 5.6% YoY), which is due, however, to a merger of a bank with a non-banking entity and the related changes in banking and monetary statistics. So-called “other loans”, which include e.g. loans to sole traders, have been growing slightly. The growth of loans to non-financial corporations has remained quite high in recent months (consistent with the economic cycle) – it was 9.8% YoY in the third quarter of 2015.

**Graph A.3.3: Non-performing Loans**

ratio of non-performing to total loans, in %

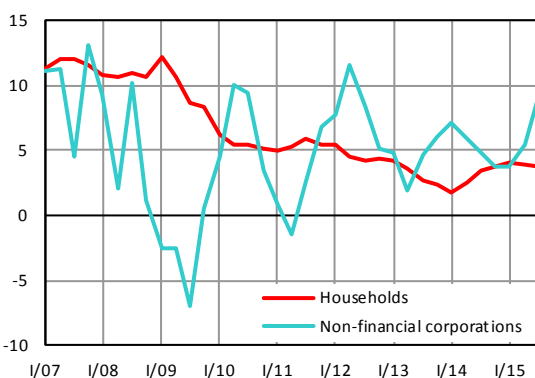


Source: CNB, own calculations

The share of non-performing loans in the total loans has been slowly decreasing, in line with the improving state of the real economy. In the third quarter of 2015, the share stood at 4.5% for households (QoQ stagnation, 0.3 pp less YoY) and at 5.7% for non-financial corporations (0.4 pp less QoQ and 1.3 pp less YoY).

**Graph A.3.4: Deposits**

YoY growth rate, in %



Source: CNB, own calculations

The growth of household deposits remains moderate. The growth of household disposable income, which is still relatively low (though accelerating), in combination with the relatively high confidence of households in future economic developments, are probably reflected here. The growth of deposits of non-financial corporations has accelerated further.

The Prague Stock Exchange Index PX reached 956.3 points at the end of December 2015 (30 December), which represented a QoQ growth of 1.0% and a YoY decrease of 0.3%. During the fourth quarter of 2015, no considerable volatility was recorded on the stock market.

**A.3.3 Exchange Rates**

From the change in the exchange rate regime in November 2013 until approximately mid-2015, the CZK/EUR exchange rate mostly hovered close to the level of 27.50 CZK/EUR. With the exception of a temporary depreciation above 28 CZK/EUR at the beginning of 2015, the exchange rate was very stable, showing only small fluctuations. At the end of the second quarter of 2015, the koruna exchange rate started strengthening in connection with favourable developments of the economy, approaching the value 27 CZK/EUR near which it remained for the whole third and fourth quarter of 2015. In the fourth quarter of 2015, the koruna strengthened by 2.1% YoY, which cannot be considered a significant movement, when taking into account the historical experience.

It is not determined yet when and in what manner will the CNB stop using the exchange rate instrument. Based on the available information (especially the CNB's statement that it will discontinue the exchange rate commitment probably around the end of 2016), we have made a technical assumption that the exchange rate will remain stable at 27.0 CZK/EUR until the end of 2016 (*versus 27.1 CZK/EUR*). We expect that subsequently the koruna will again start strengthening slightly against the euro, approximately by 0.5% QoQ. The expected development is in line with the CNB's statement that it will not allow considerable appreciation of the koruna after it discontinues the exchange rate commitment.

The estimated development of the CZK/USD exchange rate is implied by the USD/EUR exchange rate, for which we have made a technical assumption of stability at the level of 1.10 USD/EUR (*unchanged*).

**Table A.3.1: Interest Rates – yearly**

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
		Forecast									Forecast
Repo 2W rate CNB (end of period)	in % p.a.	2.25	1.00	0.75	0.75	0.05	0.05	0.05	0.05	.	.
Main refinancing rate ECB (end of period)	in % p.a.	2.50	1.00	1.00	1.00	0.75	0.25	0.05	0.05	.	.
Federal funds rate (end of period)	in % p.a.	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.50	.	.
PRIBOR 3M	in % p.a.	4.04	2.19	1.31	1.19	1.00	0.46	0.36	0.31	0.3	0.3
YTM of 10Y government bonds	in % p.a.	4.55	4.67	3.71	3.71	2.80	2.11	1.58	0.57	0.7	1.0

Source: CNB, ECB, Fed, own calculations

Table A.3.2: Interest Rates – quarterly

		2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
						Forecast	Forecast	Forecast	Forecast
Repo 2W rate CNB (end of period)	in % p.a.	0.05	0.05	0.05	0.05	.	.	.	.
Main refinancing rate ECB (end of period)	in % p.a.	0.05	0.05	0.05	0.05	.	.	.	.
Federal funds rate (end of period)	in % p.a.	0.25	0.25	0.25	0.50	.	.	.	.
PRIBOR 3M	in % p.a.	0.33	0.31	0.31	0.29	0.3	0.3	0.3	0.3
YTM of 10Y government bonds	in % p.a.	0.37	0.62	0.80	0.50	0.6	0.6	0.7	0.8

Source: CNB, ECB, Fed, own calculations

Table A.3.3: Interest Rates, Deposits and Loans – yearly

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Households – MFI (CR, unless stated otherwise)</b>											
– interest rates on loans	in % p.a.	7.53	6.93	6.64	6.81	7.00	7.01	6.83	6.46	6.03	5.57
– loans	growth in %	32.7	32.2	31.7	29.0	16.3	8.7	6.5	4.8	4.0	3.5
– loans without housing loans	growth in %	28.6	28.3	27.3	25.3	19.1	8.3	6.8	1.4	0.4	0.3
– interest rates on deposits	in % p.a.	1.24	1.22	1.29	1.55	1.38	1.25	1.20	1.18	1.01	0.84
– deposits	growth in %	6.1	8.2	11.8	10.8	10.0	5.6	5.4	4.7	3.2	2.9
– share of non-performing loans	in %	4.2	3.7	3.2	3.0	3.7	4.8	5.3	5.2	5.2	4.9
– loans to deposits ratio	in %	35	43	51	59	62	64	65	65	65	65
– loans to deposits ratio (Eurozone)	in %	94	99	99	94	89	90	90	87	84	82
<b>Non-financial firms – MFI (CR, unless stated otherwise)</b>											
– interest rates on loans	in % p.a.	4.27	4.29	4.85	5.59	4.58	4.10	3.93	3.69	3.19	3.00
– loans	growth in %	13.0	17.3	18.5	18.6	0.0	-4.8	5.2	2.5	0.1	-0.9
– interest rates on deposits	in % p.a.	0.99	1.08	1.41	1.80	0.87	0.56	0.52	0.56	0.41	0.29
– deposits	growth in %	5.7	10.5	10.0	5.7	-2.9	6.9	2.3	8.2	4.4	5.4
– share of non-performing loans	in %	5.7	4.5	3.8	3.6	6.2	8.6	8.5	7.8	7.4	7.1
– loans to deposits ratio	in %	107	113	122	137	141	125	129	122	117	110
– loans to deposits ratio (Eurozone)	in %	305	306	308	329	326	308	301	291	264	239

Source: CNB, ECB, own calculations

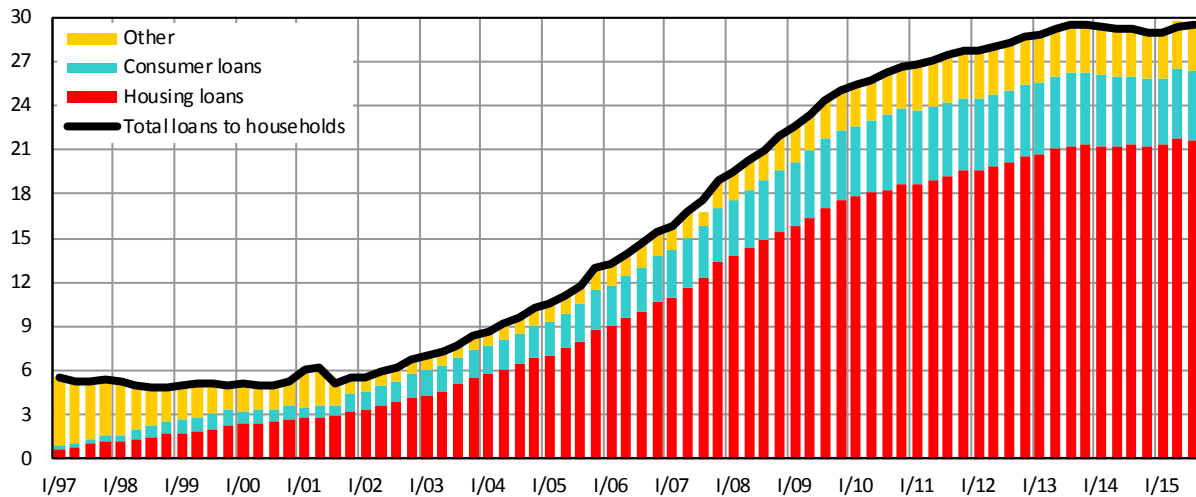
Table A.3.4: Interest Rates, Deposits and Loans – quarterly

		2013	2014				2015		
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Households – MFI (CR, unless stated otherwise)									
– interest rates on loans	in % p.a.	5.83	5.73	5.62	5.52	5.40	5.28	5.18	5.11
– loans	growth in %	4.2	3.9	3.8	3.6	2.7	2.9	3.9	5.6
– loans without housing loans	growth in %	1.2	0.6	1.2	0.6	-1.2	-1.4	1.0	4.9
– interest rates on deposits	in % p.a.	0.94	0.92	0.87	0.81	0.77	0.72	0.66	0.62
– deposits	growth in %	2.4	1.8	2.6	3.4	3.7	4.0	3.9	3.8
– share of non-performing loans	in %	5.1	5.0	4.9	4.8	4.8	4.7	4.5	4.5
– loans to deposits ratio	in %	66	65	65	66	65	65	65	66
– loans to deposits ratio (Eurozone)	in %	84	83	82	82	81	81	81	81
Non-financial firms – MFI (CR, unless stated otherwise)									
– interest rates on loans	in % p.a.	3.09	3.06	3.04	2.98	2.93	2.88	2.80	2.72
– loans	growth in %	-0.9	-1.9	-0.6	-0.9	-0.1	2.0	4.8	9.8
– interest rates on deposits	in % p.a.	0.36	0.34	0.32	0.26	0.24	0.22	0.20	0.17
– deposits	growth in %	6.1	7.1	5.9	4.9	3.8	3.8	5.4	9.2
– share of non-performing loans	in %	7.2	7.2	7.2	7.0	6.8	6.5	6.1	5.7
– loans to deposits ratio	in %	111	112	111	111	107	113	115	113
– loans to deposits ratio (Eurozone)	in %	248	242	247	239	230	217	216	210

Source: CNB, ECB, own calculations

**Graph A.3.5: Ratio of Bank Loans to Households to GDP**

yearly moving sums, in %



Source: CNB, CZSO, own calculations

**Table A.3.5: Exchange Rates – yearly**

			2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
								Estimate	Forecast	Forecast	Outlook	Outlook
<b>Nominal exchange rates:</b>												
<b>CZK / EUR</b>	average		25.29	24.59	25.14	25.98	27.53	27.28	27.0	26.7	26.2	25.7
	appreciation in %		4.6	2.8	-2.2	-3.2	-5.6	0.9	1.0	1.2	1.9	1.9
<b>CZK / USD</b>	average		19.11	17.69	19.59	19.57	20.75	24.57	24.5	24.3	23.8	23.4
	appreciation in %		-0.3	8.0	-9.7	0.1	-5.7	-15.5	0.1	1.2	1.9	1.9
<b>NEER</b>	average of 2010=100		100.0	103.1	99.5	97.3	92.5	92	94	95	96	98
	appreciation in %		2.1	3.1	-3.5	-2.2	-4.9	-0.2	1.3	1.2	1.9	1.9
<b>Real exchange rate to EA12<sup>1)</sup></b>	average of 2010=100		100.0	101.6	99.5	96.4	92.4	93	94	95	97	99
	appreciation in %		2.4	1.6	-2.0	-3.1	-4.2	0.5	0.8	1.1	2.4	2.4
<b>REER</b>	average of 2010=100		100.0	102.1	99.2	96.9	91.8	91	.	.	.	.
	(Eurostat, CPI deflated, 42 countries) appreciation in %		1.2	2.1	-2.8	-2.3	-5.2	-0.6	.	.	.	.

1) Deflated by GDP deflators.

Source: CNB, Eurostat, own calculations

**Table A.3.6: Exchange Rates – quarterly**

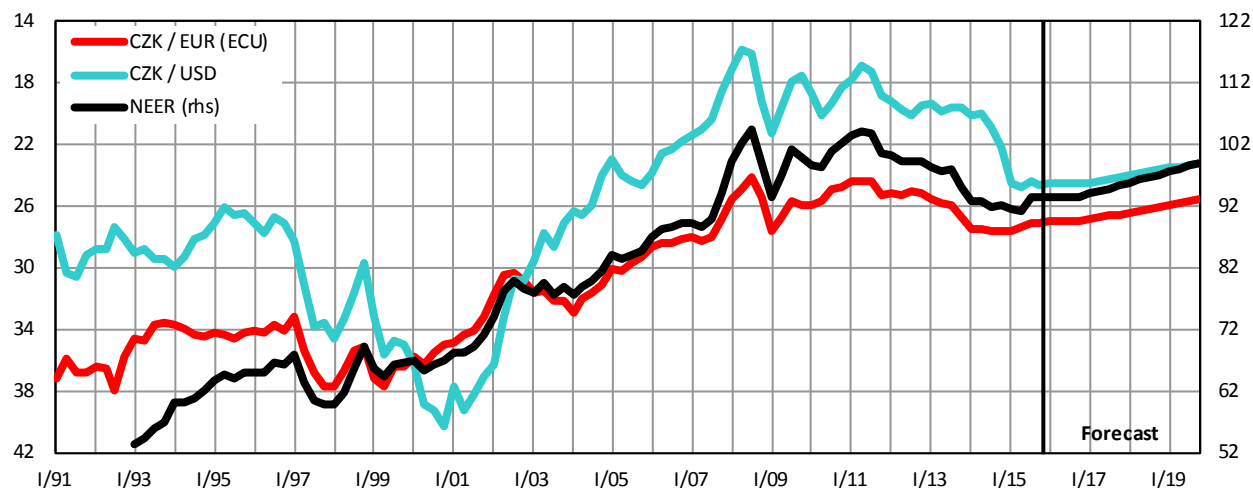
			2015				2016			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
						Estimate	Forecast	Forecast	Forecast	Forecast
<b>Nominal exchange rates:</b>										
<b>CZK / EUR</b>	average		27.62	27.38	27.07	27.06	27.0	27.0	27.0	27.0
	appreciation in %		-0.7	0.2	2.0	2.1	2.3	1.4	0.3	0.2
<b>CZK / USD</b>	average		24.55	24.79	24.35	24.60	24.5	24.5	24.5	24.5
	appreciation in %		-18.4	-19.2	-14.4	-10.1	0.0	1.0	-0.8	0.2
<b>NEER</b>	average of 2010=100		91.7	91.1	93.4	93	94	94	94	94
	appreciation in %		-1.4	-2.0	1.6	1.2	2.1	2.7	0.2	0.2
<b>Real exchange rate to EA12<sup>1)</sup></b>	average of 2010=100		91.5	92.5	93.2	94	94	93	93	94
	appreciation in %		-0.4	-0.3	1.1	1.8	2.1	1.0	0.0	0.0
<b>REER</b>	average of 2010=100		90.8	89.8	.	.	.	.	.	.
	(Eurostat, CPI deflated, 42 countries) appreciation in %		-2.3	-2.5	.	.	.	.	.	.

1) Deflated by GDP deflators.

Source: CNB, Eurostat, own calculations

### Graph A.3.6: Nominal Exchange Rates

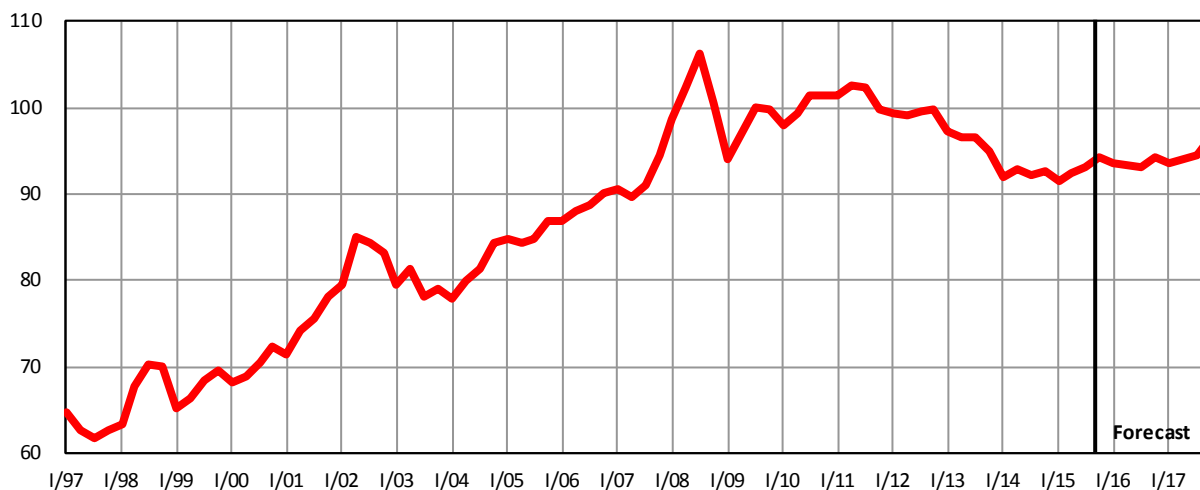
quarterly averages, average 2010=100 (rhs)



Source: CNB, own calculations

### Graph A.3.7: Real Exchange Rate to EA12

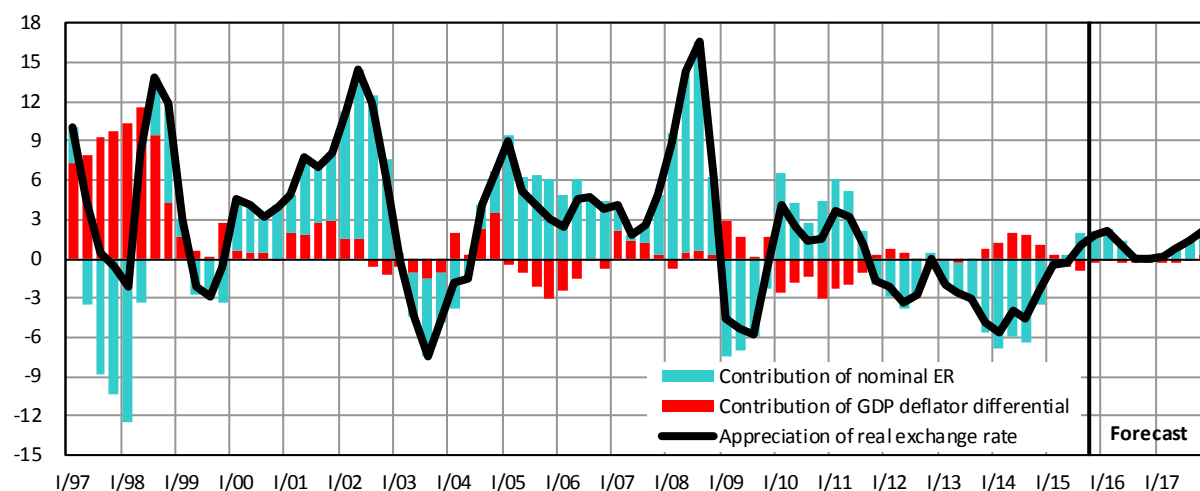
quarterly averages, deflated by GDP deflators, average 2010=100



Source: CNB, Eurostat, own calculations

### Graph A.3.8: Real Exchange Rate to EA12

deflated by GDP deflators, YoY growth rate in %, contributions in percentage points



Source: CNB, Eurostat, own calculations

## A.4 Structural Policies

### A.4.1 Business Environment

On 3 December 2015, the President of the Czech Republic signed the **Act on the Register of Contracts**. According to the new legal regulation, the state, regions, municipalities with extended competence, state-funded institutions, public research institutions, universities, state and national enterprises and companies with a majority participation of the state will in the register publish contracts with performance above CZK 50,000 excl. VAT. The aforementioned entities will send contracts to the register within one month from their conclusion. The register administrator will publish them in short order, whereby the contract will come into effect. If a contract is not published within three months from its conclusion, it will be cancelled. The Act will come into effect on 1 July 2016, and the rule related to contract effectiveness on 1 July 2017.

### A.4.2 Taxes

The institute of electronic VAT reporting, introduced by **the amendment to the Act on Value Added Tax** as of 1 January 2016, will help reveal tax evasion. VAT payers who will perform or receive tax transactions will report data on the basis of issued and received tax documents on delivery of goods or provision of services. The tax administrator will identify in what cases was the tax not admitted or if excessive deduction from fictitious invoices is claimed. Electronic VAT reporting is based on records for the VAT purposes which tax payers are already obliged to keep.

The **amendment to the Excise Tax Act** came into effect on 1 January 2016 by which the rates of excise taxes on cigarettes were increased in accordance with the EU Directive requirements. Simultaneously, the amendment introduced a three-year plan of regulating excise duties on tobacco products; the excise duty will also be increased further in 2017 and 2018. With respect to the existence of the time-limit for the sale of tobacco products taxed according to the previous rate, we do not assume any similar fluctuation of macroeconomic aggregates as in 2013–2015.

Another **amendment to the Excise Tax Act** that came into effect on 1 January 2016 set the two-year tax relief for high-percentage and clean fuels of the first generation and bio fuels produced from non-food commodities.

**The amendment to the Act on Lotteries** that came into effect on 1 January 2016 should restrict socially pathological phenomena connected with gambling. The amendment increases the rates of payments from lotteries and other similar games by 3 pp. In the case of gaming machines and other technical equipment, it increases the partial base of payment by 8 pp, increases the fixed component to CZK 80 per calendar day and regulates budget determination of levy.

**The Act on Fiscalization of Cash Payments**, that will introduce the duty to perform fiscalization of cash payments for selected business entities through the permanent electronic connection, was approved by the Chamber of Deputies in the second reading on 7 October 2015. Preparations for implementation of the Act continue, however, due to delays in negotiations the effective date of the Act was postponed for the third quarter of 2016 at the earliest for restaurants and accommodation facilities and for the fourth quarter of 2016 for retail and wholesale trade.

### A.4.3 Financial Markets

On 1 October 2016, the **Act on Recovery and Resolution on the Financial Market** came into effect, transposing the Bank Recovery and Resolution Directive into the Czech legal system. The new legal regulation lays down the complex legal framework for prevention, early intervention and resolution of banks, securities traders with initial capital exceeding EUR 730,000 and savings or loan cooperatives. In this connection, the powers and competences of the supervisory authority, planning, early intervention measures, conditions and method of resolution and definition of individual resolution measures are regulated. Last but not least, the Act defines the cross border cooperation of resolution authorities.

### A.4.4 Labour Market

**The amendment to the Act on Pension Insurance**, approved by the government on 9 November 2015, extends the group of persons working in the mining industry who have reduced retirement age. Miners who have worked 3,300 shifts under the ground in deep-seated mines and 2,200 shifts in uranium mines will become entitled to retirement five years earlier. The amendment is scheduled to come into effect from 1 October 2016.

**The Act on Pension Savings Termination**, which came into effect on 1 January 2016, cancelled the possibility to transfer a part of pension insurance premium to private accounts in pension funds. The funds saved will be paid out to participants or transferred as contributions to additional pension insurance or supplementary pension savings.

**The Government Decree on Minimal Wage** of 20 August 2015 increased the minimal wage from 1 January 2016 by CZK 700 to CZK 9,900.

### A.4.5 Health Care and Social System

**The amendment to the Act on Social Services**, approved by the government on 14 December 2015, will increase the contribution to care by 10%. The amendment is scheduled to come into effect from 1 August 2016.

## A.5 Demographic Trends

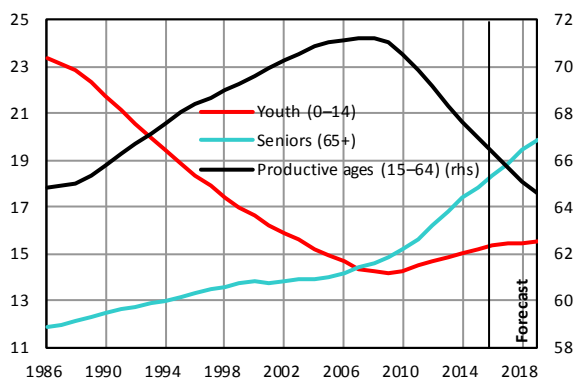
At the end of September 2015, 10.546 million people lived in the Czech Republic. Apparently, the increase in population has been slowing. During the first nine months of 2015, the number of inhabitants increased by 7.8 thousand persons. The positive net migration reached 8.5 thousand persons, the natural increase was slightly negative (−0.7 thousand persons).

In total, 25.6 thousand persons (5.1 thousand YoY less) have moved here from abroad, the highest number of them being from Slovakia and Ukraine. The number of persons moving abroad was 17.1 thousand (1.3 thousand YoY more).

The number of births reached 83.6 thousand, which almost exactly corresponded to the level of 2014. The number of deaths (84.3 thousand) was 6.2 thousand higher YoY, in particular due to the extremely low mortality in the first quarter of 2014, but approximately at the level of 2013.

**Graph A.5.1: Age Groups**

shares on total population, in %



Source: CZSO, own calculations

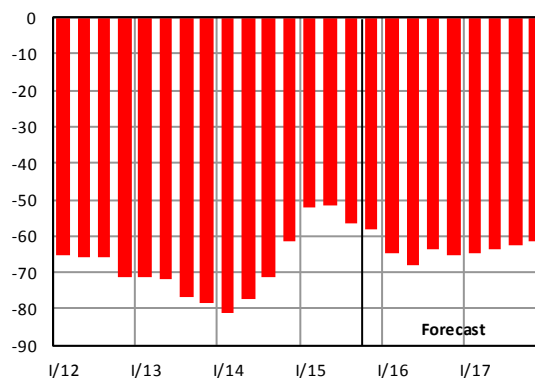
There has been a long-run decline in the **population aged 15–64 years** (see Graph A.5.1). At the beginning of 2016 it should be, for the first time since 1994, below 7 million persons. In the years to come, the working-age population should continue to decrease by approximately 60–70 thousand people a year in absolute terms, which is an annual decrease of approximately 0.9% (see Graph A.5.2). The economic impacts of this situation and its mitigation by an increase in the participation rate are described in more detail in Chapter B.1.

In contrast, the structural share of **persons aged over 64 years** in the total population reached 17.8% at the beginning of 2015 and due to the lengthening life expectancy and demographical structure it should regu-

larly increase approximately by 0.5 pp per year. The number of seniors in the population should exceed 2 million persons at the beginning of 2018. From the perspective of the sustainability of the pension system, however, the increases in retirement age are adequate to match the lengthening of life expectancy in the next 20–25 years. However, any possible legislative “softening” of the conditions in this sphere could violate the sustainability perspective.

**Graph A.5.2: Population Aged 15–64**

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

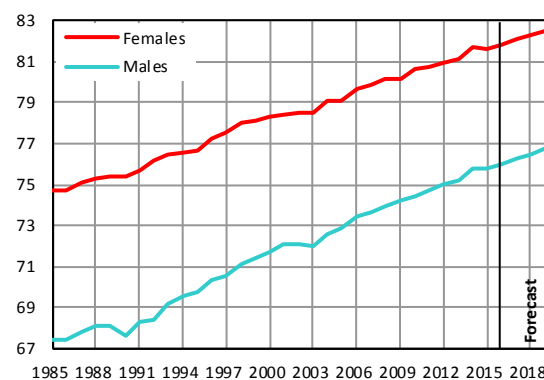


Source: CZSO, own calculations

The number of **old-age pensioners** has been increasing more slowly in the last three years than would correspond to the demographic development and the rising statutory retirement age. At the end of September 2015, the YoY increase was 13 thousand pensioners (see Graph A.5.5). The entire increase can be attributed to pensioners with reduced pensions following early retirement, while the number of pensioners entitled to a full pension fell by 8 thousand.

**Graph A.5.3: Life Expectancy at Birth**

in years



Source: CZSO

**Table A.5.1: Demographics**
*in thousands of persons (unless stated otherwise)*

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
						<i>Estimate</i>	<i>Forecast</i>	<i>Forecast</i>	<i>Outlook</i>	<i>Outlook</i>
<b>Population (January 1)</b>	<b>10 507</b>	<b>10 487</b>	<b>10 505</b>	<b>10 516</b>	<b>10 512</b>	<b>10 538</b>	<b>10 550</b>	<b>10 552</b>	<b>10 553</b>	<b>10 552</b>
<i>growth in %</i>	0.4	-0.2	0.2	0.1	0.0	0.2	0.1	0.0	0.0	0.0
<b>Age structure (January 1):</b>										
<b>(0–14)</b>	<b>1 494</b>	<b>1 522</b>	<b>1 541</b>	<b>1 560</b>	<b>1 577</b>	<b>1 601</b>	<b>1 618</b>	<b>1 627</b>	<b>1 633</b>	<b>1 636</b>
<i>growth in %</i>	1.0	1.8	1.3	1.2	1.1	1.5	1.0	0.6	0.4	0.2
<b>(15–64)</b>	<b>7 414</b>	<b>7 328</b>	<b>7 263</b>	<b>7 188</b>	<b>7 109</b>	<b>7 057</b>	<b>6 998</b>	<b>6 932</b>	<b>6 871</b>	<b>6 814</b>
<i>growth in %</i>	-0.2	-1.2	-0.9	-1.0	-1.1	-0.7	-0.8	-0.9	-0.9	-0.8
<b>(65 and more)</b>	<b>1 599</b>	<b>1 637</b>	<b>1 701</b>	<b>1 768</b>	<b>1 826</b>	<b>1 880</b>	<b>1 934</b>	<b>1 992</b>	<b>2 049</b>	<b>2 101</b>
<i>growth in %</i>	2.7	2.4	3.9	3.9	3.3	3.0	2.9	3.0	2.8	2.6
<b>Old-age pensioners (January 1)<sup>1)</sup></b>	<b>2 108</b>	<b>2 260</b>	<b>2 340</b>	<b>2 341</b>	<b>2 340</b>	<b>2 355</b>	<b>2 372</b>	<b>2 392</b>	<b>2 411</b>	<b>2 417</b>
<i>growth in %</i>	2.1	.	3.5	0.0	0.0	0.6	0.7	0.9	0.8	0.3
<b>Old-age dependency ratios (January 1, in %):</b>										
<b>Demographic<sup>2)</sup></b>	<b>21.6</b>	<b>22.3</b>	<b>23.4</b>	<b>24.6</b>	<b>25.7</b>	<b>26.6</b>	<b>27.6</b>	<b>28.7</b>	<b>29.8</b>	<b>30.8</b>
<b>Under current legislation<sup>3)</sup></b>	<b>36.6</b>	<b>37.4</b>	<b>37.8</b>	<b>38.3</b>	<b>38.8</b>	<b>39.3</b>	<b>39.6</b>	<b>40.1</b>	<b>40.6</b>	<b>40.9</b>
<b>Effective<sup>4)</sup></b>	<b>42.8</b>	<b>45.9</b>	<b>47.9</b>	<b>47.6</b>	<b>47.2</b>	<b>46.9</b>	<b>46.9</b>	<b>47.2</b>	<b>47.5</b>	<b>47.6</b>
<b>Fertility rate</b>	<b>1.493</b>	<b>1.427</b>	<b>1.452</b>	<b>1.456</b>	<b>1.528</b>	<b>1.45</b>	<b>1.45</b>	<b>1.46</b>	<b>1.46</b>	<b>1.46</b>
<b>Population increase</b>	<b>-20</b>	<b>19</b>	<b>11</b>	<b>-4</b>	<b>26</b>	<b>12</b>	<b>2</b>	<b>1</b>	<b>-1</b>	<b>-3</b>
<b>Natural increase</b>	<b>10</b>	<b>2</b>	<b>0</b>	<b>-2</b>	<b>4</b>	<b>-5</b>	<b>-7</b>	<b>-9</b>	<b>-11</b>	<b>-13</b>
<b>Live births</b>	<b>117</b>	<b>109</b>	<b>109</b>	<b>107</b>	<b>110</b>	<b>102</b>	<b>100</b>	<b>98</b>	<b>97</b>	<b>95</b>
<b>Deaths</b>	<b>107</b>	<b>107</b>	<b>108</b>	<b>109</b>	<b>106</b>	<b>107</b>	<b>107</b>	<b>107</b>	<b>107</b>	<b>107</b>
<b>Net migration</b>	<b>16</b>	<b>17</b>	<b>10</b>	<b>-1</b>	<b>22</b>	<b>17</b>	<b>9</b>	<b>9</b>	<b>10</b>	<b>10</b>
<b>Immigration</b>	<b>31</b>	<b>23</b>	<b>30</b>	<b>30</b>	<b>42</b>	.	.	.	.	.
<b>Emigration</b>	<b>15</b>	<b>6</b>	<b>20</b>	<b>31</b>	<b>20</b>	.	.	.	.	.
<b>Census difference</b>	<b>-46</b>	<b>x</b>	<b>x</b>	<b>x</b>	<b>x</b>	<b>x</b>	<b>x</b>	<b>x</b>	<b>x</b>	<b>x</b>

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).

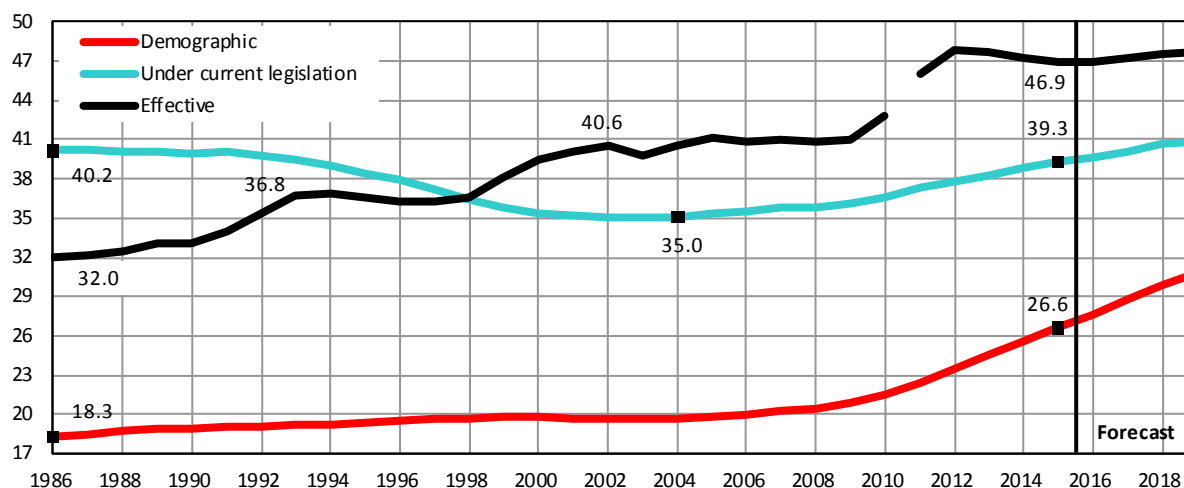
3) Dependency under current legislation: ratio of people above the official retirement age to the people over 19 below the official retirement age.

4) Effective dependency: ratio of old-age pensioners to working people.

Source: Czech Social Security Administration, CZSO, own calculations

**Graph A.5.4: Dependency Ratios**

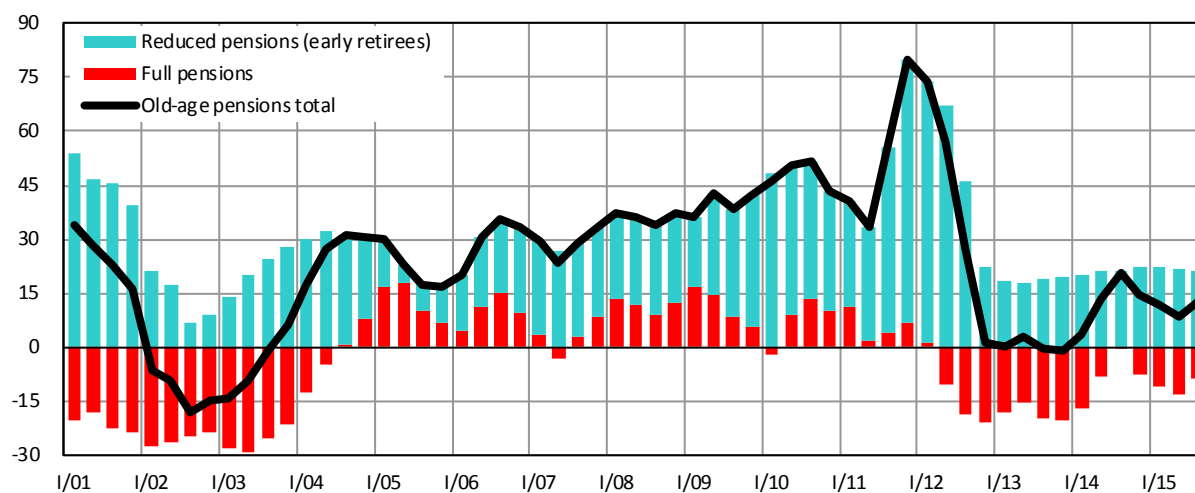
As of January 1, in %, inconsistent between 2010 and 2011 due to transfer of disability pensions to old-age pensions for people over 64 years



Source: CZSO, own calculations

### Graph A.5.5: 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, own calculations

## B Economic Cycle

### B.1 Position within the Economic Cycle

Potential product, specified on the basis of a calculation by means of the Cobb-Douglas production function, indicates the level of economic output to be achieved with the average utilization of production factors. The growth of potential product expresses the possibilities for long-term sustainable growth of the economy without giving rise to imbalances. It can be broken down into contributions of the labour force, capital stock, and total factor productivity. The output gap identifies the cyclical position of the economy and expresses the relationship between actual and potential product. The concepts of potential product and output gap are used to analyse the economic cycle and to calculate the structural balance of public budgets.

The negative **output gap**, persisting in the Czech economy since the beginning of 2009, probably closed during 2015 (see Graph B.1.1). According to our calculations, the positive output gap reached 0.8% of potential product in the third quarter of 2015. This position of the economy can be evaluated positively, as it results in the effective utilisation of production factors.

The closing of the output gap in the economy can be best seen on the labour market. For example, it is confirmed with the unemployment rate (LFS), which is deeply below its long-term average and has been further decreasing. The number of vacancies recorded by the Ministry of Labour and Social Affairs also exceeds the average level and shows considerable increases in a YoY comparison. In the case of some professions, mismatches between supply and demand have been manifesting itself more and more; these frictions are contributing to wage growth acceleration.

In contrast, the closing of the output gap has not yet manifested itself in the price development. Inflation continues to be nearly negligible. However, this is caused by a decrease in imported goods prices, in particular of fuels, which is stronger than the impact of only weak (for the time being) demand pressures.

With regard to the expected slowdown of economic growth in the following years, widening of the positive output gap should be only gradual. However, any further stimulation of the economy by economic policies could sow the seeds of future macroeconomic imbalances.

Having overcome a long-term period of recessions, stagnation or only weak recovery, the annual growth of **potential product** is accelerating. According to our calculations, it was 1.8% in the third quarter of 2015, which we consider as a result slightly undervaluing the real possibilities of the Czech economy.

Growth acceleration is most apparent in **total factor productivity**. The contribution of its trend component, derived by the Hodrick-Prescott filter, increased from

a nearly zero value during the recession in 2012 to 1.3 pp in the third quarter of 2015.

The long-lasting and deep slump in investments in 2008–2013 has also contributed to the slowdown of potential product growth. The current investment wave, supported by efforts for a maximal possible drawdown of the EU funds, has led, for the time being, to an increase in the contribution of **capital stock** from 0.3 pp at the turn of 2013 and 2014 only to 0.5 pp in the third quarter of 2015. Capital consumption (depreciation) is still reaching nearly three quarters of the level of its gross formation. Though this share has been quickly decreasing, only approximately a quarter of invested funds is left for development investment.

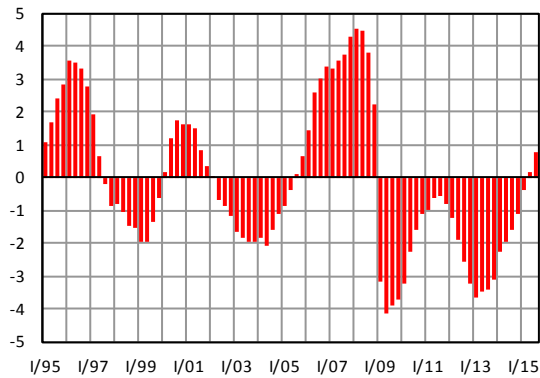
**The labour supply** is being affected by a long-lasting decrease in the working-age population, caused by the process of population ageing (see Chapter A.5). In the third quarter of 2015, **demographic development** slowed potential product growth by 0.4 pp.

The negative impact of the decline in the population aged 15–64 years on the labour supply is fully compensated by an increase in the **participation rate** (the ratio of the labour force to the population aged 15–64 years). With respect to its anti-cyclical character, the decrease in its contribution to potential product growth from 0.9 pp in 2013 to 0.5 pp in the third quarter of 2015 can be explained by the economic cycle. In the following period, however, the structural factors of the participation rate – an increase in the number of inhabitants in age groups which a naturally high participation and an increase in the statutory and effective retirement age – should start to predominate.

In the long run, the regular **average working time** is shortening in the Czech Republic. As the economic cycle progresses, however, this factor is ceasing to manifest itself. In the third quarter of 2015, the number of hours usually worked had a zero impact on potential product growth versus -0.4 pp at the end of the recession in the first quarter of 2013.

**Graph B.1.1: Output Gap**

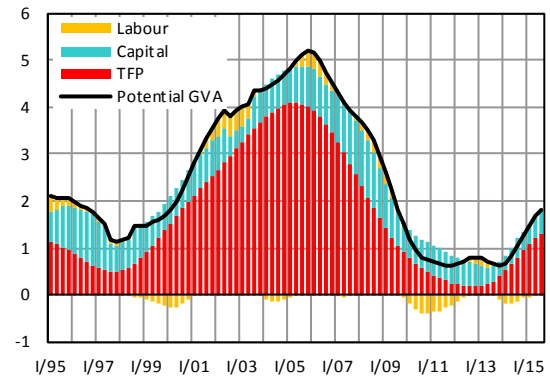
in % of potential product



Source: CZSO, own calculations

**Graph B.1.2: Potential Product Growth**

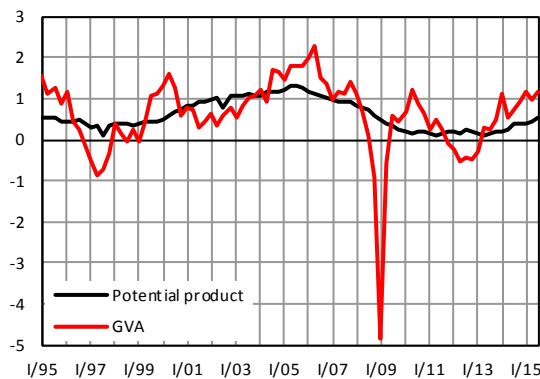
in %, contributions in percentage points



Source: CZSO, own calculations

**Graph B.1.3: Potential Product and GVA**

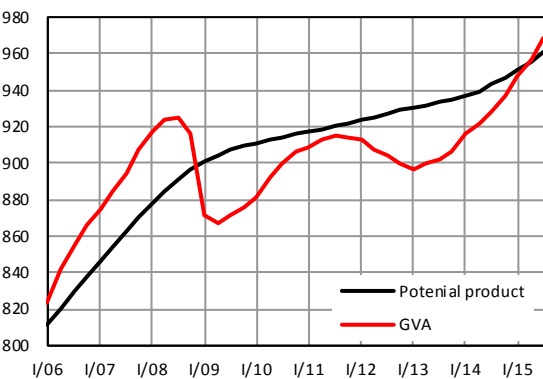
QoQ growth rate, in %



Source: CZSO, own calculations

**Graph B.1.4: Levels of Potential Product and GVA**

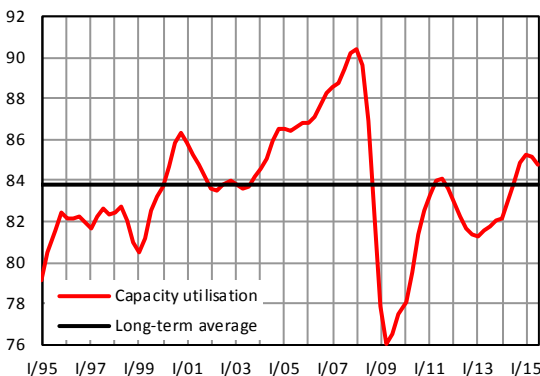
in bill. CZK of 2010



Source: CZSO, own calculations

**Graph B.1.5: Capacity Utilisation in Industry**

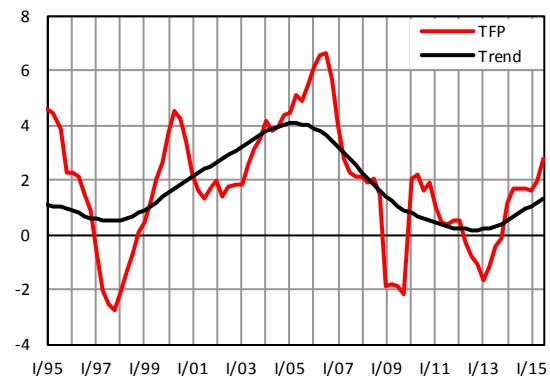
smoothed by Hodrick-Prescott filter, in %



Source: CZSO

**Graph B.1.6: Total Factor Productivity**

YoY growth rate, in %



Source: CZSO, own calculations

**Table B.1: Output Gap and Potential Product**

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
											Q1-3
<b>Output gap</b>	per cent	2.6	3.8	3.8	-3.7	-2.0	-0.7	-2.2	-3.4	-1.7	0.2
<b>Potential product <sup>1)</sup></b>	growth in %	4.9	4.0	3.4	2.0	0.9	0.7	0.7	0.7	1.0	1.7
<b>Contributions:</b>											
–Trend TFP	perc. points	3.7	2.9	2.0	1.2	0.6	0.3	0.2	0.3	0.7	1.2
–Fixed assets	perc. points	0.9	1.1	1.2	0.8	0.6	0.6	0.5	0.4	0.4	0.5
–Demography <sup>2)</sup>	perc. points	0.2	0.3	0.3	0.1	-0.2	-0.4	-0.5	-0.5	-0.5	-0.4
–Participation rate	perc. points	0.2	-0.2	0.0	0.3	0.2	0.3	0.8	0.9	0.5	0.5
–Usually worked hours	perc. points	-0.1	0.0	-0.1	-0.2	-0.2	-0.2	-0.3	-0.3	-0.2	-0.1

1) Based on gross value added

Source: CZSO, own calculations

2) Contribution of growth of working-age population (15–64 years)

## B.2 Business Cycle Indicators

Within the so-called business cycle surveys, respondents' views as to the current situation and the short-term outlook are ascertained. The so-called confidence indicators, which are based on the results of these surveys, reflect a wide range of influences shaping the expectations of economic entities and their advantage lies in the quick availability of results. A significant relationship between the confidence indicators and appropriate macroeconomic aggregates enables to assess their course ahead of national accounts publication (questions focused on the evaluation of the current development) or the following quarter (questions focused on the expectations of the future development).

It follows from the development of the confidence indicator in industry that YoY growth of GVA in industry probably slowed in the fourth quarter of 2015.

In contrast, the confidence indicator in construction increased at the end of 2015, offsetting losses from the previous quarter. However, we cannot omit here the fact that the correlation between the development of confidence and GVA in this sector is very low, as is apparent from Graph B.2.2.

The consumer confidence indicator also developed similarly, strengthening in the fourth quarter of 2015, thus signalling an acceleration of growth dynamics of household consumption at the beginning of 2016. This conclusion results from the fact that the development of the consumer confidence indicator leads household consumption by 1–2 quarters.

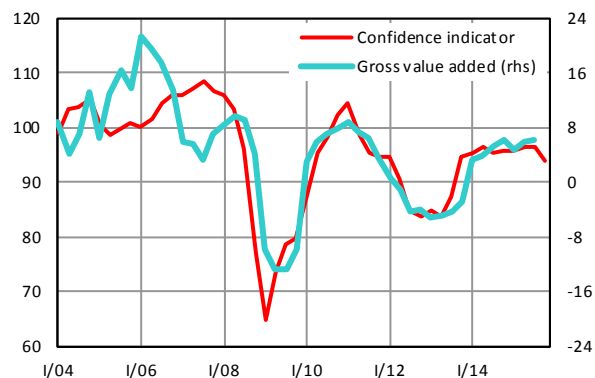
Confidence in trade and services continued to improve gradually, being safely above the end-2014 level in the fourth quarter of 2015.

As a result, the composite confidence indicator signals that YoY growth dynamics of GVA remained unchanged in the fourth quarter of 2015.

For the fourth quarter of 2015, the composite leading indicator signals relatively sharp growth of the positive relative cyclical component of GDP. For the first quarter of 2016, however, the possibility that a decreasing phase of the economic cycle in the form of a gradual closing of the positive cyclical component would begin is indicated. With respect to the strength of the relationship between the leading indicator and the cyclical component, however, we interpret this signal only as an increase in the probability of the aforementioned phenomenon.

**Graph B.2.1: Confidence and GVA in Industry**

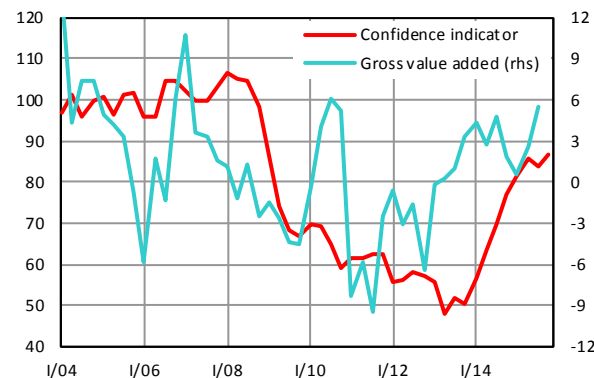
2005=100 (lhs), YoY growth in % (rhs)



Source: CZSO

**Graph B.2.2: Confidence and GVA in Construction**

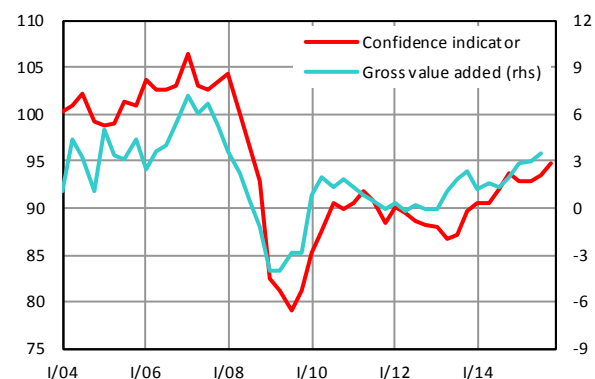
2005=100 (lhs), YoY growth in % (rhs)



Source: CZSO

**Graph B.2.3: Confidence and GVA in Trade and Services**

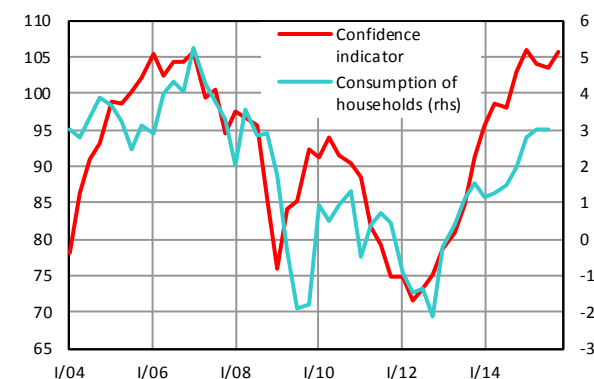
2005=100 (lhs), YoY growth in % (rhs)



Source: CZSO, own calculations

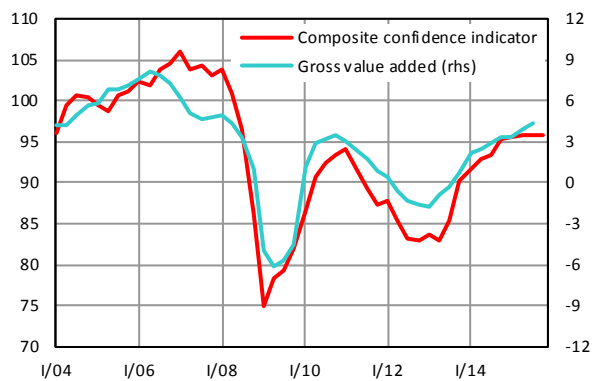
**Graph B.2.4: Consumer Confidence and Consumption**

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



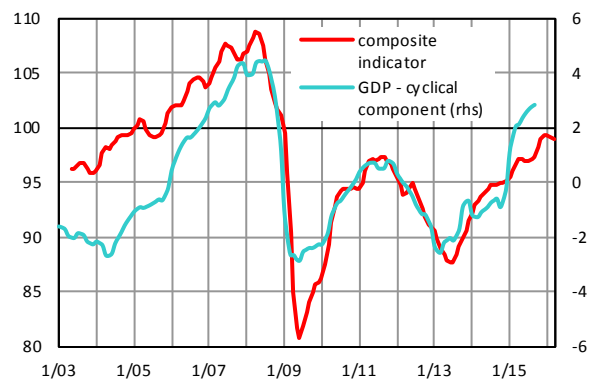
Source: CZSO

**Graph B.2.5: Composite Confidence Indicator and GVA**  
2005=100 (lhs), YoY growth in % (rhs)



Source: CZSO

**Graph B.2.6: Composite Leading Indicator**  
2005=100 (lhs), in % of GDP (rhs)



Note: Synchronized with cyclical component of GDP derived by statistical methods (Hodrick-Prescott filter)

Source: CZSO, own calculations

# C Forecast of the Development of Macroeconomic Indicators

## C.1 Economic Output

### C.1.1 GDP in the Third Quarter of 2015

Economic performance measured by real GDP rose by 4.1% YoY (*in line with the estimate*) in the third quarter of 2015, while seasonally adjusted GDP increased by 0.7% QoQ (*versus 0.6%*). The highest contribution to the 1.2% QoQ growth of the gross value added was from manufacturing, construction and the sector trade, transportation, accommodation and food service (identical contribution of 0.3 pp).

The YoY increase in GDP in the third quarter of 2015 reflected growing domestic and foreign demand. The main growth factor was again investment demand, driven by gross fixed capital formation. In the second place, final consumption expenditure of both households and the government sector contributed to the increase in GDP. The increasing demand contributed to a strong growth of imports, which, however, was largely offset by increased exports. In total, the balance of foreign trade in goods and services has slightly weighed on growth dynamics.

Growth of household consumption resulted from increasing disposable income amid strengthening consumer confidence and a YoY decline in savings rate. The most dynamically increasing components of household consumption were expenditure on durable and semi-durable goods, which suggests a higher certainty of households regarding the increasing phase of the economic cycle. This is also assisted by an extremely low unemployment rate. Expenditure on non-durable goods, which is less sensitive to economic fluctuations, and services also contributed to the growth of total household consumption. In real terms, household consumption increased by 2.7% (*versus 2.9%*). Government consumption grew by 4.4% (*versus 2.0%*) due to the increased spending on goods and services.

Gross fixed capital formation growth of 6.8% (*versus 7.6%*) was supported by all components, mainly investment in other buildings and structures<sup>1</sup>, other machinery and equipment and transport equipment. Together with a number of other indicators, such as the composite confidence indicator or the development of industrial production, this confirms the continuing recovery of private investment activity. The government sector investment, the growth of which in current prices has accelerated to 34.0% due to the increasing drawdown

of the EU funds, contributed increasingly to the rise in gross fixed capital formation. Considering the positive YoY contribution of inventories, gross capital formation rose more quickly than investment in fixed capital, specifically by 9.1% (*versus 6.5%*).

With a slight acceleration of the growth of exports of goods and a considerable slowdown of the growth of exports of services, the YoY growth of exports of goods and services decreased from 7.0% in the second quarter of 2015 to 6.6% (*versus 7.3%*). Imports of goods and services increased by 7.6% (*versus 7.1%*), which was in line with the recovery of domestic demand.

A higher decrease in import prices compared to export prices resulted in an improvement of the terms of trade of 0.2% (*versus a deterioration of 0.5%*). The resulting trading gain from the terms of trade brought about a situation where real gross domestic income, which unlike GDP includes this factor, increased by 4.3% YoY (*versus 3.7%*).

The gross operating surplus increased by 4.4% (*versus 5.1%*), compensation of employees grew by 4.1% (*versus 4.3%*) and net taxes on production were up by 6.9% YoY (*versus 0.1%*). As a result, nominal GDP recorded growth of 4.6% (*versus 4.3%*).

### C.1.2 Estimate for the Fourth Quarter of 2015

The estimate of GDP and its structure is based on the course of phenomena already observed in the previous period and commented on above. We estimate that GDP increased by 5.7% YoY (*versus 5.1%*) and by 1.0% QoQ (*versus 0.6%*). The increase in QoQ dynamics of GDP is mainly a result of the very successful drawdown of the EU funds.

We suppose that GDP growth was due mainly to the growth of gross fixed capital formation and further to final consumption expenditure. Due to the increasing disposable income and strong consumer confidence, household consumption might have increased by 3.2% (*versus 3.0%*) and government consumption by 3.5% (*versus 2.0%*). According to our estimate, gross fixed capital formation increased by 14.6% (*versus 13.6%*) due to the continuing growth of private investments, a sharp increase in the government investment activity related to the already aforementioned drawdown of the EU funds from the previous financial perspective, but also to the one-off effect of imputation of the financial leasing of the JAS-39 Gripen aircrafts.

<sup>1</sup> Other buildings and structures include both private and public investment in buildings (except for dwellings) and infrastructure investment.

Foreign trade probably had a negative effect on GDP dynamics, in particular due to the one-off increase in imports (military equipment – aircrafts). We estimate that exports grew by 7.0% (*versus* 7.3%), following foreign markets' growth, while imports increased by 8.2% (*versus* 9.2%) due to higher exports and domestic demand.

### C.1.3 Forecast for the Years 2016 and 2017

In 2016, economic growth should be driven mainly by domestic demand led by final consumption expenditure. The contribution of net exports should be slightly positive. We expect real GDP to grow by 2.7% (*unchanged*) in 2016 and by 2.6% in 2017.

Consumption of households will be supported by the growth of real disposable income, declining savings rate and consumers' optimistic expectations, as evidenced by the business cycle surveys. Dynamics of the disposable income will be positively affected by not only the growth of wages and salaries, to which an increase in the wage bill in the budgetary sphere or another rise in the minimal wage will contribute, but also by some other government measures, such as the one-off contribution to pensions or an increase in tax credit for the second and every other child. For 2016, we also expect a gradual increase in the contribution of consumer loans to the resources for private consumption. Household consumption could increase by 3.1% (*versus* 2.5%) in 2016, and its growth could slow down to 2.6% in 2017. The change in the forecast for 2016 is mainly related to a decreased inflation forecast, which has a favourable impact on the expected dynamics of real household disposable income.

We expect that government consumption will grow by 2.1% (*versus* 2.0%) in 2016 and by 1.5% in 2017. The main growth factor of government consumption in 2016 will be an increase in compensation of employees, partially related to the planned creation of up to 13 thousand new jobs. In contrast, the contribution of expenditure on goods and services should be lower than in 2015, as an increased drawdown of non-investment resources from the EU funds from the programming period 2007–2013 fades out.

In 2016, private investment and government sector investment will influence the growth of gross fixed capital formation in the opposite direction. In the case of private investment, we still expect acceleration of its

growth due to the development of firms' profitability, eased monetary conditions increasing the availability of external financing resources (the growth of loans to non-financial corporations accelerated quite considerably in the first three quarters of 2015 – see Chapter A.3) and the position of the economy in the economic cycle. Compared to the October Forecast, however, we expect a slower growth of private investment in 2016 due to a slight decrease in capacity utilization in manufacturing. Government sector investment, which grew dynamically at the end of 2015 in relation to the drawdown of the EU funds from the programming period 2007–2013 (the growth was probably stronger than expected in the previous forecast), should weigh on growth of total gross fixed capital formation in 2016. The reason is not only the expected slower start of drawdown from the financial perspective 2014–2020 but also the impact of a high comparison base of 2015. With respect to these factors, we expect the government sector investment to decrease quite sharply this year. Gross fixed capital formation could thus increase by 1.5% (*versus* 2.9%) in 2016. In 2017, growth could accelerate to 3.3%, with a positive contribution of both private and government investment.

Gross capital formation should increase by 1.3% (*versus* 2.8%) in 2016 and by 3.2% in 2017. We forecast that in both this and the next year inventories will grow at a similar rate as in 2015 (restricting the time validity of tobacco stamps resulted in an exceptionally strong accumulation of inventories in the first quarter of 2015). The contribution of the change in inventories to GDP growth should thus be zero, yet the expected development of inventories is consistent with a positive output gap.

We expect that exports of goods and services will grow by 6.1% (*versus* 6.4%) in 2016 and by 6.0% in 2017. Lower growth dynamics compared to 2015 mainly reflects expected slowdown of export performance growth (see Chapter C.4). However, export growth should be supported – similarly as in 2015 – by a low crude oil price (a positive supply impulse not only for the domestic economy, but also for the economies of trading partners). On the side of imports of goods and services, we expect the impact of a slower growth of exports and domestic demand. Hence, imports will probably grow by 5.9% (*versus* 6.4%) in 2016 and by 6.1% in 2017.

**Table C.1.1: Real GDP by Type of Expenditure – yearly**
*chained volumes, reference year 2010*

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
							<i>Estimate</i>	<i>Forecast</i>	<i>Forecast</i>	<i>Outlook</i>	<i>Outlook</i>
<b>Gross domestic product</b>	<i>bill. CZK 2010</i>	3 954	4 031	3 995	3 974	4 053	4 241	4 357	4 471	4 581	4 692
	<i>growth in %</i>	<b>2.3</b>	<b>2.0</b>	<b>-0.9</b>	<b>-0.5</b>	<b>2.0</b>	<b>4.6</b>	<b>2.7</b>	<b>2.6</b>	<b>2.4</b>	<b>2.4</b>
<b>Private consumption expenditure <sup>1)</sup></b>	<i>bill. CZK 2010</i>	1 947	1 952	1 924	1 938	1 966	2 023	2 085	2 138	2 189	2 240
	<i>growth in %</i>	<b>1.0</b>	<b>0.3</b>	<b>-1.5</b>	<b>0.7</b>	<b>1.5</b>	<b>2.9</b>	<b>3.1</b>	<b>2.6</b>	<b>2.4</b>	<b>2.3</b>
<b>Government consumption exp.</b>	<i>bill. CZK 2010</i>	810	786	772	790	804	830	848	861	872	883
	<i>growth in %</i>	<b>0.4</b>	<b>-3.0</b>	<b>-1.8</b>	<b>2.3</b>	<b>1.8</b>	<b>3.2</b>	<b>2.1</b>	<b>1.5</b>	<b>1.3</b>	<b>1.3</b>
<b>Gross capital formation</b>	<i>bill. CZK 2010</i>	1 074	1 094	1 050	997	1 041	1 166	1 181	1 218	1 257	1 296
	<i>growth in %</i>	<b>4.4</b>	<b>1.8</b>	<b>-4.1</b>	<b>-5.0</b>	<b>4.4</b>	<b>12.0</b>	<b>1.3</b>	<b>3.2</b>	<b>3.2</b>	<b>3.1</b>
<b>– gross fixed capital formation</b>	<i>bill. CZK 2010</i>	1 066	1 077	1 043	1 014	1 035	1 121	1 137	1 175	1 213	1 251
	<i>growth in %</i>	<b>1.3</b>	<b>1.1</b>	<b>-3.2</b>	<b>-2.7</b>	<b>2.0</b>	<b>8.3</b>	<b>1.5</b>	<b>3.3</b>	<b>3.2</b>	<b>3.2</b>
<b>– change in stocks and valuables</b>	<i>bill. CZK 2010</i>	8	16	7	-18	6	45	43	43	44	44
<b>Exports of goods and services</b>	<i>bill. CZK 2010</i>	2 616	2 860	2 983	2 984	3 248	3 474	3 687	3 907	4 132	4 369
	<i>growth in %</i>	<b>14.8</b>	<b>9.3</b>	<b>4.3</b>	<b>0.0</b>	<b>8.9</b>	<b>7.0</b>	<b>6.1</b>	<b>6.0</b>	<b>5.8</b>	<b>5.7</b>
<b>Imports of goods and services</b>	<i>bill. CZK 2010</i>	2 494	2 661	2 732	2 734	3 003	3 246	3 439	3 650	3 867	4 096
	<i>growth in %</i>	<b>14.9</b>	<b>6.7</b>	<b>2.7</b>	<b>0.1</b>	<b>9.8</b>	<b>8.1</b>	<b>5.9</b>	<b>6.1</b>	<b>6.0</b>	<b>5.9</b>
<b>Gross domestic expenditure</b>	<i>bill. CZK 2010</i>	3 831	3 832	3 746	3 726	3 812	4 019	4 113	4 217	4 318	4 419
	<i>growth in %</i>	<b>1.8</b>	<b>0.0</b>	<b>-2.3</b>	<b>-0.5</b>	<b>2.3</b>	<b>5.4</b>	<b>2.4</b>	<b>2.5</b>	<b>2.4</b>	<b>2.4</b>
<b>Methodological discrepancy <sup>2)</sup></b>	<i>bill. CZK 2010</i>	0	0	-1	-1	-4	-6	-4	-3	-2	0
<b>Real gross domestic income</b>	<i>bill. CZK 2010</i>	3 954	3 988	3 936	3 949	4 074	4 275	4 405	4 510	4 629	4 750
	<i>growth in %</i>	<b>1.0</b>	<b>0.9</b>	<b>-1.3</b>	<b>0.3</b>	<b>3.2</b>	<b>4.9</b>	<b>3.0</b>	<b>2.4</b>	<b>2.6</b>	<b>2.6</b>
<b>Contributions to GDP growth <sup>3)</sup></b>											
<b>– gross domestic expenditure</b>	<i>percent. points</i>	<b>1.7</b>	<b>0.0</b>	<b>-2.2</b>	<b>-0.5</b>	<b>2.2</b>	<b>5.1</b>	<b>2.2</b>	<b>2.4</b>	<b>2.2</b>	<b>2.2</b>
– consumption	<i>percent. points</i>	<b>0.6</b>	<b>-0.5</b>	<b>-1.1</b>	<b>0.8</b>	<b>1.1</b>	<b>2.0</b>	<b>1.9</b>	<b>1.5</b>	<b>1.4</b>	<b>1.4</b>
– household expenditure	<i>percent. points</i>	<b>0.5</b>	<b>0.1</b>	<b>-0.7</b>	<b>0.4</b>	<b>0.7</b>	<b>1.4</b>	<b>1.4</b>	<b>1.2</b>	<b>1.1</b>	<b>1.1</b>
– government expenditure	<i>percent. points</i>	<b>0.1</b>	<b>-0.6</b>	<b>-0.4</b>	<b>0.5</b>	<b>0.4</b>	<b>0.6</b>	<b>0.4</b>	<b>0.3</b>	<b>0.3</b>	<b>0.2</b>
<b>– gross capital formation</b>	<i>percent. points</i>	<b>1.2</b>	<b>0.5</b>	<b>-1.1</b>	<b>-1.3</b>	<b>1.1</b>	<b>3.0</b>	<b>0.3</b>	<b>0.8</b>	<b>0.9</b>	<b>0.8</b>
– gross fixed capital formation	<i>percent. points</i>	<b>0.4</b>	<b>0.3</b>	<b>-0.9</b>	<b>-0.7</b>	<b>0.5</b>	<b>2.1</b>	<b>0.4</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>
– change in stocks	<i>percent. points</i>	<b>0.8</b>	<b>0.2</b>	<b>-0.2</b>	<b>-0.6</b>	<b>0.6</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>– foreign balance</b>	<i>percent. points</i>	<b>0.5</b>	<b>1.9</b>	<b>1.3</b>	<b>0.0</b>	<b>-0.2</b>	<b>-0.4</b>	<b>0.5</b>	<b>0.3</b>	<b>0.2</b>	<b>0.2</b>
– external balance of goods	<i>percent. points</i>	<b>0.8</b>	<b>2.0</b>	<b>1.4</b>	<b>0.1</b>	<b>0.0</b>	<b>-0.8</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>
– external balance of services	<i>percent. points</i>	<b>-0.2</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.2</b>	<b>0.4</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Gross value added</b>	<i>bill. CZK 2010</i>	3 583	3 654	3 622	3 603	3 702	.	.	.	.	.
	<i>growth in %</i>	<b>2.9</b>	<b>2.0</b>	<b>-0.9</b>	<b>-0.5</b>	<b>2.7</b>	.	.	.	.	.
<b>Net taxes and subsidies on products</b>	<i>bill. CZK 2010</i>	371	378	373	371	354	.	.	.	.	.

1) The consumption of non-profit institutions serving households (NPISH) is included in the private consumption.

2) Deterministic impact of using prices and structure of the previous year for calculation of y-o-y growth.

3) Calculated on the basis of prices and structure of the previous year with perfectly additive contributions.

Source: CZSO, own calculations

**Table C.1.2: Real GDP by Type of Expenditure – quarterly**  
*chained volumes, reference year 2010*

		2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		<i>Prelim.</i>	<i>Prelim.</i>	<i>Prelim.</i>	<i>Estimate</i>	<i>Forecast</i>	<i>Forecast</i>	<i>Forecast</i>	<i>Forecast</i>
<b>Gross domestic product</b>	<i>bill. CZK 2010</i>	985	1 062	1 080	1 114	1 014	1 100	1 104	1 139
	<i>growth in %</i>	<b>4.1</b>	<b>4.6</b>	<b>4.1</b>	<b>5.7</b>	<b>2.9</b>	<b>3.6</b>	<b>2.3</b>	<b>2.2</b>
	<i>growth in % <sup>1)</sup></i>	<b>4.1</b>	<b>4.6</b>	<b>4.7</b>	<b>5.3</b>	<b>3.2</b>	<b>2.7</b>	<b>2.6</b>	<b>2.2</b>
	<i>QoQ in % <sup>1)</sup></i>	<b>2.5</b>	<b>1.0</b>	<b>0.7</b>	<b>1.0</b>	<b>0.4</b>	<b>0.5</b>	<b>0.6</b>	<b>0.6</b>
<b>Private consumption expenditure <sup>2)</sup></b>	<i>bill. CZK 2010</i>	475	504	516	528	487	521	532	545
	<i>growth in %</i>	<b>2.8</b>	<b>2.9</b>	<b>2.7</b>	<b>3.2</b>	<b>2.4</b>	<b>3.4</b>	<b>3.1</b>	<b>3.2</b>
<b>Government consumption exp.</b>	<i>bill. CZK 2010</i>	191	200	204	235	196	204	208	240
	<i>growth in %</i>	<b>2.8</b>	<b>2.2</b>	<b>4.4</b>	<b>3.5</b>	<b>2.4</b>	<b>2.1</b>	<b>2.1</b>	<b>2.0</b>
<b>Gross capital formation</b>	<i>bill. CZK 2010</i>	236	293	315	323	244	311	316	310
	<i>growth in %</i>	<b>11.5</b>	<b>11.9</b>	<b>9.1</b>	<b>15.5</b>	<b>3.6</b>	<b>6.2</b>	<b>0.3</b>	<b>-4.0</b>
<b>– gross fixed capital formation</b>	<i>bill. CZK 2010</i>	237	266	285	333	252	278	287	320
	<i>growth in %</i>	<b>2.9</b>	<b>7.5</b>	<b>6.8</b>	<b>14.6</b>	<b>6.5</b>	<b>4.6</b>	<b>0.7</b>	<b>-3.9</b>
<b>– change in stocks and valuables</b>	<i>bill. CZK 2010</i>	-1	27	30	-11	-8	33	29	-10
<b>Exports of goods and services</b>	<i>bill. CZK 2010</i>	852	870	856	896	905	921	910	952
	<i>growth in %</i>	<b>7.2</b>	<b>7.0</b>	<b>6.6</b>	<b>7.0</b>	<b>6.2</b>	<b>5.8</b>	<b>6.3</b>	<b>6.2</b>
<b>Imports of goods and services</b>	<i>bill. CZK 2010</i>	771	804	808	864	819	855	860	905
	<i>growth in %</i>	<b>8.7</b>	<b>8.1</b>	<b>7.6</b>	<b>8.2</b>	<b>6.3</b>	<b>6.4</b>	<b>6.3</b>	<b>4.8</b>
<b>Methodological discrepancy <sup>3)</sup></b>	<i>bill. CZK 2010</i>	1	-1	-2	-3	0	-1	-2	-2
<b>Real gross domestic income</b>	<i>bill. CZK 2010</i>	994	1 068	1 088	1 124	1 029	1 112	1 114	1 149
	<i>growth in %</i>	<b>4.8</b>	<b>4.5</b>	<b>4.3</b>	<b>6.1</b>	<b>3.5</b>	<b>4.2</b>	<b>2.3</b>	<b>2.2</b>
<b>Gross value added</b>	<i>bill. CZK 2010</i>	901	966	978	.	.	.	.	.
	<i>growth in %</i>	<b>3.5</b>	<b>3.9</b>	<b>3.7</b>	.	.	.	.	.
	<i>growth in % <sup>1)</sup></i>	<b>3.4</b>	<b>3.9</b>	<b>4.3</b>	.	.	.	.	.
	<i>QoQ in % <sup>1)</sup></i>	<b>1.2</b>	<b>1.0</b>	<b>1.2</b>	.	.	.	.	.
<b>Net taxes and subsidies on products</b>	<i>bill. CZK 2010</i>	85	96	102	.	.	.	.	.

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, own calculations

**Table C.1.3: Nominal GDP by Type of Expenditure – yearly**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
							Estimate	Forecast	Forecast	Outlook	Outlook
Gross domestic product	bill. CZK	3 954	4 023	4 042	4 077	4 261	4 495	4 657	4 831	5 033	5 241
	growth in %	0.8	1.7	0.5	0.9	4.5	5.5	3.6	3.7	4.2	4.1
Private consumption expenditure <sup>1)</sup>	bill. CZK	1 947	1 984	1 998	2 030	2 070	2 132	2 206	2 296	2 394	2 496
	growth in %	1.5	1.9	0.7	1.6	2.0	3.0	3.4	4.1	4.3	4.2
Government consumption exp.	bill. CZK	810	792	783	801	828	866	895	919	941	964
	growth in %	-0.3	-2.2	-1.2	2.4	3.3	4.6	3.4	2.7	2.4	2.4
Gross capital formation	bill. CZK	1 074	1 087	1 061	1 010	1 076	1 219	1 247	1 307	1 369	1 432
	growth in %	3.3	1.2	-2.4	-4.9	6.6	13.3	2.3	4.8	4.8	4.6
– gross fixed capital formation	bill. CZK	1 066	1 069	1 052	1 025	1 065	1 168	1 201	1 260	1 322	1 387
	growth in %	0.2	0.3	-1.6	-2.6	4.0	9.6	2.9	4.9	4.9	4.9
– change in stocks and valuables	bill. CZK	8	18	9	-15	10	51	45	46	48	45
External balance	bill. CZK	123	159	200	236	286	278	310	309	328	349
– exports of goods and services	bill. CZK	2 616	2 881	3 097	3 150	3 571	3 790	3 966	4 169	4 407	4 668
	growth in %	13.4	10.1	7.5	1.7	13.4	6.1	4.7	5.1	5.7	5.9
– imports of goods and services	bill. CZK	2 494	2 722	2 897	2 914	3 285	3 512	3 656	3 859	4 079	4 319
	growth in %	15.8	9.1	6.5	0.6	12.7	6.9	4.1	5.6	5.7	5.9
Gross national income	bill. CZK	3 656	3 718	3 788	3 831	3 927	4 159	4 304	4 452	4 624	4 802
	growth in %	0.3	1.7	1.9	1.1	2.5	5.9	3.5	3.5	3.8	3.9
Primary income balance	bill. CZK	-297	-305	-253	-246	-334	-336	-354	-379	-409	-439

1) The consumption of non-profit institutions serving households (NPISH) is included in the private consumption.

Source: CZSO, own calculations

**Table C.1.4: Nominal GDP by Type of Expenditure – quarterly**

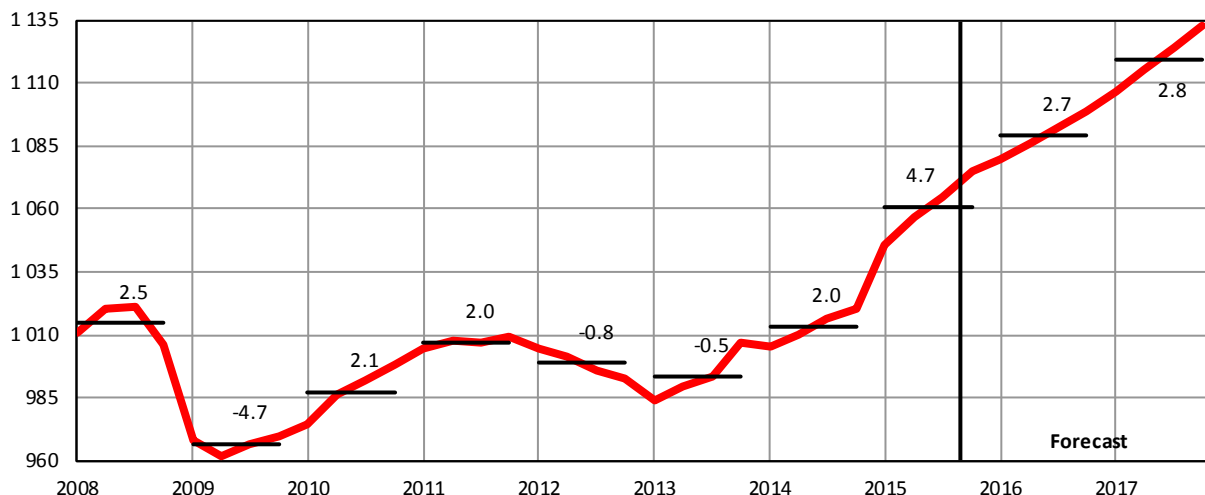
		2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		Prelim.	Prelim.	Prelim.	Estimate	Forecast	Forecast	Forecast	Forecast
Gross domestic product	bill. CZK	1 037	1 124	1 142	1 192	1 077	1 173	1 178	1 229
	growth in %	5.5	5.4	4.6	6.5	3.9	4.4	3.1	3.1
Private consumption expenditure <sup>1)</sup>	bill. CZK	499	533	545	555	512	551	564	578
	growth in %	2.9	3.4	2.7	3.0	2.5	3.5	3.5	4.1
Government consumption exp.	bill. CZK	194	207	211	254	201	214	218	261
	growth in %	4.4	3.7	5.5	4.7	3.8	3.4	3.6	2.8
Gross capital formation	bill. CZK	246	306	328	339	257	327	333	329
	growth in %	13.5	13.4	9.6	16.7	4.6	6.8	1.5	-2.7
– gross fixed capital formation	bill. CZK	246	277	296	348	265	293	303	340
	growth in %	4.3	9.1	7.8	15.8	7.6	5.9	2.3	-2.4
– change in stocks and valuables	bill. CZK	0	29	32	-10	-8	33	30	-11
External balance	bill. CZK	98	77	58	44	107	81	62	60
– exports of goods and services	bill. CZK	935	955	927	973	967	987	982	1 030
	growth in %	7.3	7.1	4.5	5.7	3.4	3.3	6.0	5.9
– imports of goods and services	bill. CZK	837	877	868	929	860	906	919	970
	growth in %	7.9	8.3	5.3	6.3	2.8	3.3	5.9	4.4

1) The consumption of non-profit institutions serving households (NPISH) is included in the private consumption.

Source: CZSO, own calculations

### Graph C.1.1: Gross Domestic Product (real)

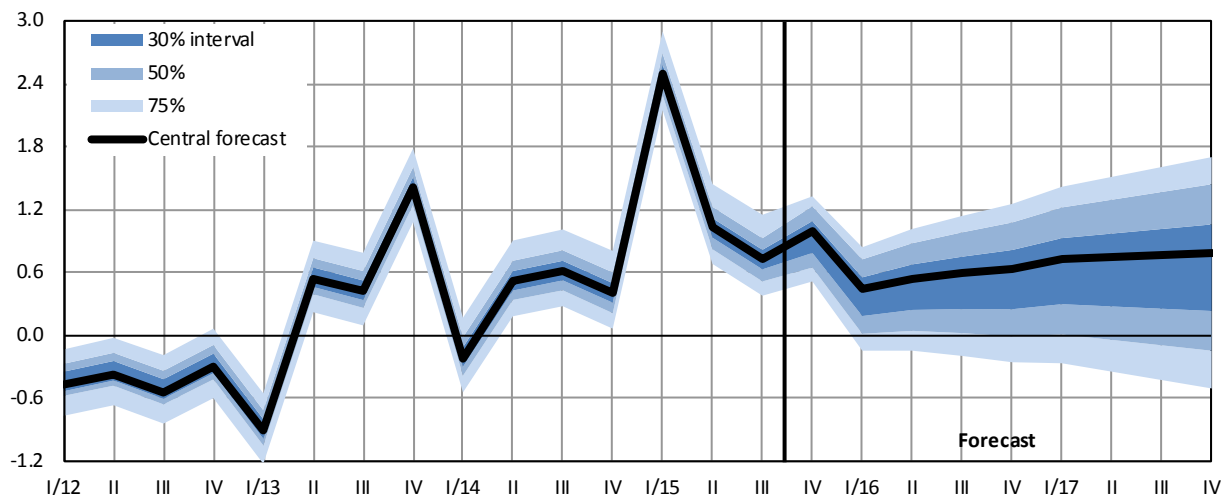
chained volumes, bill. CZK in const. prices of 2010, seasonally adjusted, growth rates in %



Source: CZSO, own calculations

### Graph C.1.2: Gross Domestic Product (real)

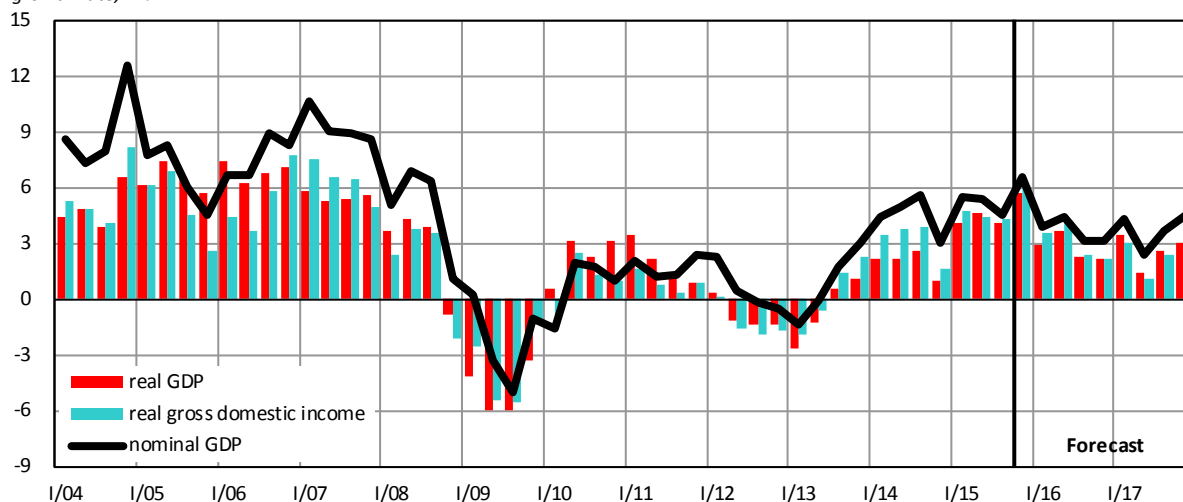
QoQ growth rate, in %, seasonally adjusted, past probability distribution reflects the actual distribution of data revisions, future probability distribution is based upon the MoF's forecasting performance



Source: CZSO, own calculations

### Graph C.1.3: Gross Domestic Product and Real Gross Domestic Income

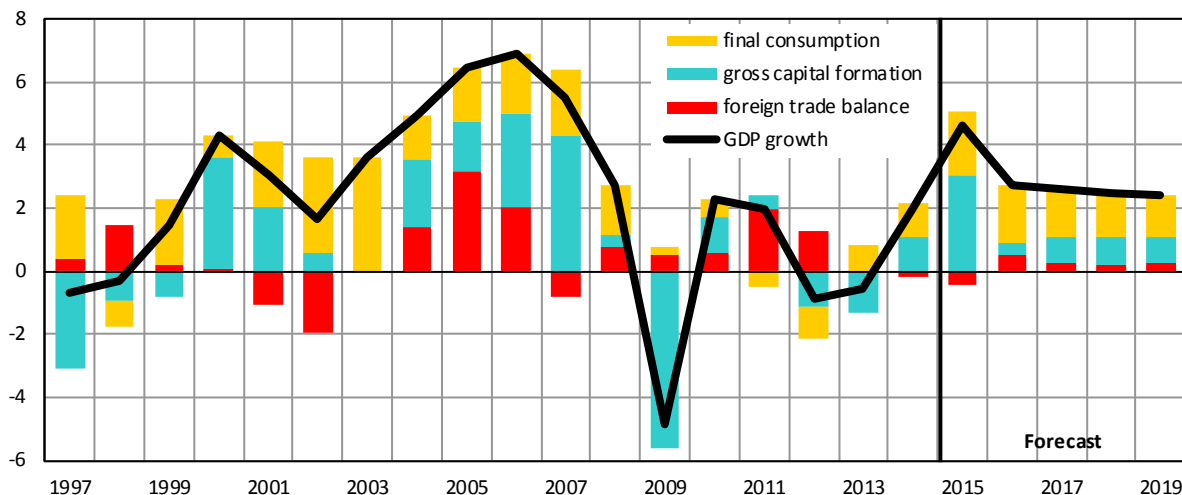
YoY growth rate, in %



Source: CZSO, own calculations

**Graph C.1.4: Gross Domestic Product (real) – contributions to YoY growth**

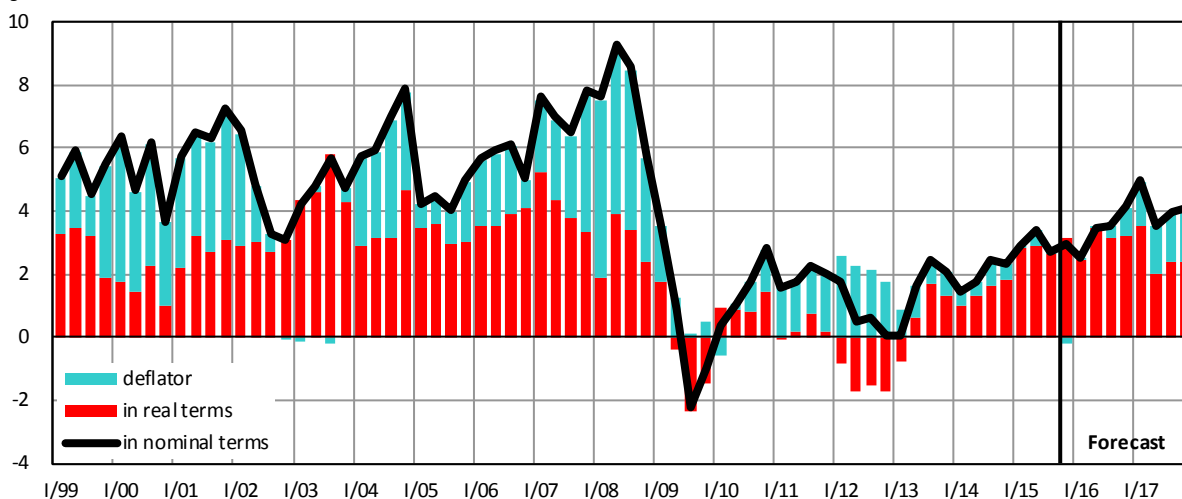
decomposition of GDP YoY growth, contributions in percentage points, GDP growth rate in %



Source: CZSO, own calculations

**Graph C.1.5: Private Consumption (incl. NPISH)**

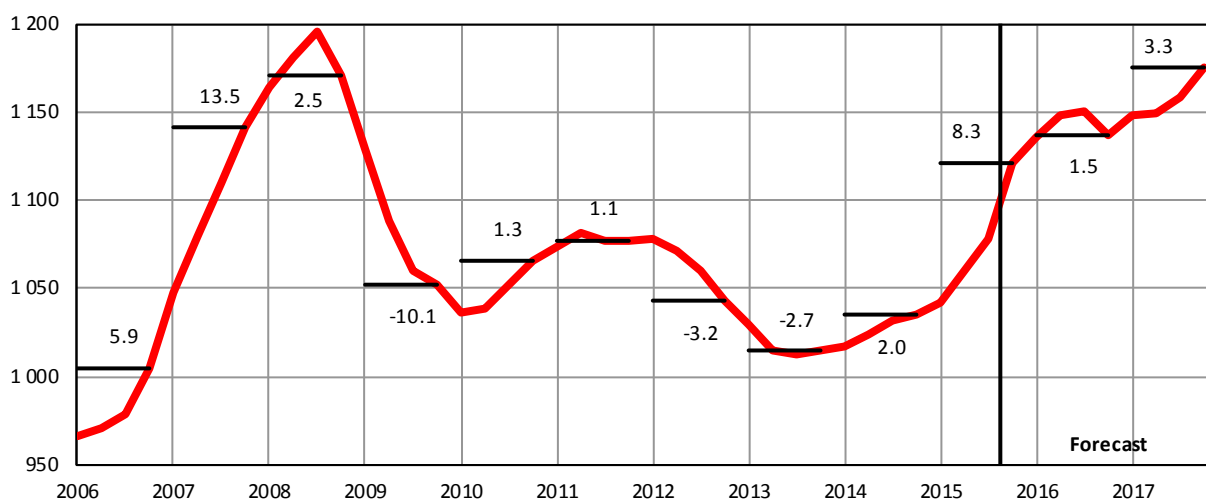
YoY growth rate, in %



Source: CZSO, own calculations

**Graph C.1.6: Gross Fixed Capital Formation**

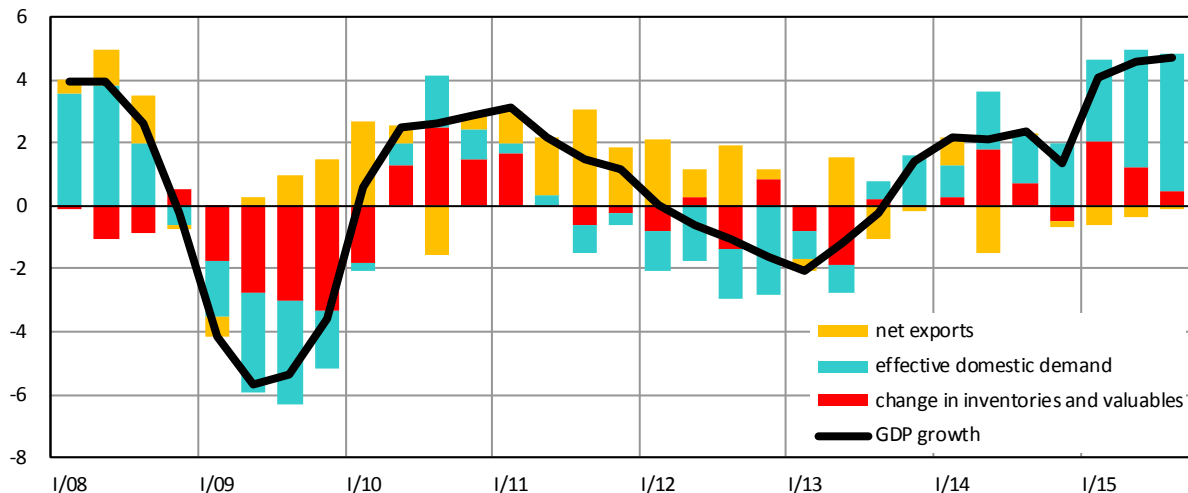
yearly moving sums, bill. CZK in const. prices of 2010, growth rates in %



Source: CZSO, own calculations

**Graph C.1.7: Decomposition of Real GDP Growth**

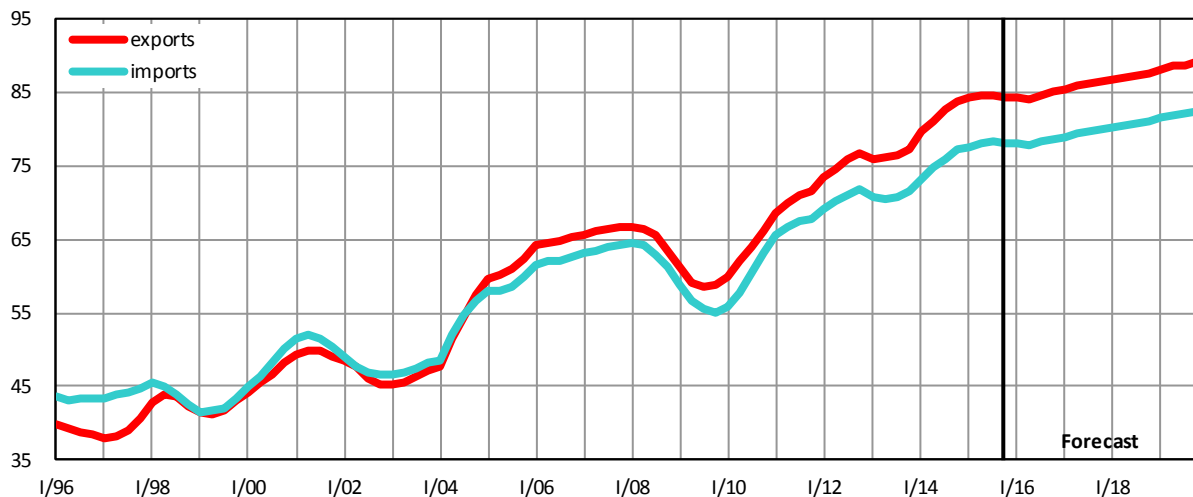
seasonally adjusted, YoY growth rate of GDP in %, contributions of individual components in percentage points



Source: CZSO

**Graph C.1.8: Ratio of Exports and Imports of Goods and Services to GDP (nominal)**

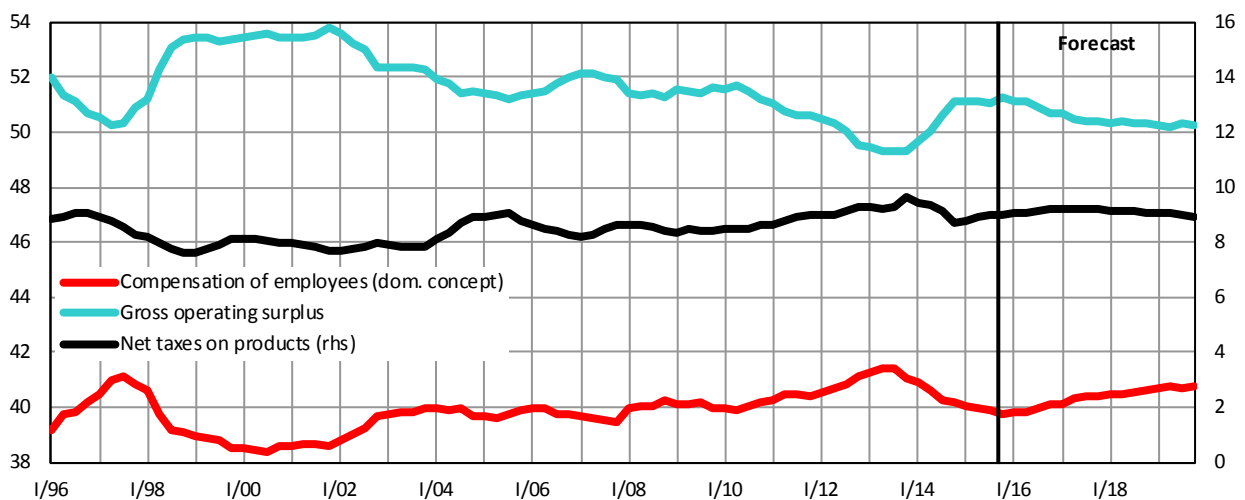
yearly moving sums, in %



Source: CZSO, own calculations

**Graph C.1.9: GDP – Income Structure**

yearly moving sums, in %



Source: CZSO, own calculations

Table C.1.5: GDP by Type of Income – yearly

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
							Estimate	Forecast	Forecast	Outlook	Outlook
<b>GDP</b>	<i>bill. CZK</i>	<b>3 954</b>	<b>4 023</b>	<b>4 042</b>	<b>4 077</b>	<b>4 261</b>	<b>4 495</b>	<b>4 657</b>	<b>4 831</b>	<b>5 033</b>	<b>5 241</b>
	<i>growth in %</i>	0.8	1.7	0.5	0.9	4.5	5.5	3.6	3.7	4.2	4.1
<b>Balance of taxes and subsidies</b>	<i>bill. CZK</i>	<b>341</b>	<b>360</b>	<b>376</b>	<b>392</b>	<b>370</b>	<b>405</b>	<b>429</b>	<b>444</b>	<b>458</b>	<b>469</b>
	<i>growth in %</i>	3.5	5.7	4.4	4.2	-5.7	9.5	6.0	3.6	3.0	2.5
<b>– Taxes on production and imports</b>	<i>bill. CZK</i>	<b>447</b>	<b>488</b>	<b>507</b>	<b>532</b>	<b>524</b>	.	.	.	.	.
	<i>growth in %</i>	4.0	9.0	4.1	4.8	-1.4	.	.	.	.	.
<b>– Subsidies on production</b>	<i>bill. CZK</i>	<b>107</b>	<b>127</b>	<b>131</b>	<b>140</b>	<b>154</b>	.	.	.	.	.
	<i>growth in %</i>	5.7	19.5	3.2	6.3	10.4	.	.	.	.	.
<b>Compensation of employees</b>	<i>bill. CZK</i>	<b>1 589</b>	<b>1 626</b>	<b>1 663</b>	<b>1 675</b>	<b>1 712</b>	<b>1 786</b>	<b>1 867</b>	<b>1 953</b>	<b>2 043</b>	<b>2 137</b>
	<i>growth in %</i>	1.3	2.3	2.3	0.7	2.3	4.3	4.5	4.6	4.6	4.6
<b>– Wages and salaries</b>	<i>bill. CZK</i>	<b>1 209</b>	<b>1 236</b>	<b>1 268</b>	<b>1 273</b>	<b>1 298</b>	<b>1 350</b>	<b>1 412</b>	<b>1 476</b>	<b>1 545</b>	<b>1 616</b>
	<i>growth in %</i>	0.6	2.2	2.5	0.4	1.9	4.1	4.5	4.6	4.6	4.6
<b>– Social security contributions</b>	<i>bill. CZK</i>	<b>380</b>	<b>390</b>	<b>396</b>	<b>402</b>	<b>415</b>	<b>436</b>	<b>456</b>	<b>476</b>	<b>498</b>	<b>521</b>
	<i>growth in %</i>	3.7	2.5	1.6	1.4	3.3	5.0	4.5	4.6	4.6	4.6
<b>Gross operating surplus</b>	<i>bill. CZK</i>	<b>2 024</b>	<b>2 037</b>	<b>2 002</b>	<b>2 011</b>	<b>2 179</b>	<b>2 304</b>	<b>2 361</b>	<b>2 435</b>	<b>2 532</b>	<b>2 635</b>
	<i>growth in %</i>	0.0	0.6	-1.7	0.4	8.4	5.8	2.5	3.1	4.0	4.1
<b>– Consumption of capital</b>	<i>bill. CZK</i>	<b>850</b>	<b>863</b>	<b>879</b>	<b>906</b>	<b>916</b>	<b>943</b>	<b>976</b>	<b>1 015</b>	<b>1 063</b>	<b>1 108</b>
	<i>growth in %</i>	1.0	1.6	1.9	3.0	1.1	3.0	3.5	4.1	4.7	4.2
<b>– Net operating surplus</b>	<i>bill. CZK</i>	<b>1 174</b>	<b>1 173</b>	<b>1 123</b>	<b>1 105</b>	<b>1 263</b>	<b>1 361</b>	<b>1 386</b>	<b>1 419</b>	<b>1 469</b>	<b>1 527</b>
	<i>growth in %</i>	-0.8	-0.1	-4.3	-1.6	14.3	7.8	1.8	2.4	3.5	3.9

Source: CZSO, own calculations

Table C.1.6: GDP by Type of Income – quarterly

		2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		Prelim.	Prelim.	Prelim.	Estimate	Forecast	Forecast	Forecast	Forecast
<b>GDP</b>	<i>bill. CZK</i>	<b>1 037</b>	<b>1 124</b>	<b>1 142</b>	<b>1 192</b>	<b>1 077</b>	<b>1 173</b>	<b>1 178</b>	<b>1 229</b>
	<i>growth in %</i>	5.5	5.4	4.6	6.5	3.9	4.4	3.1	3.1
<b>Balance of taxes and subsidies</b>	<i>bill. CZK</i>	<b>87</b>	<b>107</b>	<b>114</b>	<b>96</b>	<b>94</b>	<b>111</b>	<b>121</b>	<b>102</b>
	<i>growth in %</i>	12.5	12.2	6.9	7.0	7.4	3.8	6.2	6.9
<b>Compensation of employees</b>	<i>bill. CZK</i>	<b>427</b>	<b>443</b>	<b>440</b>	<b>475</b>	<b>447</b>	<b>463</b>	<b>460</b>	<b>496</b>
	<i>growth in %</i>	3.9	4.6	4.1	4.6	4.7	4.5	4.5	4.5
<b>– Wages and salaries</b>	<i>bill. CZK</i>	<b>320</b>	<b>334</b>	<b>334</b>	<b>362</b>	<b>335</b>	<b>349</b>	<b>350</b>	<b>378</b>
	<i>growth in %</i>	3.3	4.1	4.3	4.6	4.7	4.5	4.5	4.5
<b>– Social security contributions</b>	<i>bill. CZK</i>	<b>107</b>	<b>110</b>	<b>106</b>	<b>113</b>	<b>112</b>	<b>114</b>	<b>111</b>	<b>118</b>
	<i>growth in %</i>	5.9	6.1	3.6	4.6	4.7	4.5	4.5	4.5
<b>Gross operating surplus</b>	<i>bill. CZK</i>	<b>522</b>	<b>573</b>	<b>587</b>	<b>622</b>	<b>536</b>	<b>598</b>	<b>596</b>	<b>631</b>
	<i>growth in %</i>	5.7	4.8	4.4	8.0	2.6	4.5	1.5	1.4

Source: CZSO, own calculations

## C.2 Prices

### C.2.1 Consumer Prices

**The average inflation rate in 2015** reached 0.3% (*versus 0.4%*). This was the second lowest inflation in the history of the independent Czech Republic (in 2003, the average inflation rate was 0.1%). Factors mainly from the external environment, which above all included a supply factor in the form of a considerable decline in the crude oil price and the related decrease in producer prices in the euro area, contributed to the very low inflation. The domestic economic development, characterised by increasing demand in the environment of the probably already closed output gap (see Chapter B.1) and low unemployment, had proinflationary effects, but they were mitigated by an estimated decrease in unit labour costs. Administrative measures contributed to consumer price growth only slightly.

Throughout 2015, YoY inflation fluctuated within a relatively narrow range of 0.1–0.8%, i.e. below the 1% lower limit of the inflation target tolerance band. In December 2015, the YoY increase in consumer prices was only 0.1% (*versus 0.6%*). The contribution of indirect taxes was 0.1 pp, the contributions of regulated prices and market impacts were zero. Administrative measures were estimated exactly; the deviation of the out-turn from the forecast was due to the market effects and was mainly given by a lower than expected crude oil price.

The price impacts of cheap crude oil manifested themselves in a further decrease in fuel prices that were cheaper by 15.1% YoY in December 2015 (the average price of Natural 95 petrol and diesel oil has in both cases been the lowest since December 2009). With its contribution reaching –0.4 pp (identically with the division *food and non-alcoholic beverages*), the division *transport* mitigated considerably the YoY increase in prices.

**In 2016**, the average inflation rate should reach a similar very low level as in the previous two years.

Out of administrative measures a further increase in excise duty on tobacco products will affect consumer prices mainly in the first quarter of 2016 (the contribution of 0.2 pp). In the case of natural gas and electricity prices, which the CZSO reports as regulated prices, there were probably smaller price fluctuations at the beginning of 2016 than expected in the October Macroeconomic Forecast. Most likely, the price of electricity for consumers hardly changed and a decrease in the natural gas price was only half of that assumed in the October Forecast (the contribution of –0.1 pp). Nevertheless, a further decrease in the natural gas price cannot be excluded. In the second half of 2016, we expect a decrease in VAT in food services from 21% to 15%, except for alcoholic beverages. However, the expected contribution of this measure to MoM infla-

tion at the time of its introduction (–0.2 to –0.1 pp) will not manifest itself more considerably in the average inflation rate of 2016 due to its timing. The introduction of the fiscalization of cash payments will probably have an opposite and similarly marginal effect on consumer prices. We expect the contribution of administrative measures to a YoY increase in consumer prices in December 2016 of 0.1 pp (*versus 0.0 pp*).

In the first half of 2016, the YoY inflation should remain very low. Its more significant acceleration can be expected as late as in the fourth quarter of 2016 when YoY growth of the CZK crude oil price will probably become positive. In addition to the crude oil price, the main factors of the price development in 2016 will likely have a nearly neutral (CZK/EUR exchange rate) or proinflationary effect (growing demand in connection with an increasing positive output gap and an increase in unit labour costs).

**In 2016**, the average inflation rate should reach 0.5% (*versus 1.1%*), with a YoY increase in consumer prices of 1.3% (*versus 1.8%*) in December. The downward revision to the forecast is mainly due to a decrease in the expected crude oil price (see Chapter A.1.3) and the deviation of the out-turn in December 2015 from the previous forecast.

**In 2017**, inflation should increase further. At present, we do not identify any factors that would have an anti-inflationary effect in 2017, with the exception of a rather insignificant movement of exchange rates. We expect that an increase in the crude oil price, growth of domestic demand in the environment of positive output gap, an increase in unit labour costs and, very slightly, also administrative measures will have an effect on an increase in prices. In 2017, the average inflation rate should reach 1.6%, with a YoY increase in consumer prices of 1.7% in December.

### C.2.2 Deflators

A comprehensive indicator of the price level is the gross domestic product deflator, which is a resultant of the gross domestic expenditure deflator and the terms of trade. In the third quarter of 2015, its growth of 0.4% (*versus 0.2%*) was caused by an increase in the gross domestic expenditure deflator of 0.3% (*versus 0.7%*) and by an improvement of the terms of trade of 0.2% (*versus a decrease of 0.5%*).

Lower crude oil prices influenced the development of price indexes. While growth of the deflator of gross fixed capital formation slowed down only negligibly due to strongly accelerating investment activity, the deflator of household consumption stagnated in YoY terms, even though we forecasted it to increase. Growth of the deflator of government sector consumption was estimated exactly.

We expect the GDP deflator to increase by 0.8% (*versus 0.9%*) in 2016 and, with gradually increasing inflationary pressures, by 1.1% (*versus 1.4%*) in 2017. The terms of trade should improve by 0.3% (*versus a decrease of 0.1%*) in 2016 and, in contrast, decrease by 0.3% (*versus 0.0%*) in 2017. The gross domestic expenditure deflator could increase by 0.7% (*versus 1.1%*) in 2016 and further by 1.5% (*versus 1.4%*) in 2017. The main

change in the forecast for 2016, i.e. a decrease in the growth of household consumption deflator and an improvement of the terms of trade, is based on a higher decrease in import prices mainly due to a lower than expected crude oil price and a weaker growth of import prices of non-fuel commodities related to the pass-through of low foreign inflation into the domestic economy.

**Table C.2.1: Prices – yearly**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
							Estimate	Forecast	Forecast	Outlook	Outlook
<b>Consumer Price Index</b>											
<b>average of a year</b>	<i>average 2005=100</i>	114.9	117.1	121.0	122.7	123.2	123.6	124.2	126.1	128.4	130.8
	<i>growth in %</i>	<b>1.5</b>	<b>1.9</b>	<b>3.3</b>	<b>1.4</b>	<b>0.4</b>	<b>0.3</b>	<b>0.5</b>	<b>1.6</b>	<b>1.8</b>	<b>1.9</b>
<b>December</b>	<i>average 2005=100</i>	115.5	118.3	121.1	122.8	122.9	123.0	124.5	126.7	129.1	131.4
	<i>growth in %</i>	<b>2.3</b>	<b>2.4</b>	<b>2.4</b>	<b>1.4</b>	<b>0.1</b>	<b>0.1</b>	<b>1.3</b>	<b>1.7</b>	<b>1.8</b>	<b>1.8</b>
<b>of which the contribution of</b>											
– administrative measures <sup>1)</sup>	<i>percentage points</i>	<b>1.6</b>	<b>1.2</b>	<b>2.2</b>	<b>1.0</b>	<b>-0.2</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>
– market increase	<i>percentage points</i>	<b>0.7</b>	<b>1.2</b>	<b>0.1</b>	<b>0.4</b>	<b>0.3</b>	<b>0.0</b>	<b>1.1</b>	<b>1.5</b>	<b>1.6</b>	<b>1.6</b>
<b>HICP</b>	<i>average 2005=100</i>	113.7	116.2	120.3	121.9	122.4	122.8	123.3	125.2	127.4	129.7
	<i>growth in %</i>	<b>1.2</b>	<b>2.1</b>	<b>3.5</b>	<b>1.4</b>	<b>0.4</b>	<b>0.3</b>	<b>0.4</b>	<b>1.5</b>	<b>1.8</b>	<b>1.8</b>
<b>Offering prices of flats</b>	<i>average 2010=100</i>	100.0	95.1	96.1	97.2	100.7	106.9	.	.	.	.
	<i>growth in %</i>	<b>-4.1</b>	<b>-4.9</b>	<b>1.1</b>	<b>1.1</b>	<b>3.6</b>	<b>6.2</b>	.	.	.	.
<b>Deflators</b>											
<b>GDP</b>	<i>average 2010=100</i>	100.0	99.8	101.2	102.6	105.1	106.0	106.9	108.1	109.9	111.7
	<i>growth in %</i>	<b>-1.5</b>	<b>-0.2</b>	<b>1.4</b>	<b>1.4</b>	<b>2.5</b>	<b>0.8</b>	<b>0.8</b>	<b>1.1</b>	<b>1.7</b>	<b>1.7</b>
<b>Domestic final use</b>	<i>average 2010=100</i>	100.0	100.8	102.6	103.1	104.3	104.9	105.7	107.2	109.0	110.7
	<i>growth in %</i>	<b>-0.2</b>	<b>0.8</b>	<b>1.7</b>	<b>0.5</b>	<b>1.1</b>	<b>0.6</b>	<b>0.7</b>	<b>1.5</b>	<b>1.6</b>	<b>1.6</b>
<b>Consumption of households</b>	<i>average 2010=100</i>	100.0	101.6	103.9	104.7	105.3	105.4	105.8	107.4	109.4	111.4
	<i>growth in %</i>	<b>0.5</b>	<b>1.6</b>	<b>2.2</b>	<b>0.9</b>	<b>0.5</b>	<b>0.1</b>	<b>0.4</b>	<b>1.5</b>	<b>1.8</b>	<b>1.9</b>
<b>Consumption of government</b>	<i>average 2010=100</i>	100.0	100.8	101.4	101.5	103.0	104.3	105.6	106.8	107.9	109.1
	<i>growth in %</i>	<b>-0.6</b>	<b>0.8</b>	<b>0.6</b>	<b>0.1</b>	<b>1.5</b>	<b>1.3</b>	<b>1.2</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>
<b>Fixed capital formation</b>	<i>average 2010=100</i>	100.0	99.2	100.9	101.0	102.9	104.2	105.6	107.3	109.0	110.8
	<i>growth in %</i>	<b>-1.1</b>	<b>-0.8</b>	<b>1.7</b>	<b>0.1</b>	<b>1.9</b>	<b>1.2</b>	<b>1.4</b>	<b>1.6</b>	<b>1.6</b>	<b>1.7</b>
<b>Exports of goods and services</b>	<i>average 2010=100</i>	100.0	100.7	103.8	105.6	110.0	109.1	107.6	106.7	106.6	106.8
	<i>growth in %</i>	<b>-1.2</b>	<b>0.7</b>	<b>3.1</b>	<b>1.7</b>	<b>4.1</b>	<b>-0.8</b>	<b>-1.4</b>	<b>-0.8</b>	<b>0.0</b>	<b>0.2</b>
<b>Imports of goods and services</b>	<i>average 2010=100</i>	100.0	102.3	106.1	106.6	109.4	108.2	106.3	105.7	105.5	105.4
	<i>growth in %</i>	<b>0.8</b>	<b>2.3</b>	<b>3.7</b>	<b>0.5</b>	<b>2.6</b>	<b>-1.1</b>	<b>-1.7</b>	<b>-0.6</b>	<b>-0.3</b>	<b>0.0</b>
<b>Terms of trade</b>	<i>average 2010=100</i>	100.0	98.5	97.9	99.0	100.5	100.8	101.2	100.9	101.1	101.3
	<i>growth in %</i>	<b>-2.0</b>	<b>-1.5</b>	<b>-0.6</b>	<b>1.2</b>	<b>1.5</b>	<b>0.3</b>	<b>0.3</b>	<b>-0.3</b>	<b>0.2</b>	<b>0.2</b>

1) The contribution of increase in regulated prices and in indirect taxes to increase of December YoY consumer price inflation.

Source: CZSO, Eurostat, own calculations

Table C.2.2: Prices – quarterly

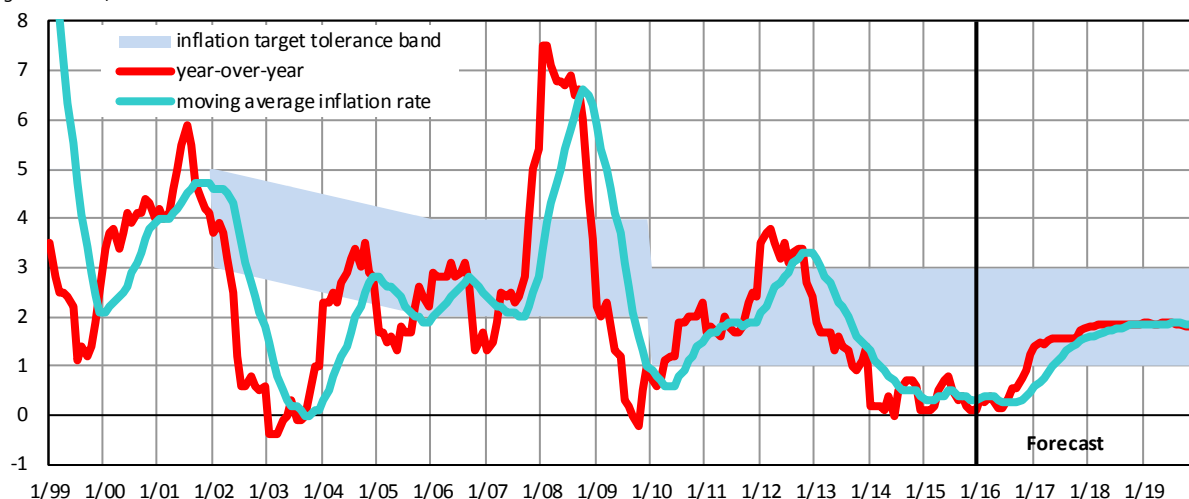
		2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
					Estimate	Forecast	Forecast	Forecast	Forecast
<b>Consumer Price Index</b>	average 2005=100	123.2	124.0	123.8	123.2	123.6	124.2	124.4	124.4
	growth in %	0.1	0.7	0.4	0.1	0.3	0.2	0.5	1.0
<b>of which the contribution of</b>									
–administrative measures <sup>1)</sup>	percentage points	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.2
–market increase	percentage points	-0.1	0.4	0.2	0.0	0.1	-0.1	0.3	0.8
<b>HICP</b>	average 2005=100	122.3	123.3	123.0	122.4	122.6	123.5	123.6	123.5
	growth in %	0.0	0.7	0.3	0.1	0.2	0.1	0.4	0.9
<b>Offering prices of flats</b>	average 2010=100	102.9	105.6	108.1	110.9	.	.	.	.
	growth in %	3.6	5.0	6.1	9.6	.	.	.	.
<b>Deflators</b>									
<b>GDP</b>	average 2010=100	105.3	105.8	105.8	107.0	106.3	106.6	106.6	107.9
	growth in %	1.3	0.7	0.4	0.8	0.9	0.7	0.8	0.9
<b>Domestic final use</b>	average 2010=100	104.0	105.0	104.8	105.8	104.7	105.4	105.6	106.9
	growth in %	0.9	0.9	0.3	0.4	0.6	0.4	0.8	1.0
<b>Consumption of households</b>	average 2010=100	105.0	105.7	105.7	105.3	105.1	105.7	106.1	106.2
	growth in %	0.1	0.5	0.0	-0.2	0.1	0.0	0.4	0.9
<b>Consumption of government</b>	average 2010=100	101.4	103.7	103.4	108.1	102.8	105.1	104.9	108.9
	growth in %	1.6	1.5	1.1	1.1	1.4	1.3	1.4	0.8
<b>Fixed capital formation</b>	average 2010=100	103.9	104.1	104.0	104.5	105.0	105.5	105.6	106.2
	growth in %	1.4	1.5	1.0	1.0	1.1	1.3	1.5	1.6
<b>Exports of goods and services</b>	average 2010=100	109.7	109.8	108.3	108.6	106.9	107.2	107.9	108.3
	growth in %	0.1	0.0	-2.0	-1.3	-2.6	-2.3	-0.3	-0.3
<b>Imports of goods and services</b>	average 2010=100	108.6	109.2	107.4	107.6	105.1	105.9	107.0	107.2
	growth in %	-0.7	0.2	-2.1	-1.8	-3.3	-3.0	-0.4	-0.4
<b>Terms of trade</b>	average 2010=100	101.0	100.6	100.8	101.0	101.7	101.2	100.9	101.0
	growth in %	0.8	-0.2	0.2	0.5	0.7	0.6	0.1	0.0

1) The contribution of increase in regulated prices and in indirect taxes to increase of December YoY consumer price inflation.

Source: CZSO, Eurostat, own calculations

Graph C.2.1: Consumer Prices

YoY growth rate, in %

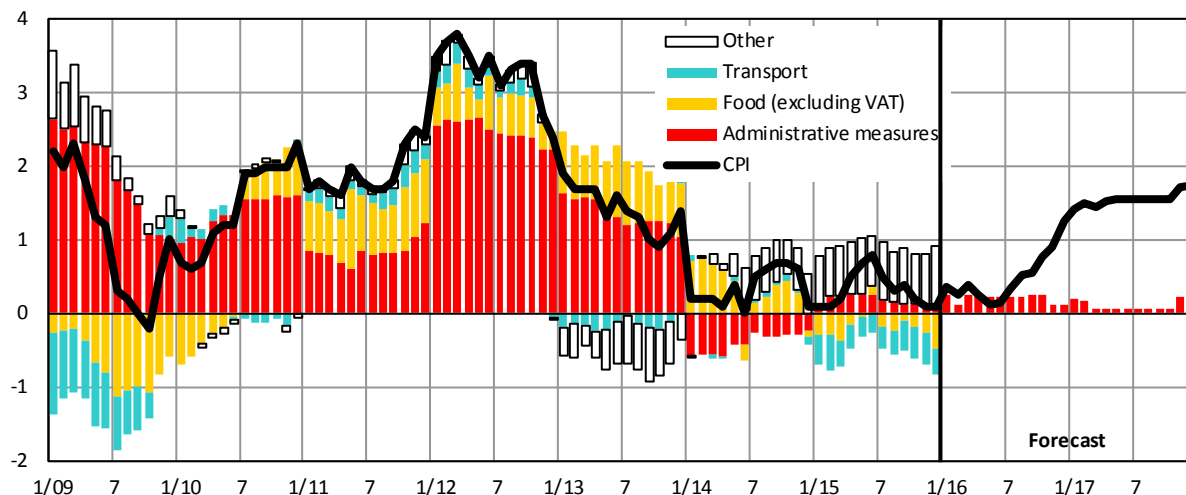


Note: For the years 2002–2005 the highlighted area represents target band for headline inflation, whereas from 2006 on it is the tolerance band of the CNB's point target for headline inflation.

Source: CNB, CZSO, own calculations

### Graph C.2.2: Consumer Prices

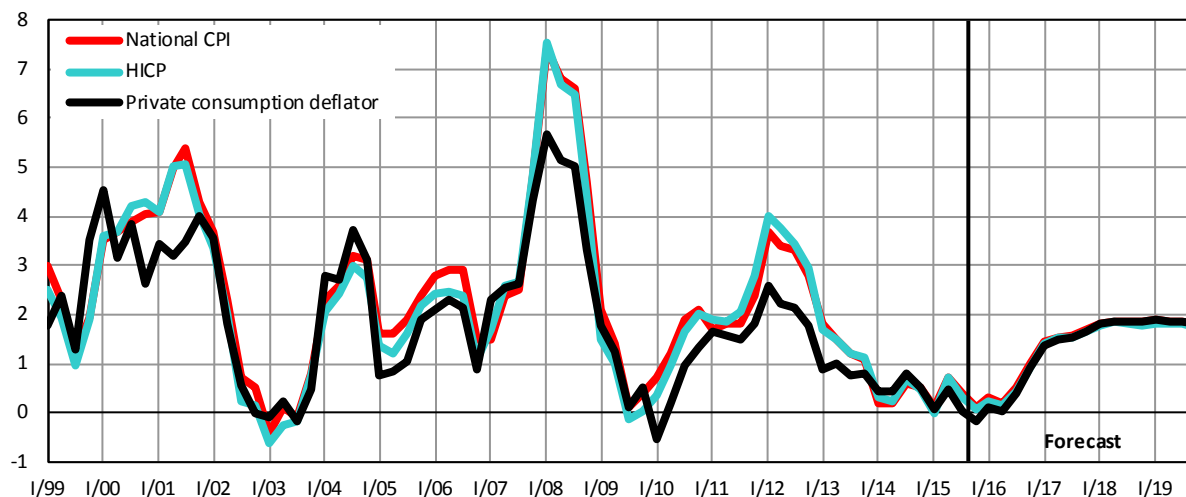
decomposition of YoY growth of CPI, contributions in pp, CPI growth rate in %, Transport excluding administrative measures and excises



Source: CZSO, own calculations

### Graph C.2.3: Indicators of Consumer Prices

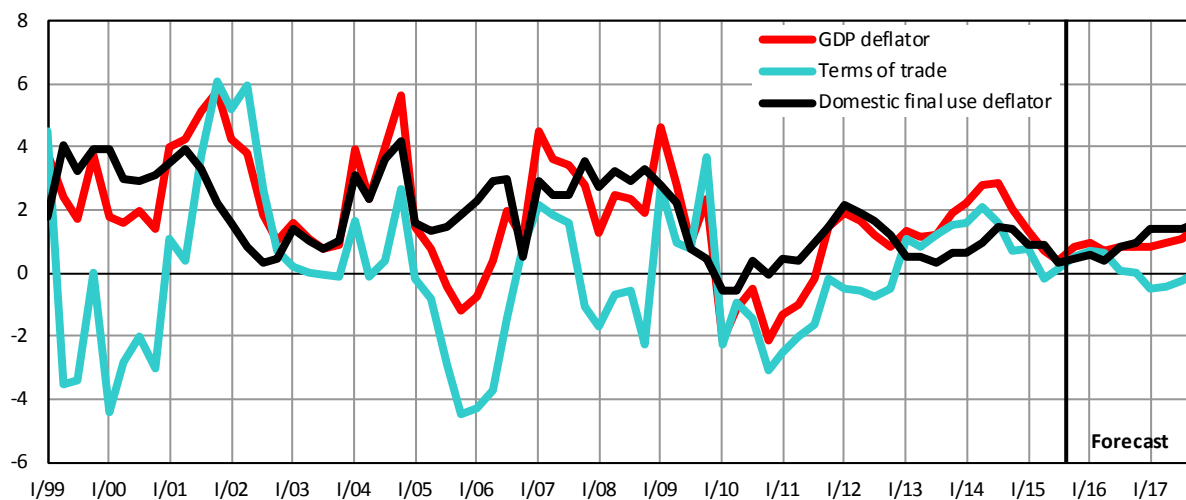
YoY growth rate, in %



Source: CZSO, Eurostat, own calculations

### Graph C.2.4: GDP Deflator

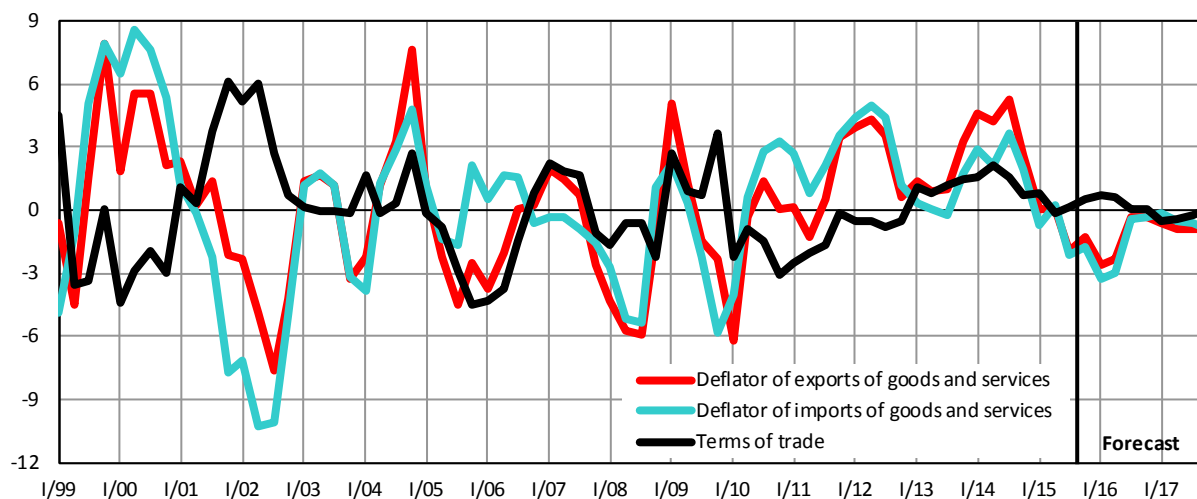
YoY growth rate, in %



Source: CZSO, own calculations

**Graph C.2.5: Terms of Trade**

YoY growth rate, in %



Source: CZSO, own calculations

## C.3 Labour Market

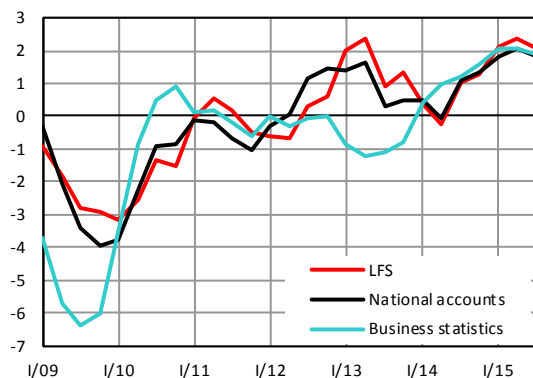
The labour market situation in the third quarter of 2015 was in line with the period of economic upswing. Considerable growth of employment continued, driven by the category of employees, and both registered unemployment and unemployment according to the LFS decreased further. These factors, also thanks to labour productivity growth, contributed to the growth of the wage bill and the average wage.

### C.3.1 Employment

According to the LFS, **employment** grew by 1.3% YoY (*in line with the estimate*) in the third quarter of 2015, especially due to an increase in the number of employees of 2.0% (*versus 1.7%*); the category of entrepreneurs recorded a considerable decrease of 2.1% (*versus 0.5%*). One of the possible explanations can be the restriction of false self-employment work under improving financial conditions of the private sector. However, when interpreting this result, caution is necessary due to uncertainties in statistical reporting. The shift among the categories of self-employed persons and employees is apparent in particular in technical professions. In terms of sectors, trade, manufacturing and “professional, scientific, technical and administrative activities” (which encompass, among others, job agencies) still contributed considerably to the growth of employment.

**Graph C.3.1: Employees in Different Statistics**

YoY growth rate, in %



Source: CZSO

For the forecast of employment, we assume that employers will continue to prefer wage growth to a further more significant increase in the number of employed persons. This development will be largely caused by the continually rising frictions – a shortage of employees in some professions is already apparent in a number of regions. Citizens' small willingness for migration for work or longer commuting will also contribute considerably to such frictions.

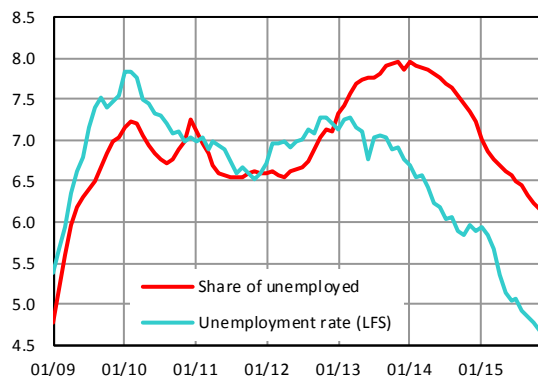
With respect to the absence of new relevant facts, we do not change our estimate of employment growth of 1.3% in 2015. We also leave the forecast for 2016 and 2017 (0.3% or 0.1%, respectively) unchanged.

### C.3.2 Unemployment

Strong economic growth has resulted in a quick reduction of the number of unemployed persons registered at labour offices and also according to the LFS statistics. Both the improving functioning of labour offices (this has manifested itself in statistics approximately since the first half of 2014) and a higher success rate of unemployed in finding work on their own play a role in the case of registered unemployment. Moreover, after seasonal adjustment, a considerable decrease in newly registered job applicants can be observed in December data. In the case of the LFS, the decrease in unemployment rate is mainly due to a shift of the short-term unemployed to the category of employed persons. Seasonally adjusted long-term unemployment rate *de facto* stagnated in QoQ terms, which can signal little interest of employers to employ such persons. Together with the regional mismatch between labour demand and supply, this aspect will represent the main obstacle to a quicker decrease in the unemployment rate for the future.

**Graph C.3.2: Indicators of Unemployment**

seasonally adjusted data, in %



Source: CZSO, Ministry of Labour and Social Affairs, own calculations

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.

When taking into account the development in the third quarter of 2015, we estimate that the **unemployment rate** according to the LFS averaged 5.1% (*versus 5.2%*) in 2015. In relation to the ongoing positive economic development, we expect the unemployment rate to continue declining to 4.7% (*versus 4.9%*) in 2016 and to 4.6% in 2017.

### C.3.3 Economic Activity Rate

The **economic activity rate** (15–64 year-olds) grew by 0.4 pp YoY to 74.2% in the third quarter of 2015 (*versus growth 0.6 pp to 74.3%*). The participation rate should continue to grow further (see Graph C.3.5), with the structural factors in the form of increasing weight of cohorts with a naturally high economic activity rate (especially of those aged 40–49) and increasing of the statutory retirement age playing a crucial role.

### C.3.4 Wages

The improving financial situation of the private sector and the labour market situation should result in an acceleration of the growth rates of the wage bill and average wage. However, a very low inflation rate will take effect in the direction of a slower rise in nominal wages.

The growth of the **wage bill** (national accounts methodology, domestic concept) accelerated to 4.3% in the third quarter of 2015 (*in line with the estimate*). A considerable increase in the wage bill in manufacturing (5.9%) and in the category “professional, scientific, technical and administrative activities” (5.4%) contributed to this outcome.

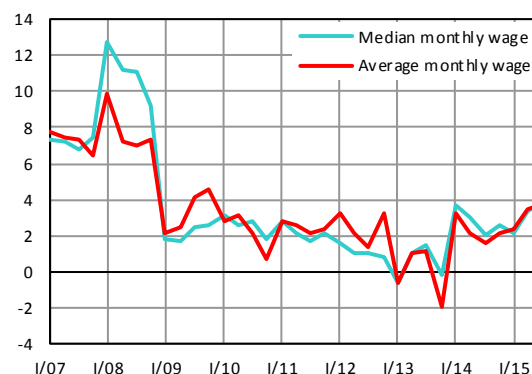
Based on the available data of the state budget cash collection, we estimate that the wage bill growth accelerated slightly in the fourth quarter of 2015, compared to the third quarter of 2015. From the longer-term perspective, we expect that the growth of wages will be enabled by a solid increase in real labour productivity. The current and expected further increase in the minimal wage will also not be negligible and will probably already have an indirect impact on an increase in wages in higher wage scales. In contrast, a low inflation rate will weigh on nominal growth of the wage bill. Compared to the last forecast, the impact of a shortage of qualified employees in some professions and regions on the wage growth can be more significant due to a downward revision of the forecast for the unemployment rate. The budgetary sphere will also contribute to the growth of the wage bill in 2016 thanks to increasing wage funds in connection with the Civil Service Act.

On the basis of available information, we revise our estimate of the growth of the wage bill in 2015 to 4.1% (*versus 4.2%*). With respect to the factors referred to in the previous paragraph, the wage bill could increase more quickly in 2016 and 2017 than in 2015, specifically by 4.5% in 2016 (*versus 4.3%*) and by 4.6% in 2017. Thanks to the expected positive development of

labour productivity, however, the growth of unit labour costs should remain at an acceptable level, posing no risks to the reduction of price competitiveness of the Czech economy.

**Graph C.3.3: Nominal Monthly Wage**

YoY growth rate, in %



Source: CZSO

**The average wage** (business statistics, full-time equivalent) increased by 3.8% (*versus 3.6%*) in the third quarter of 2015, with the growth of wages in both the business and non-business spheres being approximately at the same level. In terms of sectors, administrative activities (growth of 6.4%) or public administration and defence (4.1%) contributed to this outcome, and continuing solid growth could also be seen in manufacturing (3.7%). A positive signal for household consumption is an acceleration of the median wage growth to 3.9%. For similar reasons as those relating to the wage bill mentioned above, we estimate that growth of the average nominal wage accelerated to 3.4% (*unchanged*) in 2015. In 2016 and 2017, growth should further accelerate to 4.3% (*versus 4.1%*) or 4.5%, respectively. A considerable downward revision to the forecast for the inflation rate (see Chapter C.2) contributes to a change in the forecast for growth of the average real wage that could increase by 3.8% (*versus 2.9%*) in 2016 and by 2.9% in 2017.

Table C.3.1: Labour Market – yearly

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
							Estimate	Forecast	Forecast	Outlook	Outlook
<b>Labour Force Survey</b>											
<b>Employment</b>	<i>av. in thous.persons</i>	<b>4 885</b>	<b>4 872</b>	<b>4 890</b>	<b>4 937</b>	<b>4 974</b>	<b>5 038</b>	<b>5 053</b>	<b>5 059</b>	<b>5 062</b>	<b>5 064</b>
	<i>growth in %</i>	-1.0	0.4	0.4	1.0	0.8	1.3	0.3	0.1	0.1	0.1
<b>– employees</b>	<i>av. in thous.persons</i>	<b>4 019</b>	<b>3 993</b>	<b>3 990</b>	<b>4 055</b>	<b>4 079</b>	<b>4 165</b>	<b>4 187</b>	<b>4 196</b>	<b>4 200</b>	<b>4 203</b>
	<i>growth in %</i>	-2.1	0.0	-0.1	1.6	0.6	2.1	0.5	0.2	0.1	0.1
<b>– entrepreneurs and self-employed</b>	<i>av. in thous.persons</i>	<b>866</b>	<b>880</b>	<b>901</b>	<b>882</b>	<b>895</b>	<b>873</b>	<b>866</b>	<b>863</b>	<b>862</b>	<b>862</b>
	<i>growth in %</i>	4.7	2.0	2.4	-2.1	1.5	-2.4	-0.8	-0.4	-0.1	0.0
<b>Unemployment</b>	<i>av. in thous.persons</i>	<b>384</b>	<b>351</b>	<b>367</b>	<b>369</b>	<b>324</b>	<b>271</b>	<b>247</b>	<b>242</b>	<b>238</b>	<b>236</b>
<b>Unemployment rate</b>	<i>average in per cent</i>	<b>7.3</b>	<b>6.7</b>	<b>7.0</b>	<b>7.0</b>	<b>6.1</b>	<b>5.1</b>	<b>4.7</b>	<b>4.6</b>	<b>4.5</b>	<b>4.4</b>
<b>Long-term unemployment <sup>1)</sup></b>	<i>av. in thous.persons</i>	<b>160</b>	<b>144</b>	<b>161</b>	<b>163</b>	<b>141</b>	.	.	.	.	.
<b>Labour force</b>	<i>av. in thous.persons</i>	<b>5 269</b>	<b>5 223</b>	<b>5 257</b>	<b>5 306</b>	<b>5 298</b>	<b>5 310</b>	<b>5 301</b>	<b>5 302</b>	<b>5 300</b>	<b>5 300</b>
	<i>growth in %</i>	-0.3	-0.2	0.7	0.9	-0.2	0.2	-0.2	0.0	0.0	0.0
<b>Population aged 15–64</b>	<i>av. in thous.persons</i>	<b>7 399</b>	<b>7 295</b>	<b>7 229</b>	<b>7 154</b>	<b>7 081</b>	<b>7 027</b>	<b>6 961</b>	<b>6 898</b>	<b>6 840</b>	<b>6 787</b>
	<i>growth in %</i>	-0.4	-0.7	-0.9	-1.0	-1.0	-0.8	-0.9	-0.9	-0.8	-0.8
<b>Employment/Pop. 15–64</b>	<i>average in per cent</i>	<b>66.0</b>	<b>66.8</b>	<b>67.6</b>	<b>69.0</b>	<b>70.2</b>	<b>71.7</b>	<b>72.6</b>	<b>73.3</b>	<b>74.0</b>	<b>74.6</b>
<b>Employment rate 15–64 <sup>2)</sup></b>	<i>average in per cent</i>	<b>65.0</b>	<b>65.7</b>	<b>66.5</b>	<b>67.7</b>	<b>69.0</b>	<b>70.2</b>	<b>71.1</b>	<b>71.8</b>	<b>72.4</b>	<b>73.0</b>
<b>Labour force/Pop. 15–64</b>	<i>average in per cent</i>	<b>71.2</b>	<b>71.6</b>	<b>72.7</b>	<b>74.2</b>	<b>74.8</b>	<b>75.6</b>	<b>76.2</b>	<b>76.9</b>	<b>77.5</b>	<b>78.1</b>
<b>Participation rate 15–64 <sup>3)</sup></b>	<i>average in per cent</i>	<b>70.2</b>	<b>70.5</b>	<b>71.6</b>	<b>72.9</b>	<b>73.5</b>	<b>74.1</b>	<b>74.6</b>	<b>75.3</b>	<b>75.9</b>	<b>76.5</b>
<b>Registered unemployment</b>											
<b>Unemployment</b>	<i>av. in thous.persons</i>	<b>528.7</b>	<b>507.8</b>	<b>504.7</b>	<b>564.4</b>	<b>561.4</b>	<b>478.9</b>	<b>408</b>	<b>374</b>	<b>353</b>	<b>339</b>
<b>Share of unemployed <sup>4)</sup></b>	<i>average in per cent</i>	<b>7.0</b>	<b>6.7</b>	<b>6.8</b>	<b>7.7</b>	<b>7.7</b>	<b>6.6</b>	<b>5.6</b>	<b>5.2</b>	<b>4.9</b>	<b>4.8</b>
<b>Wages and salaries</b>											
<b>Average monthly wage <sup>5)</sup></b>											
<b>– nominal</b>	CZK	23 864	24 455	25 067	25 035	25 607	26 500	27 600	28 800	30 100	31 500
	<i>growth in %</i>	<b>2.2</b>	<b>2.5</b>	<b>2.5</b>	<b>-0.1</b>	<b>2.3</b>	<b>3.4</b>	<b>4.3</b>	<b>4.5</b>	<b>4.5</b>	<b>4.5</b>
<b>– real</b>	CZK 2005	20 769	20 884	20 717	20 403	20 785	21 400	22 200	22 900	23 500	24 100
	<i>growth in %</i>	<b>0.8</b>	<b>0.6</b>	<b>-0.8</b>	<b>-1.5</b>	<b>1.9</b>	<b>3.0</b>	<b>3.8</b>	<b>2.9</b>	<b>2.7</b>	<b>2.6</b>
<b>Median monthly wage</b>	CZK	20 294	20 743	20 984	21 077	21 668	.	.	.	.	.
	<i>growth in %</i>	<b>2.6</b>	<b>2.2</b>	<b>1.2</b>	<b>0.4</b>	<b>2.8</b>	.	.	.	.	.
<b>Wage bill</b>	<i>growth in %</i>	<b>0.6</b>	<b>2.2</b>	<b>2.5</b>	<b>0.4</b>	<b>1.9</b>	<b>4.1</b>	<b>4.5</b>	<b>4.6</b>	<b>4.6</b>	<b>4.6</b>
<b>Labour productivity</b>	<i>growth in %</i>	<b>3.4</b>	<b>2.2</b>	<b>-1.3</b>	<b>-0.8</b>	<b>1.4</b>	<b>3.5</b>	<b>2.4</b>	<b>2.5</b>	<b>2.4</b>	<b>2.4</b>
<b>Unit labour costs <sup>6)</sup></b>	<i>growth in %</i>	<b>0.0</b>	<b>0.6</b>	<b>3.1</b>	<b>0.6</b>	<b>0.1</b>	<b>-1.0</b>	<b>1.5</b>	<b>1.8</b>	<b>2.1</b>	<b>2.1</b>
<b>Compens. of employees / GDP</b>	%	<b>40.2</b>	<b>40.4</b>	<b>41.2</b>	<b>41.1</b>	<b>40.2</b>	<b>39.7</b>	<b>40.1</b>	<b>40.4</b>	<b>40.6</b>	<b>40.8</b>

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, own calculations

**Table C.3.2: Labour Market – quarterly**

		2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
					Estimate	Forecast	Forecast	Forecast	Forecast
<b>Labour Force Survey</b>									
<b>Employment</b>	<i>av. in thous. persons</i>	<b>4 988</b>	<b>5 044</b>	<b>5 060</b>	<b>5 061</b>	<b>5 017</b>	<b>5 058</b>	<b>5 070</b>	<b>5 069</b>
	<i>YoY growth in %</i>	1.3	1.7	1.3	0.9	0.6	0.3	0.2	0.2
	<i>QoQ growth in %</i>	0.4	0.3	0.1	0.1	0.1	0.0	0.0	0.0
<b>– employees</b>	<i>av. in thous. persons</i>	<b>4 116</b>	<b>4 161</b>	<b>4 189</b>	<b>4 195</b>	<b>4 160</b>	<b>4 183</b>	<b>4 201</b>	<b>4 206</b>
	<i>growth in %</i>	2.1	2.4	2.0	1.9	1.1	0.5	0.3	0.3
<b>– entrepreneurs and self-employed</b>	<i>av. in thous. persons</i>	<b>872</b>	<b>883</b>	<b>872</b>	<b>866</b>	<b>857</b>	<b>875</b>	<b>869</b>	<b>863</b>
	<i>growth in %</i>	-2.3	-1.7	-2.1	-3.7	-1.8	-0.9	-0.3	-0.3
<b>Unemployment</b>	<i>av. in thous. persons</i>	<b>317</b>	<b>262</b>	<b>257</b>	<b>249</b>	<b>261</b>	<b>241</b>	<b>246</b>	<b>242</b>
<b>Unemployment rate</b>	<i>average in per cent</i>	<b>6.0</b>	<b>4.9</b>	<b>4.8</b>	<b>4.7</b>	<b>4.9</b>	<b>4.5</b>	<b>4.6</b>	<b>4.6</b>
<b>Long-term unemployment <sup>1)</sup></b>	<i>av. in thous. persons</i>	<b>145</b>	<b>122</b>	<b>125</b>	.	.	.	.	.
<b>Labour force</b>	<i>av. in thous. persons</i>	<b>5 306</b>	<b>5 306</b>	<b>5 318</b>	<b>5 310</b>	<b>5 277</b>	<b>5 299</b>	<b>5 316</b>	<b>5 311</b>
	<i>growth in %</i>	0.5	0.5	0.2	-0.2	-0.5	-0.1	0.0	0.0
<b>Population aged 15–64</b>	<i>av. in thous. persons</i>	<b>7 050</b>	<b>7 037</b>	<b>7 017</b>	<b>7 002</b>	<b>6 986</b>	<b>6 969</b>	<b>6 953</b>	<b>6 936</b>
	<i>growth in %</i>	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-0.9	-0.9
<b>Employment/Pop. 15–64</b>	<i>average in per cent</i>	<b>70.8</b>	<b>71.7</b>	<b>72.1</b>	<b>72.3</b>	<b>71.8</b>	<b>72.6</b>	<b>72.9</b>	<b>73.1</b>
	<i>increase over a year</i>	1.4	1.7	1.5	1.2	1.1	0.9	0.8	0.8
<b>Employment rate 15–64 <sup>2)</sup></b>	<i>average in per cent</i>	<b>69.4</b>	<b>70.2</b>	<b>70.5</b>	<b>70.8</b>	<b>70.3</b>	<b>71.1</b>	<b>71.4</b>	<b>71.5</b>
	<i>increase over a year</i>	1.4	1.5	1.2	1.0	0.9	0.9	0.9	0.8
<b>Labour force/Pop. 15–64</b>	<i>average in per cent</i>	<b>75.3</b>	<b>75.4</b>	<b>75.8</b>	<b>75.8</b>	<b>75.5</b>	<b>76.0</b>	<b>76.5</b>	<b>76.6</b>
	<i>increase over a year</i>	0.9	0.9	0.7	0.4	0.3	0.6	0.7	0.7
<b>Participation rate 15–64 <sup>3)</sup></b>	<i>average in per cent</i>	<b>73.9</b>	<b>73.9</b>	<b>74.2</b>	<b>74.3</b>	<b>74.0</b>	<b>74.5</b>	<b>74.9</b>	<b>75.0</b>
	<i>increase over a year</i>	0.8	0.7	0.4	0.2	0.1	0.6	0.7	0.7
<b>Registered unemployment</b>									
<b>Unemployment</b>	<i>av. in thous. persons</i>	<b>546.0</b>	<b>481.9</b>	<b>451.2</b>	<b>436.4</b>	<b>465</b>	<b>407</b>	<b>381</b>	<b>379</b>
<b>Share of unemployed <sup>4)</sup></b>	<i>average in per cent</i>	<b>7.5</b>	<b>6.6</b>	<b>6.2</b>	<b>6.0</b>	<b>6.4</b>	<b>5.6</b>	<b>5.2</b>	<b>5.2</b>
<b>Wages and salaries</b>									
<b>Average monthly wage <sup>5)</sup></b>									
<b>– nominal</b>	CZK	25 334	26 300	26 100	28 200	26 300	27 400	27 200	29 400
	<i>growth in %</i>	<b>2.3</b>	<b>3.5</b>	<b>3.8</b>	<b>4.0</b>	<b>4.0</b>	<b>4.3</b>	<b>4.4</b>	<b>4.4</b>
<b>– real</b>	CZK 2005	20 563	21 200	21 100	22 900	21 300	22 100	21 900	23 700
	<i>growth in %</i>	<b>2.2</b>	<b>2.8</b>	<b>3.3</b>	<b>3.9</b>	<b>3.7</b>	<b>4.1</b>	<b>3.9</b>	<b>3.4</b>
<b>Median monthly wage</b>	CZK	21 166	22 235	22 531	.	.	.	.	.
	<i>growth in %</i>	<b>2.2</b>	<b>3.4</b>	<b>3.9</b>	.	.	.	.	.
<b>Wage bill</b>	<i>growth in %</i>	<b>3.3</b>	<b>4.1</b>	<b>4.3</b>	<b>4.6</b>	<b>4.7</b>	<b>4.5</b>	<b>4.5</b>	<b>4.5</b>

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.

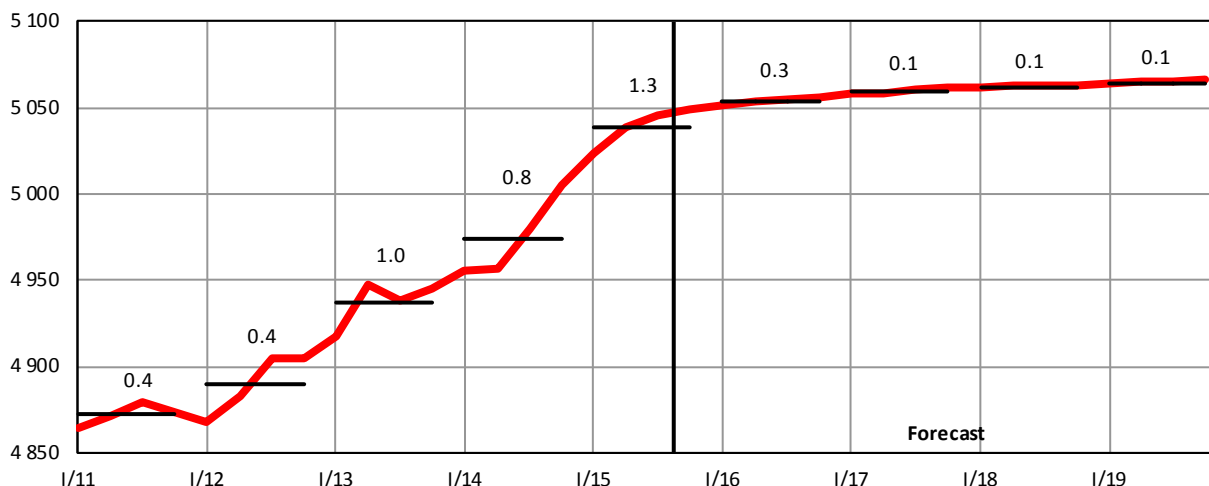
4) Share of available job seekers aged 15 to 64 years in the population of the same age.

5) Derived from full-time-equivalent employers in the entire economy.

Source: CZSO, Ministry of Labour and Social Affairs, own calculations

### Graph C.3.4: Employment (LFS)

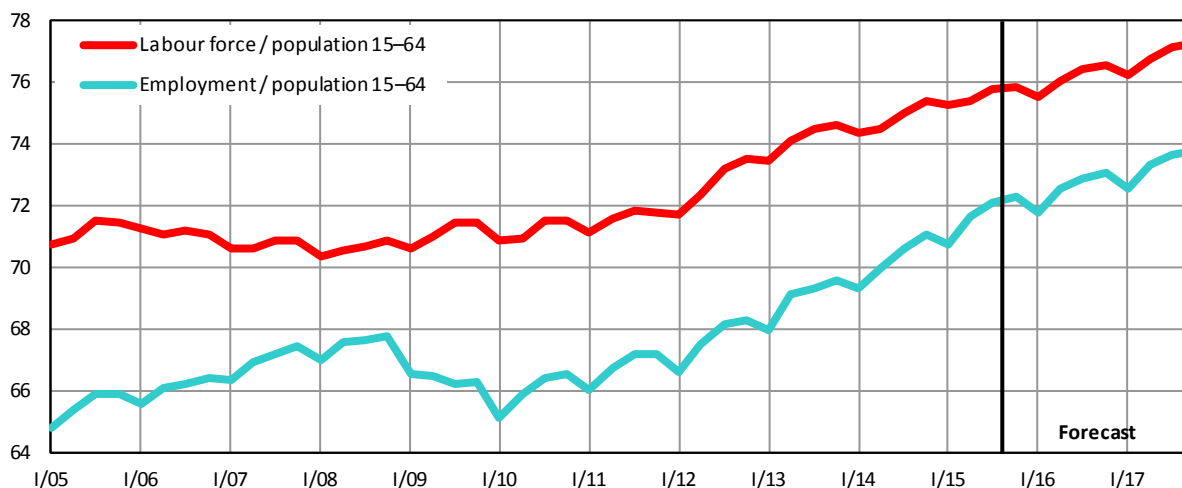
seasonally adjusted data, in thousands of persons, growth rates in %



Source: CZSO, own calculations

### Graph C.3.5: Ratio of Labour Force and Employment to Population Aged 15–64

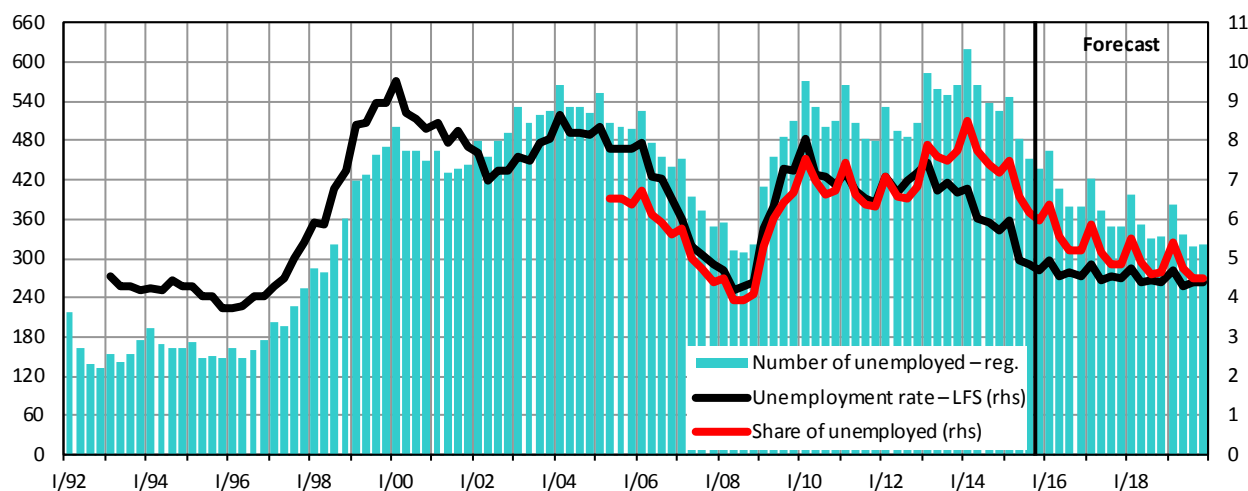
in %



Source: CZSO, own calculations

### Graph C.3.6: Unemployment

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

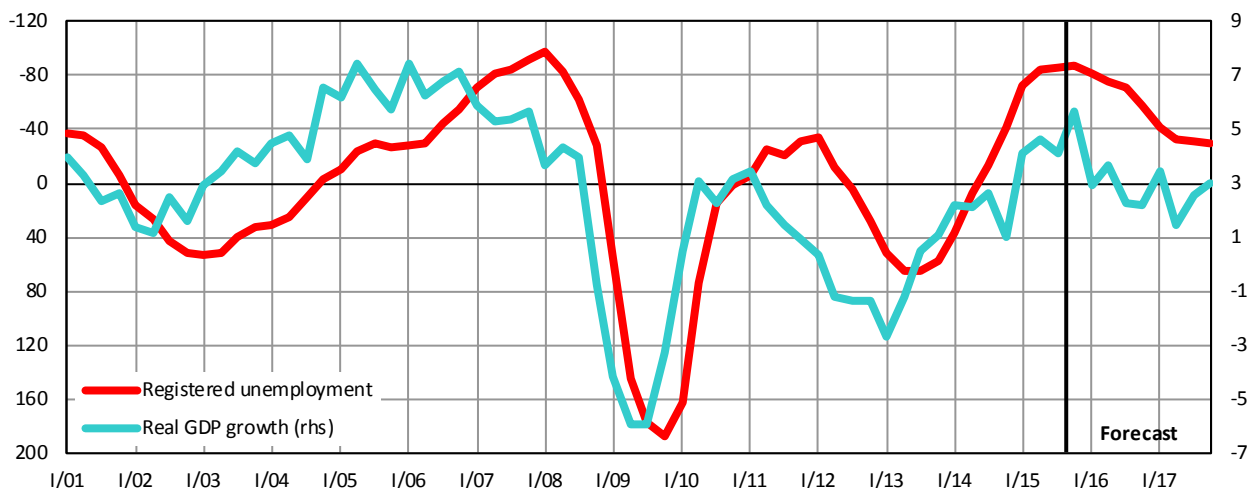


Note: Share of unemployed (Ministry of Labour and Social Affairs) is defined as a share of available job seekers aged 15 to 64 years in the population of the same age.

Source: CZSO, Ministry of Labour and Social Affairs, own calculations

### Graph C.3.7: Economic Output and Unemployment

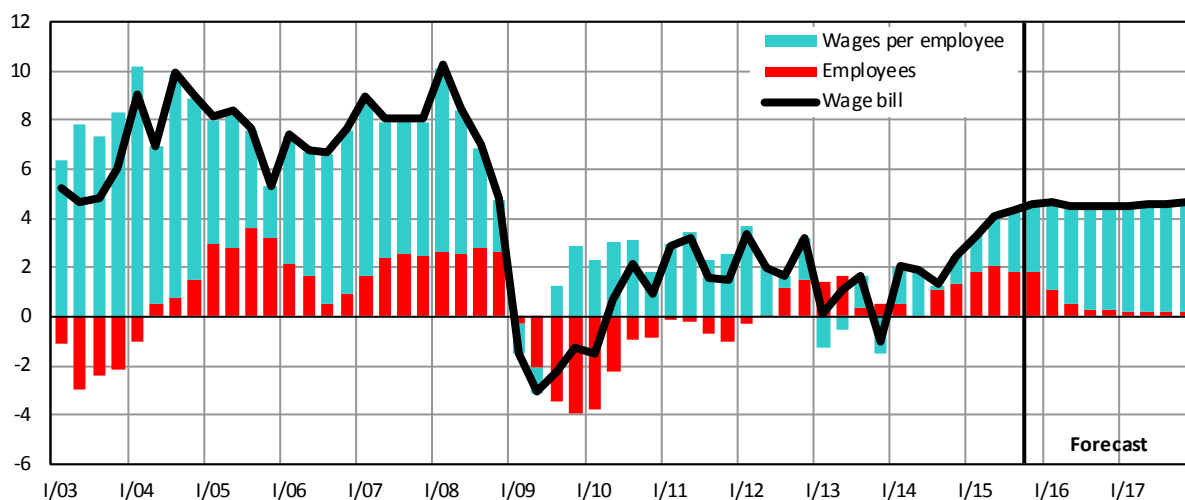
YoY real GDP growth rate in %, change in unemployment in thousands of persons



Source: CZSO, Ministry of Labour and Social Affairs, own calculations

### Graph C.3.8: Wage Bill – nominal, domestic concept

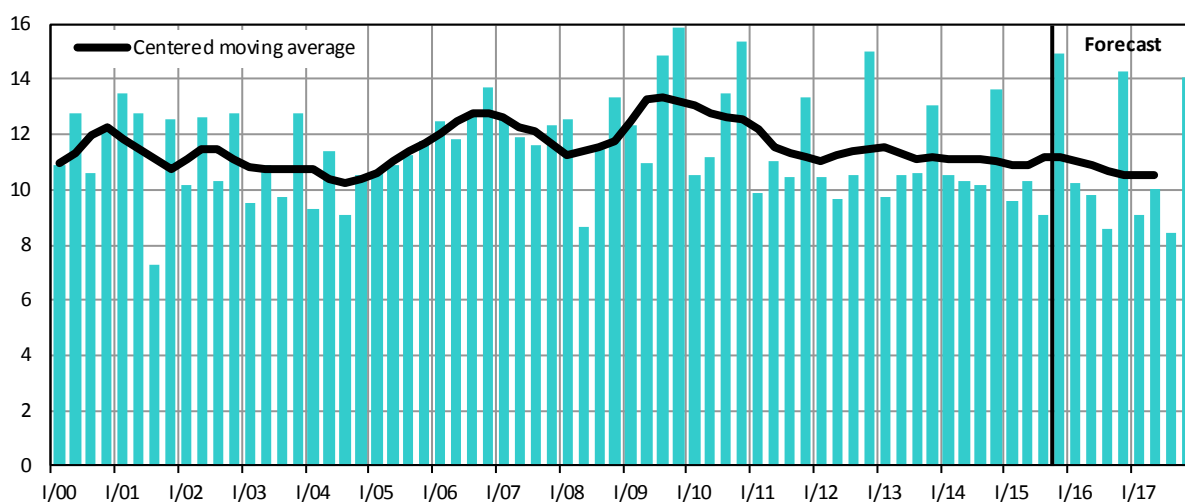
YoY growth rate, in %



Source: CZSO, own calculations

### Graph C.3.9: Gross Savings Rate of Households

in % of disposable income



Source: CZSO, own calculations

**Table C.3.3: Income and Expenditures of Households – yearly**
*SNA methodology – national concept*

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
									Estimate	Forecast	Forecast
<b>Current income</b>											
Compensation of employees	bill.CZK	1 593	1 553	1 585	1 626	1 668	1 690	1 737	1 817	1 897	1 981
	growth in %	5.8	-2.5	2.0	2.6	2.6	1.3	2.8	4.6	4.4	4.4
Gross operating surplus	bill.CZK	657	686	685	674	654	645	675	676	689	706
and mixed income	growth in %	4.0	4.5	-0.2	-1.7	-2.9	-1.3	4.6	0.2	1.9	2.4
Property income received	bill.CZK	177	158	152	151	145	155	139	132	132	134
	growth in %	9.8	-11.0	-3.5	-0.9	-3.7	7.0	-10.5	-5.3	0.5	1.2
Social benefits not-in-kind	bill.CZK	493	535	542	553	566	563	577	595	607	624
	growth in %	4.7	8.6	1.2	2.1	2.4	-0.6	2.4	3.2	2.1	2.8
Other current transfers received	bill.CZK	143	141	140	139	151	147	148	166	171	176
	growth in %	13.2	-1.4	-1.0	-0.5	8.6	-2.8	1.0	12.2	3.0	3.0
<b>Current expenditure</b>											
Property income paid	bill.CZK	31	19	23	21	15	21	15	11	11	10
	growth in %	11.2	-36.7	17.7	-8.5	-27.2	40.5	-29.5	-25.9	-3.0	-3.0
Curr. taxes on income and property	bill.CZK	145	140	137	149	151	159	166	171	178	186
	growth in %	-9.9	-3.0	-2.6	8.6	1.7	5.1	4.5	3.0	4.4	4.4
Social contributions	bill.CZK	637	603	621	640	654	670	697	724	757	787
	growth in %	3.3	-5.3	2.9	3.0	2.3	2.4	4.0	4.0	4.5	4.0
Other current transfers paid	bill.CZK	146	143	141	147	154	140	139	151	151	151
	growth in %	12.1	-1.6	-1.6	4.0	5.3	-9.3	-0.9	8.8	0.2	0.0
Gross disposable income	bill.CZK	2 106	2 168	2 182	2 187	2 210	2 211	2 260	2 329	2 399	2 486
	growth in %	7.4	3.0	0.7	0.2	1.0	0.0	2.2	3.1	3.0	3.6
Final consumption	bill.CZK	1 887	1 891	1 920	1 957	1 971	2 001	2 042	2 103	2 175	2 265
	growth in %	7.9	0.2	1.5	2.0	0.7	1.6	2.0	3.0	3.4	4.1
Change in share in pension funds	bill.CZK	24	17	15	16	15	35	35	33	35	40
Gross savings	bill.CZK	243	295	278	246	254	244	254	259	260	261
Capital transfers											
(income (-) / expenditure (+))	bill.CZK	-25	-25	-29	-25	-21	-13	-32	-18	-23	-24
Gross capital formation	bill.CZK	219	212	230	198	183	181	180	185	192	199
	growth in %	2.8	-3.1	8.8	-14.0	-7.8	-1.2	-0.3	3.0	3.5	3.5
Change in financial assets and liab.	bill.CZK	47	106	75	71	91	75	104	90	89	85
Real disposable income	growth in %	2.5	2.1	0.1	-1.4	-1.1	-0.8	1.7	3.0	2.6	2.1
Gross savings rate	%	11.5	13.6	12.7	11.2	11.5	11.0	11.2	11.1	10.8	10.5

*Source: CZSO, own calculations*

## C.4 External Relations

The current account balance<sup>2</sup> to GDP<sup>3</sup> ratio reached 1.2% (*versus 1.1%*) in the third quarter of 2015, which was a QoQ improvement of 0.1% of GDP. The current account remains in surplus.

In the third quarter of 2015, growth of export markets<sup>4</sup> accelerated slightly to 6.1% (*in line with the estimate*). According to our estimate, export markets increased by 5.7% (*versus 5.6%*) in 2015 as a whole. In connection with the expected GDP growth in countries of the main trading partners of the Czech Republic, export markets should grow at a similar rate in 2016 and 2017. They could increase by 5.7% (*versus 5.3%*) in 2016 and by 5.8% in 2017.

A weakening of the koruna after the introduction of the CNB's exchange rate commitment at the end of 2013 positively influenced price competitiveness of Czech exporters, and thus also export performance (it indicates a change in the market share of Czech goods on foreign markets). However, the growth of export performance was gradually slowing during 2014 and this development continued also in 2015. In the third quarter of 2015, export performance increased only by 0.8% (*in line with the estimate*). This development suggests that the effect of the weak koruna has already been used up. We estimate that the growth of export performance decreased from 4.1% in 2014 to 1.4% (*versus 1.2%*) in 2015. We also expect further slowing of growth in 2016 and 2017, when export performance could increase by 1.0% (*unchanged*) or 0.5%, respectively. The expected leaving of the regime of using the exchange rate as an additional instrument of monetary policy at the end of 2016 will weigh on the growth of export performance.

The quarterly growth rates of foreign trade have had a decreasing tendency since the beginning of 2014. In 2015, moreover, import growth exceeded export growth and the trade surplus was stagnating or declining, respectively. This development was influenced by decreasing achieved koruna prices and deteriorating terms of trade.

The terms of trade will continue to be influenced considerably by low crude oil prices. In the second and third quarter of 2015, their positive impact on the overall balance of foreign trade was outweighed by a deterioration of the terms of trade for other important commodity groups, such as machinery and transport equipment, consumer goods and semi-finished products. The improvement of the terms of trade into

slightly positive values in September and October 2015 suggests the unfavourable tendency stopped. We estimate that the deficit of the fuel balance (SITC 3) reached 2.5% of GDP in 2015 (*versus 2.4%*). In relation to the scenario of the crude oil price development we expect that the deficit will further decrease to 1.5% of GDP (*versus 2.1%*) in 2016. For 2017, however, we already expect growth of the koruna crude oil price and, in relation to that, also a deterioration of the deficit of the balance SITC 3 to 1.9% of GDP.

In the fourth quarter of 2015, the balance of goods was influenced by a one-off factor (an increase in imports), namely by the financial leasing of the JAS-39 Gripen aircrafts amounting to CZK 9.9 billion.

With respect to the aforementioned information, we have revised the forecast for the surplus on the balance of goods slightly to 4.6% of GDP (*versus 4.7%*) in 2015 and to 5.1% of GDP (*versus 4.6%*) in 2016. For 2017, we expect only a slight deterioration of the balance to 4.9% of GDP.

The trend of a decreasing surplus of the balance of services, persisting since 2012, stopped in the second quarter of 2015. The total surplus of the balance of services reached 1.5% of GDP (*in line with the estimate*) in the third quarter of 2015, improving by 0.2% of GDP on the previous quarter. In the following period, we expect that, with the continuing economic growth, the sale of services abroad will improve gradually and the surplus will be kept at similar values. The surplus on the balance of services probably reached 1.6% of GDP (*unchanged*) in 2015. As a percentage of GDP, the surplus should remain at the same level also in 2016 (*versus 1.5%*) and 2017.

A higher surplus of the current account in the third quarter of 2015 of 0.8% of GDP in YoY terms was due to an improvement of the deficit of the primary income balance of 1.1% of GDP, a decrease in the surplus of the balance of goods of 0.4% of GDP and an improvement of the secondary income balance of 0.2% of GDP. The deficit of primary incomes reached 5.5% of GDP (*versus 5.8%*) and its improvement was at the expense of a lower outflow of income from foreign direct investment to foreign owners, i.e. dividends and reinvested earnings. In 2015, according to our estimate, the deficit of the primary income balance decreased to 5.4% of GDP (*versus 5.7%*). In the long run, however, the trend of an increase in the deficit on this account prevails, but with high volatility. For the future, we forecast a gradual return to this trend. The primary income balance could show a deficit of 5.6% of GDP (*versus 6.0%*) in 2016 that could further deepen to 5.9% of GDP in 2017.

<sup>2</sup> The CNB revised the results relating to the second quarter of 2015. The current account as a percentage of GDP has deteriorated by 0.4% of GDP.

<sup>3</sup> All *quarterly* data stated in yearly moving sums.

<sup>4</sup> Weighted average of the growth of goods imports by the six most important trading partner countries (Germany, Slovakia, Poland, France, United Kingdom and Austria).

In the aforementioned context we estimate that the current account of the balance of payments showed a surplus of 1.2% of GDP (*versus 0.7%*) in 2015. The posi-

tive balance could remain at this level (*versus 0.2%*) in 2016 and the surplus could decrease to 0.6% of GDP in 2017.

**Table C.4.1: Balance of Payments – yearly**

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
									<i>Estimate</i>	<i>Forecast</i>	<i>Forecast</i>
Goods and services	<i>bill.CZK</i>	85	147	119	157	201	237	295	281	314	313
	% GDP	2.1	3.7	3.0	3.9	5.0	5.8	6.9	6.3	6.7	6.5
– goods	<i>bill.CZK</i>	-4	65	40	75	124	167	239	208	238	238
	% GDP	-0.1	1.7	1.0	1.9	3.1	4.1	5.6	4.6	5.1	4.9
– services	<i>bill.CZK</i>	89	82	78	81	78	70	56	73	76	75
	% GDP	2.2	2.1	2.0	2.0	1.9	1.7	1.3	1.6	1.6	1.6
Primary income	<i>bill.CZK</i>	-148	-217	-250	-223	-238	-249	-259	-244	-261	-286
	% GDP	-3.7	-5.5	-6.3	-5.6	-5.9	-6.1	-6.1	-5.4	-5.6	-5.9
Secondary income	<i>bill.CZK</i>	-12	-19	-11	-18	-27	-10	-10	14	2	2
	% GDP	-0.3	-0.5	-0.3	-0.5	-0.7	-0.2	-0.2	0.3	0.0	0.0
Current account	<i>bill.CZK</i>	-75	-89	-142	-85	-63	-22	26	52	54	29
	% GDP	-1.9	-2.3	-3.6	-2.1	-1.6	-0.5	0.6	1.2	1.2	0.6
Capital account	<i>bill.CZK</i>	26	51	38	13	53	82	32	119	39	47
	% GDP	0.6	1.3	1.0	0.3	1.3	2.0	0.8	2.6	0.8	1.0
Net lending/borrowing	<i>bill.CZK</i>	-49	-38	-104	-72	-10	61	58	171	93	76
	% GDP	-1.2	-1.0	-2.6	-1.8	-0.3	1.5	1.4	3.8	2.0	1.6
Financial account	<i>bill.CZK</i>	-43	-72	-122	-75	12	68	48	.	.	.
– direct investments	<i>bill.CZK</i>	-36	-38	-95	-47	-121	7	-134	.	.	.
– portfolio investments	<i>bill.CZK</i>	9	-159	-150	-6	-55	-93	90	.	.	.
– financial derivatives	<i>bill.CZK</i>	3	1	5	4	-9	-5	-6	.	.	.
– other investments	<i>bill.CZK</i>	-59	62	77	-9	116	-30	24	.	.	.
– reserve assets	<i>bill.CZK</i>	40	61	41	-17	80	188	73	.	.	.
International investment position	<i>bill.CZK</i>	-1 534	-1 726	-1 823	-1 823	-1 864	-1 695	-1 520	.	.	.
	% GDP	-38.2	-44.0	-46.1	-45.3	-46.1	-41.6	-35.7	.	.	.
Gross external debt	<i>bill.CZK</i>	1 862	1 956	2 164	2 312	2 434	2 733	2 857	.	.	.
	% GDP	46.4	49.9	54.7	57.5	60.2	67.0	67.0	.	.	.

Source: CNB, CZSO, own calculations

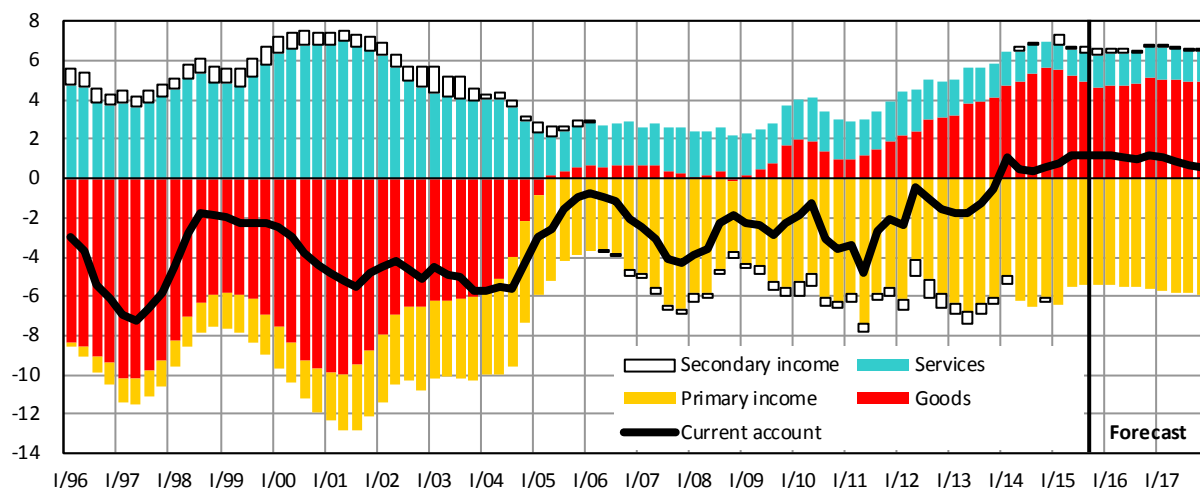
**Table C.4.2: Balance of Payments – quarterly**  
moving sums of the latest 4 quarters

		2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
					<i>Estimate</i>	<i>Forecast</i>	<i>Forecast</i>	<i>Forecast</i>	<i>Forecast</i>
Goods and services	<i>bill.CZK</i>	295	288	284	281	290	294	298	314
– goods	<i>bill.CZK</i>	241	229	217	208	215	218	222	238
– services	<i>bill.CZK</i>	54	59	67	73	76	75	76	76
Primary income	<i>bill.CZK</i>	-279	-242	-242	-244	-247	-251	-256	-261
Secondary income	<i>bill.CZK</i>	19	4	12	14	11	8	5	2
Current account	<i>bill.CZK</i>	35	50	54	52	55	50	46	54
Capital account	<i>bill.CZK</i>	42	93	99	119	99	79	59	39
Net lending/borrowing	<i>bill.CZK</i>	77	143	153	171	154	129	105	93
Financial account	<i>bill.CZK</i>	83	145	160	.	.	.	.	.
– direct investments	<i>bill.CZK</i>	-97	-46	-2	.	.	.	.	.
– portfolio investments	<i>bill.CZK</i>	121	75	-13	.	.	.	.	.
– financial derivatives	<i>bill.CZK</i>	-4	1	-3	.	.	.	.	.
– other investments	<i>bill.CZK</i>	-23	-20	-145	.	.	.	.	.
– reserve assets	<i>bill.CZK</i>	86	135	322	.	.	.	.	.
International investment position	<i>stock in bill.CZK</i>	-1 322	-1 307	-1 397	.	.	.	.	.
Gross external debt	<i>stock in bill.CZK</i>	2 895	2 910	3 140	.	.	.	.	.

Source: CNB, CZSO, own calculations

### Graph C.4.1: Current Account

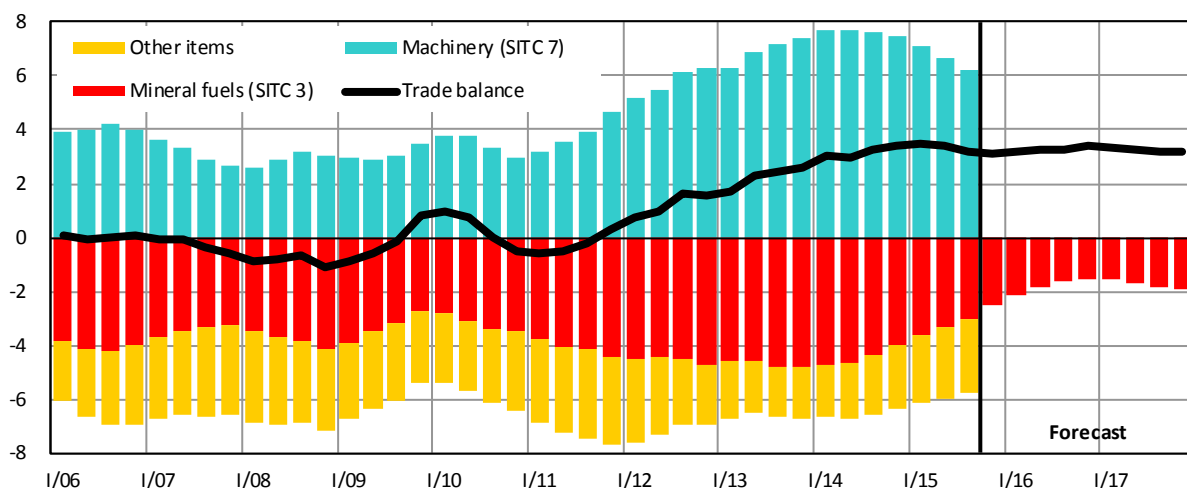
moving sums of the latest 4 quarters, in % of GDP, trade and service balances in BoP definitions



Source: CNB, CZSO, own calculations

### Graph C.4.2: Balance of Trade (national concept)

moving sums of the latest 4 quarters, in % of GDP, in cross-border definitions

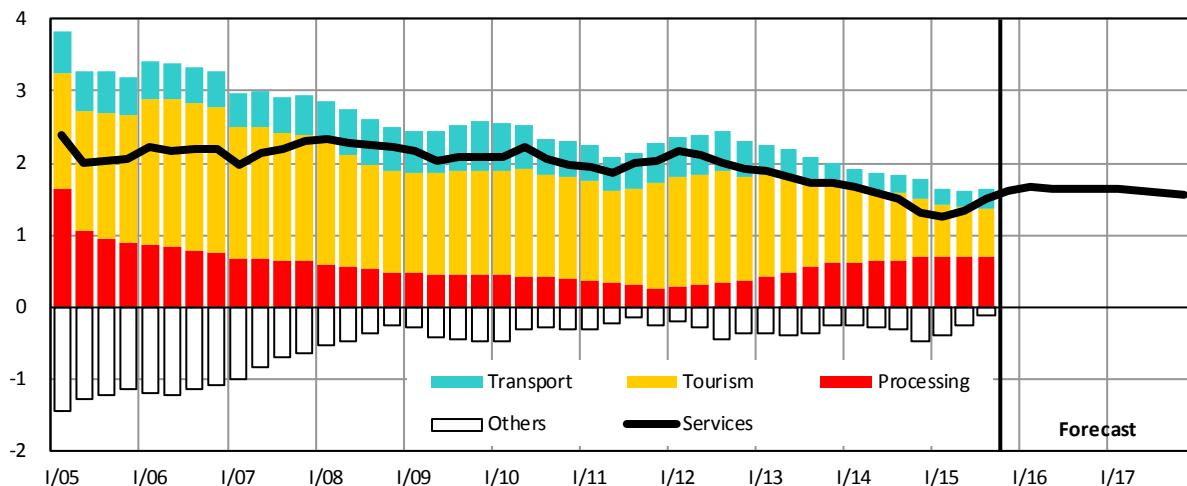


Note: The data in the chart show imports in cif methodology. For this reason, the chart is not comparable with Tables C.4.1 and C.4.2, where imports are in fob methodology. Trade balance in the national concept (unlike in the BoP methodology in Tables C.4.1 and C.4.2) does not include the import of JAS-39 Gripen fighter jets in the fourth quarter of 2015 amounting to CZK 9.9 bill., i.e. 0.2% of GDP.

Source: CZSO, own calculations

### Graph C.4.3: Balance of Services

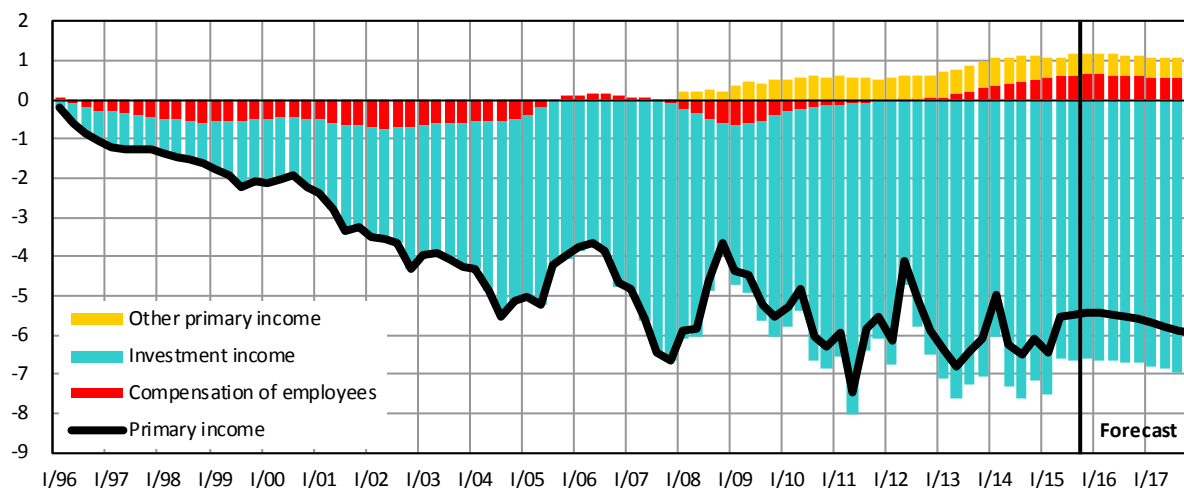
moving sums of the latest 4 quarters, in % of GDP



Source: CNB, CZSO, own calculations

**Graph C.4.4: Balance of Primary Income**

moving sums of the latest 4 quarters, in % of GDP



Source: CNB, CZSO, own calculations

**Table C.4.3: Decomposition of Exports of Goods – yearly**

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
										Estimate	Forecast
<b>GDP<sup>1)</sup></b>	average of 2005=100	100.9	96.3	100.0	103.7	104.6	105.5	107.6	110	112	115
	growth in %	1.8	-4.5	3.9	3.7	0.9	0.9	1.9	2.1	2.3	2.4
<b>Import intensity<sup>2)</sup></b>	average of 2005=100	98.6	91.4	100.0	104.2	103.3	104.9	108.0	112	115	119
	growth in %	0.0	-7.2	9.4	4.2	-0.9	1.5	3.0	3.5	3.3	3.3
<b>Export markets<sup>3)</sup></b>	average of 2005=100	99.4	88.0	100.0	108.0	108.1	110.6	116.2	123	130	137
	growth in %	1.7	-11.4	13.6	8.0	0.0	2.4	5.0	5.7	5.7	5.8
<b>Export performance</b>	average of 2005=100	96.8	97.8	100.0	102.0	106.2	104.4	108.6	110	111	112
	growth in %	2.4	1.0	2.3	2.0	4.1	-1.7	4.1	1.4	1.0	0.5
<b>Real exports</b>	average of 2005=100	96.3	86.1	100.0	110.2	114.8	115.5	126.2	135	144	153
	growth in %	4.2	-10.5	16.1	10.2	4.2	0.6	9.3	7.1	6.7	6.4
<b>1 / NEER</b>	average of 2005=100	98.9	102.2	100.0	97.1	100.6	102.9	108.1	108	107	106
	growth in %	-10.5	3.4	-2.2	-2.9	3.6	2.3	5.1	0.2	-1.3	-1.2
<b>Prices on foreign markets</b>	average of 2005=100	102.4	99.3	100.0	103.8	103.5	102.7	101.7	100	100	100
	growth in %	6.3	-3.1	0.8	3.8	-0.4	-0.7	-1.0	-1.3	-0.4	0.1
<b>Exports deflator</b>	average of 2005=100	101.2	101.4	100.0	100.8	104.0	105.6	109.9	109	107	106
	growth in %	-4.9	0.2	-1.4	0.8	3.2	1.5	4.1	-1.1	-1.7	-1.1
<b>Nominal exports</b>	average of 2005=100	97.4	87.2	100.0	111.0	119.4	122.0	138.7	147	154	162
	growth in %	-0.9	-10.5	14.7	11.0	7.5	2.2	13.7	5.9	5.0	5.3

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, own calculations

**Table C.4.4: Decomposition of Exports of Goods – quarterly**

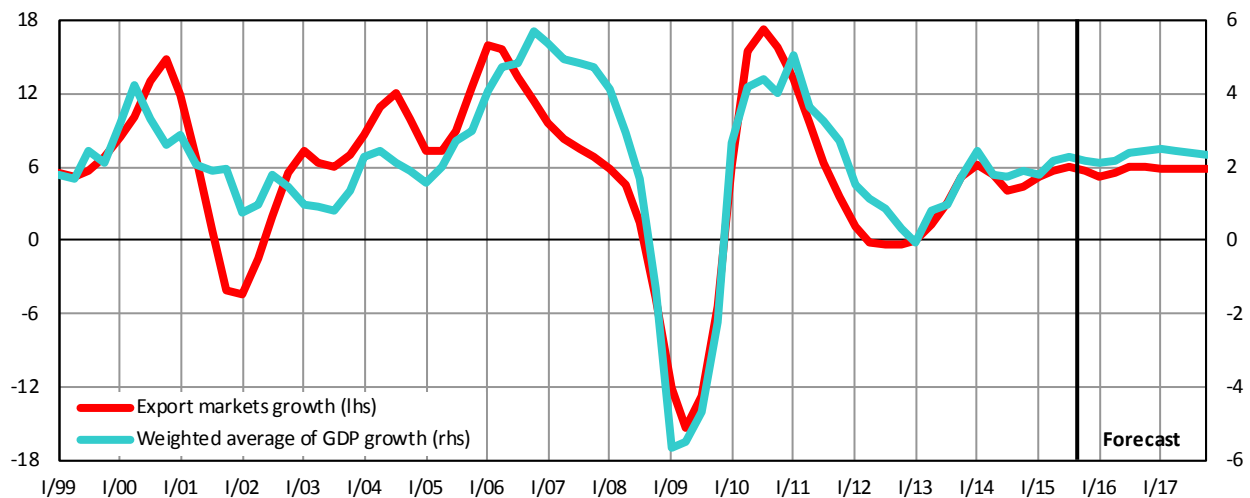
		2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
					Estimate	Forecast	Forecast	Forecast	Forecast
<b>GDP</b> <sup>1)</sup>	average of 2010=100	109.0	109.6	110.1	111	111	112	113	113
	growth in %	1.8	2.2	2.3	2.1	2.1	2.2	2.4	2.5
<b>Import intensity</b> <sup>2)</sup>	average of 2010=100	110.7	111.4	112.0	113	114	115	116	117
	growth in %	3.3	3.5	3.7	3.5	3.0	3.2	3.5	3.5
<b>Export markets</b> <sup>3)</sup>	average of 2010=100	120.6	122.1	123.3	125	127	129	131	133
	growth in %	5.2	5.7	6.1	5.7	5.2	5.5	6.0	6.0
<b>Export performance</b>	average of 2010=100	111.2	110.8	107.9	111	113	112	109	111
	growth in %	2.1	0.9	0.8	1.7	1.4	1.1	0.9	0.7
<b>Real exports</b>	average of 2010=100	134.1	135.3	133.0	138	143	144	142	148
	growth in %	7.4	6.7	6.9	7.5	6.7	6.6	6.9	6.8
<b>1 / NEER</b>	average of 2010=100	109.1	109.8	107.1	107	107	107	107	107
	growth in %	1.4	2.0	-1.6	-1.2	-2.0	-2.6	-0.2	-0.2
<b>Prices on foreign markets</b>	average of 2010=100	100.3	99.7	100.6	101	99	100	100	101
	growth in %	-1.7	-2.2	-0.8	-0.4	-1.0	-0.1	-0.2	-0.2
<b>Exports deflator</b>	average of 2010=100	109.5	109.5	107.7	108	106	106	107	108
	growth in %	-0.3	-0.2	-2.4	-1.6	-3.0	-2.8	-0.4	-0.4
<b>Nominal exports</b>	average of 2010=100	146.8	148.0	143.2	150	152	153	152	159
	growth in %	7.1	6.4	4.3	5.8	3.4	3.7	6.5	6.3

See notes to Table C.4.3.

Source: CNB, CZSO, Eurostat, own calculations

**Graph C.4.5: GDP and Imports of Goods in Main Partner Countries**

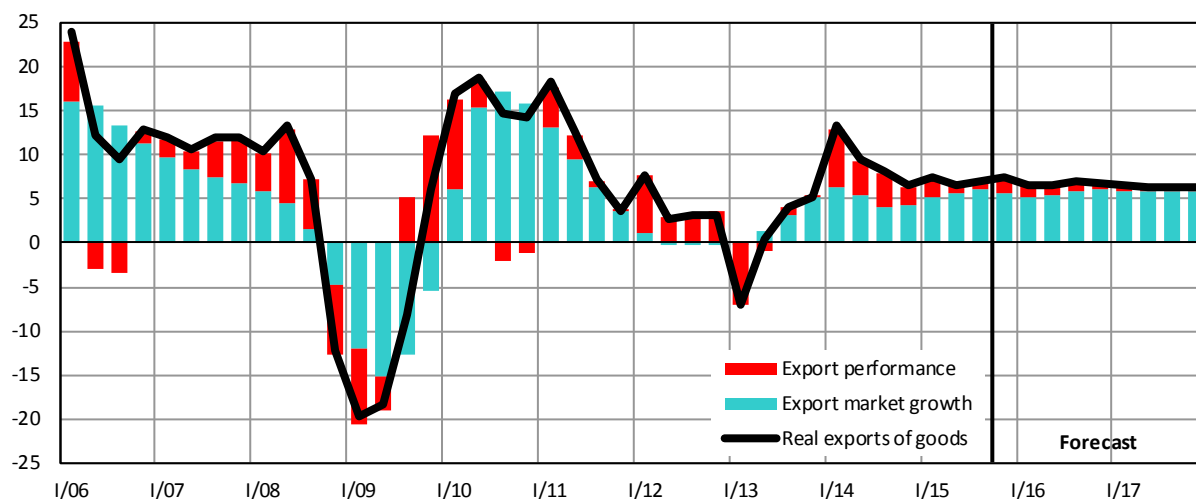
YoY growth rate, in %



Source: Eurostat, own calculations

### Graph C.4.6: Real Exports of Goods

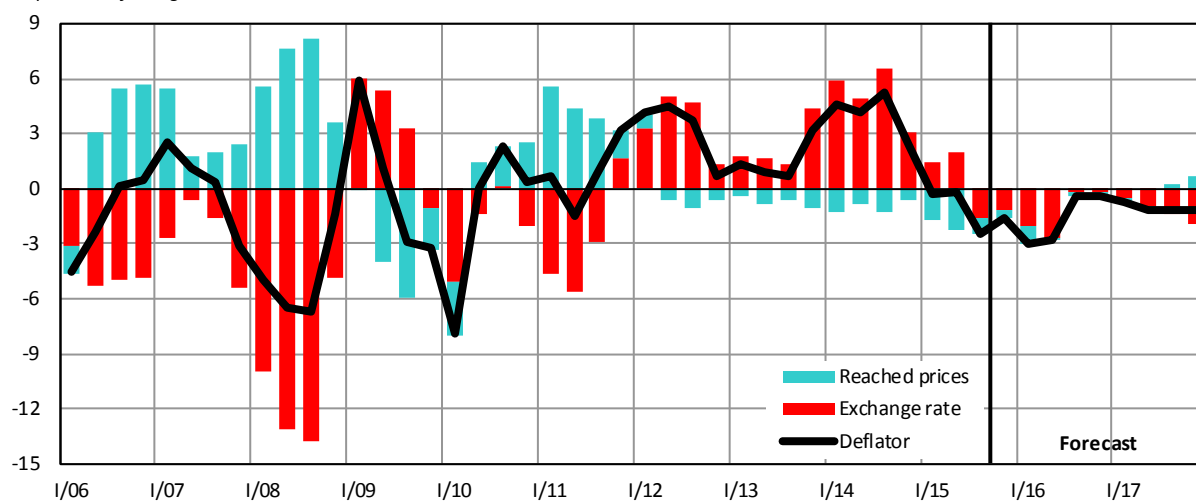
decomposition of YoY growth, in %



Source: CZSO, Eurostat, own calculations

### Graph C.4.7: Deflator of Exports of Goods

decomposition of YoY growth, in %



Source: CNB, CZSO, own calculations

## C.5 International Comparisons

Comparisons for the period up to and including 2014 are based on Eurostat statistics. Since 2015, our own calculations on the basis of real exchange rates have been used.

Using the purchasing power parity method, comparisons of economic output for individual countries within the EU are made in purchasing power standards (PPS). PPS is an artificial currency unit expressing a quantity of goods that can be bought on average for one euro in the EU28 territory after converting the exchange rate for countries using currency units other than the euro.

The level of GDP per capita converted by **current purchasing power parity** increased in all monitored countries in 2014. However, there was a slight decrease of the relative economic level towards the EA12 countries in Greece and Croatia. In the Czech Republic, the purchasing power parity was 17.44 CZK/PPS compared to the EU28 and 16.91 CZK/EUR compared to the EA12. The economic level of the Czech Republic was circa 23,200 PPS, corresponding to 78% of the economic level in the EA12. In 2015–2017, the relative economic level of the Czech Republic should increase gradually, thanks to strong economic growth, up to 83% of the EA12 average in 2017.

GDP per capita adjusted for the current **exchange rate** takes into account the market valuation of the currency and the ensuing differences in price levels. In the case of the Czech Republic, this indicator was approximately EUR 14,700 in 2014, i.e. 48% of the EA12 level. Higher economic growth will result in a gradual increase in the relative level up to 52% of the EA12 average in 2017.

When comparing price levels, the **comparative price level of GDP** in the Czech Republic decreased by 3 pp in 2014, thus reaching 61% of the EA12 average. In 2015–2017, the comparative price level of GDP should gradually increase to 63% in 2017, which will continue to help the competitiveness of the Czech economy.

Through the decomposition<sup>5</sup> of GDP per capita into 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 C.5.5 and C.5.6.

**Labour productivity** in the monitored countries has been increasing in the long run; however, its level is

still relatively low compared to the EA12 average. Although the economic crisis slowed down labour productivity growth, its absolute level did not decrease in any of the monitored countries in 2008–2014. In the given period, a decrease in the relative level of labour productivity to the EA12 countries, however, was seen in Greece and Slovenia, while the increase in the relative level exceeded 8 pp in Lithuania, Poland and Estonia. In the Czech Republic, after a five-year period of stagnation, labour productivity was only 63% of the EA12 average in 2014.

In the case of the **labour market component**, which gives the number of hours worked per person in the working age, there is the opposite situation. From 2008 to 2014, the absolute level of this indicator decreased in all monitored countries, except for Poland and the Czech Republic. The highest slump – by 18% – was seen in Greece due to a 22% decrease in the number of hours worked. In contrast, with the exception of Slovakia, the relative level of the labour market component has long been exceeding the EA12 average in all countries – in Estonia and Latvia by more than 20 pp in 2014.

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 21<sup>st</sup> century and is now decreasing due to population ageing. In 2008–2014, the sharpest decrease of 3.8 pp was recorded in the Czech Republic. Compared to the EA12 average, however, the demographic component is still higher in all monitored countries. In 2014, it exceeded the EA12 average by 11 pp in Slovakia and by 6 pp in Slovenia.

<sup>5</sup> GDP per capita can be written as follows:

$$\begin{aligned} \text{GDP per capita} &= \frac{\text{GDP}}{\text{number of inhabit.}} = \\ &= \frac{\text{GDP}}{\text{no. of hours worked}} * \frac{\text{no. of hours worked}}{\text{population aged 15–64}} * \frac{\text{population aged 15–64}}{\text{no. of inhabit.}} = \\ &= \text{labour productivity} * \text{labour market component} * \text{demographic component} \end{aligned}$$

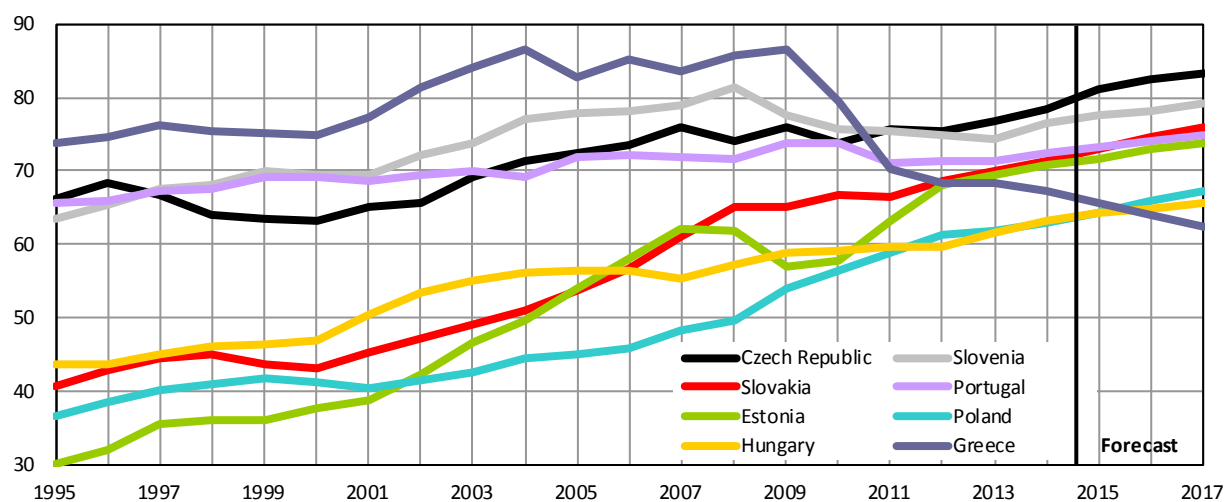
**Table C.5.1: GDP per Capita – Using Current Purchasing Power Parities**

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
									Estimate	Forecast	Forecast
<b>Czech Republic</b>	PPS	<b>21 100</b>	<b>20 200</b>	<b>20 600</b>	<b>21 600</b>	<b>21 700</b>	<b>22 200</b>	<b>23 200</b>	<b>24 500</b>	<b>25 400</b>	<b>26 300</b>
	EA12=100	74	76	74	76	75	77	78	81	82	83
<b>Slovenia</b>	PPS	<b>23 100</b>	<b>20 700</b>	<b>21 100</b>	<b>21 500</b>	<b>21 500</b>	<b>21 500</b>	<b>22 600</b>	<b>23 400</b>	<b>24 100</b>	<b>25 000</b>
	EA12=100	81	77	76	75	75	74	77	78	78	79
<b>Slovakia</b>	PPS	<b>18 500</b>	<b>17 300</b>	<b>18 600</b>	<b>19 000</b>	<b>19 700</b>	<b>20 200</b>	<b>21 100</b>	<b>22 000</b>	<b>23 000</b>	<b>24 000</b>
	EA12=100	65	65	67	67	69	70	71	73	74	76
<b>Portugal</b>	PPS	<b>20 400</b>	<b>19 700</b>	<b>20 500</b>	<b>20 300</b>	<b>20 500</b>	<b>20 600</b>	<b>21 400</b>	<b>22 100</b>	<b>22 900</b>	<b>23 700</b>
	EA12=100	72	74	74	71	71	71	72	73	74	75
<b>Estonia</b>	PPS	<b>17 600</b>	<b>15 200</b>	<b>16 100</b>	<b>18 000</b>	<b>19 600</b>	<b>20 000</b>	<b>20 900</b>	<b>21 600</b>	<b>22 500</b>	<b>23 300</b>
	EA12=100	62	57	58	63	68	69	71	72	73	74
<b>Lithuania</b>	PPS	<b>16 200</b>	<b>13 800</b>	<b>15 300</b>	<b>17 000</b>	<b>18 500</b>	<b>19 600</b>	<b>20 600</b>	<b>21 400</b>	<b>22 500</b>	<b>23 400</b>
	EA12=100	57	52	55	60	64	68	70	71	73	74
<b>Poland</b>	PPS	<b>14 100</b>	<b>14 400</b>	<b>15 700</b>	<b>16 800</b>	<b>17 600</b>	<b>17 900</b>	<b>18 600</b>	<b>19 400</b>	<b>20 300</b>	<b>21 300</b>
	EA12=100	50	54	57	59	61	62	63	64	66	67
<b>Hungary</b>	PPS	<b>16 300</b>	<b>15 700</b>	<b>16 500</b>	<b>17 100</b>	<b>17 200</b>	<b>17 700</b>	<b>18 600</b>	<b>19 400</b>	<b>20 100</b>	<b>20 800</b>
	EA12=100	57	59	59	60	60	61	63	64	65	66
<b>Greece</b>	PPS	<b>24 300</b>	<b>23 100</b>	<b>22 100</b>	<b>20 100</b>	<b>19 600</b>	<b>19 700</b>	<b>19 900</b>	<b>19 800</b>	<b>19 800</b>	<b>19 700</b>
	EA12=100	86	86	79	70	68	68	67	66	64	62
<b>Latvia</b>	PPS	<b>15 500</b>	<b>12 800</b>	<b>13 300</b>	<b>14 700</b>	<b>16 000</b>	<b>16 600</b>	<b>17 500</b>	<b>18 300</b>	<b>19 200</b>	<b>20 000</b>
	EA12=100	55	48	48	51	55	58	59	61	62	63
<b>Croatia</b>	PPS	<b>16 400</b>	<b>15 000</b>	<b>14 900</b>	<b>15 500</b>	<b>15 900</b>	<b>15 800</b>	<b>16 100</b>	<b>16 500</b>	<b>17 000</b>	<b>17 400</b>
	EA12=100	58	56	53	54	55	55	55	55	55	55

Source: AMECO, CZSO, Eurostat, own calculations

**Graph C.5.1: GDP per Capita – Using Current Purchasing Power Parities**

EA12=100



Source: AMECO, CZSO, Eurostat, own calculations

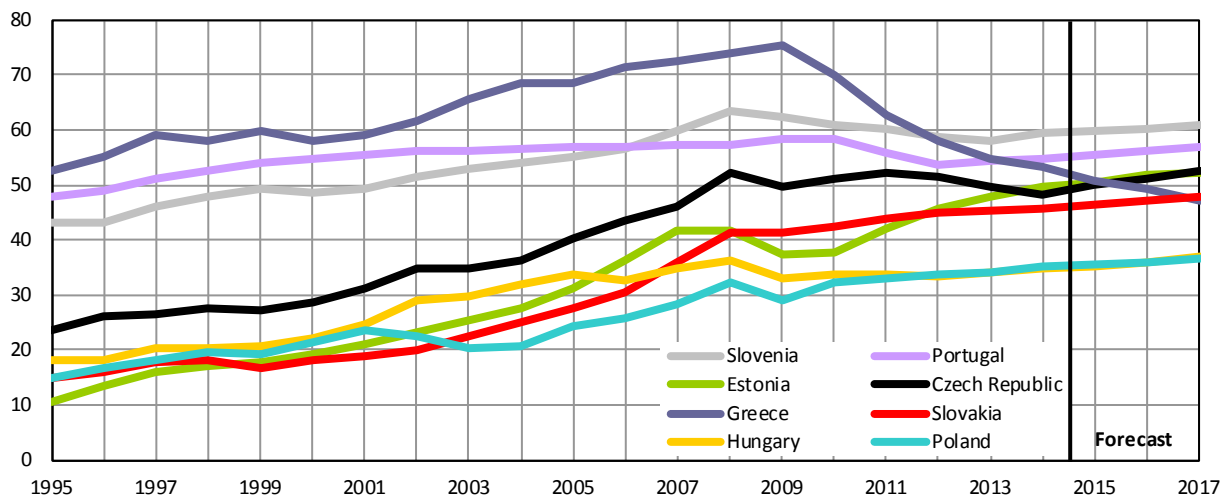
**Table C.5.2: GDP per Capita – Using Current Exchange Rates**

			2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
										Estimate	Forecast	Forecast
Slovenia	EUR		18 800	17 700	17 700	18 000	17 500	17 400	18 100	18 600	19 200	19 800
	EA12=100		63	62	61	60	59	58	59	60	60	61
	Comparative price level	EA12=100	78	80	80	80	78	78	78	77	77	77
Portugal	EUR		16 900	16 600	17 000	16 700	16 000	16 300	16 700	17 300	17 900	18 600
	EA12=100		57	58	58	56	54	54	55	56	56	57
	Comparative price level	EA12=100	80	79	79	79	75	76	76	76	76	76
Estonia	EUR		12 300	10 600	11 000	12 500	13 600	14 400	15 200	15 700	16 500	17 100
	EA12=100		42	37	38	42	46	48	50	50	52	52
	Comparative price level	EA12=100	68	65	66	67	67	69	70	70	71	71
Czech Republic	EUR		15 400	14 100	14 900	15 600	15 300	14 900	14 700	15 600	16 300	17 100
	EA12=100		52	50	51	52	51	50	48	50	51	52
	Comparative price level	EA12=100	70	66	69	69	68	65	61	62	62	63
Greece	EUR		21 800	21 400	20 300	18 600	17 300	16 500	16 200	15 800	15 700	15 300
	EA12=100		74	75	70	63	58	55	53	51	49	47
	Comparative price level	EA12=100	86	87	88	89	85	80	79	78	77	75
Slovakia	EUR		12 200	11 800	12 400	13 000	13 400	13 600	13 900	14 400	15 100	15 600
	EA12=100		41	41	43	44	45	45	46	46	47	48
	Comparative price level	EA12=100	63	64	64	66	66	65	64	64	63	63
Lithuania	EUR		10 200	8 500	9 000	10 300	11 200	11 800	12 400	12 700	13 300	13 600
	EA12=100		35	30	31	35	37	39	41	41	42	42
	Comparative price level	EA12=100	61	58	56	58	58	58	58	58	57	56
Latvia	EUR		11 200	8 700	8 500	9 800	10 800	11 300	11 800	12 300	13 100	13 600
	EA12=100		38	31	29	33	36	38	39	40	41	42
	Comparative price level	EA12=100	69	64	61	64	65	65	65	65	66	66
Hungary	EUR		10 700	9 300	9 800	10 100	10 000	10 200	10 600	11 000	11 500	12 000
	EA12=100		36	33	34	34	33	34	35	35	36	37
	Comparative price level	EA12=100	63	56	57	57	56	55	55	55	55	56
Poland	EUR		9 500	8 200	9 400	9 900	10 100	10 200	10 700	11 000	11 400	12 000
	EA12=100		32	29	32	33	34	34	35	35	36	37
	Comparative price level	EA12=100	65	54	57	56	55	55	56	55	54	55
Croatia	EUR		11 200	10 500	10 500	10 400	10 300	10 200	10 200	10 400	10 600	10 800
	EA12=100		38	37	36	35	35	34	33	33	33	33
	Comparative price level		65	65	67	64	63	62	61	61	61	60

Source: AMECO, CZSO, Eurostat, own calculations

**Graph C.5.2: GDP per Capita – Using Current Exchange Rates**

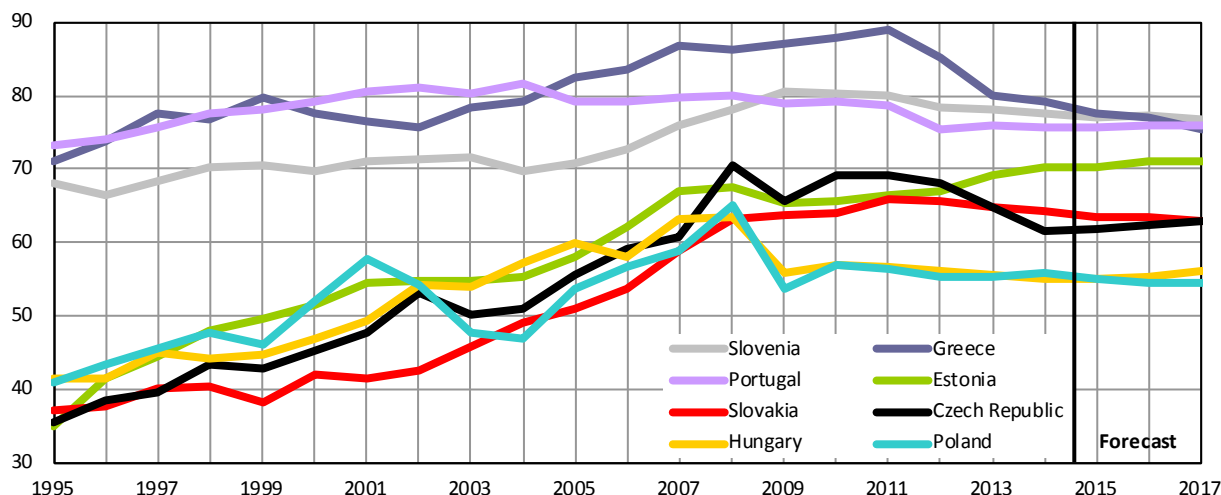
EA12=100



Source: AMECO, CZSO, Eurostat, own calculations

**Graph C.5.3: Comparative Price Level of GDP per Capita**

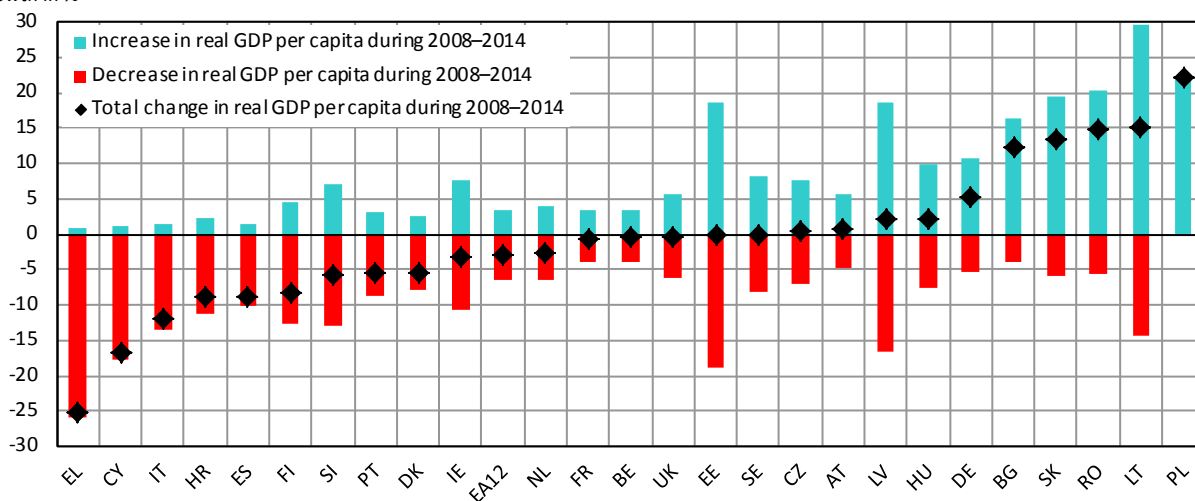
EA12=100



Source: AMECO, CZSO, Eurostat, own calculations

**Graph C.5.4: Change in Real GDP per Capita during 2008–2014**

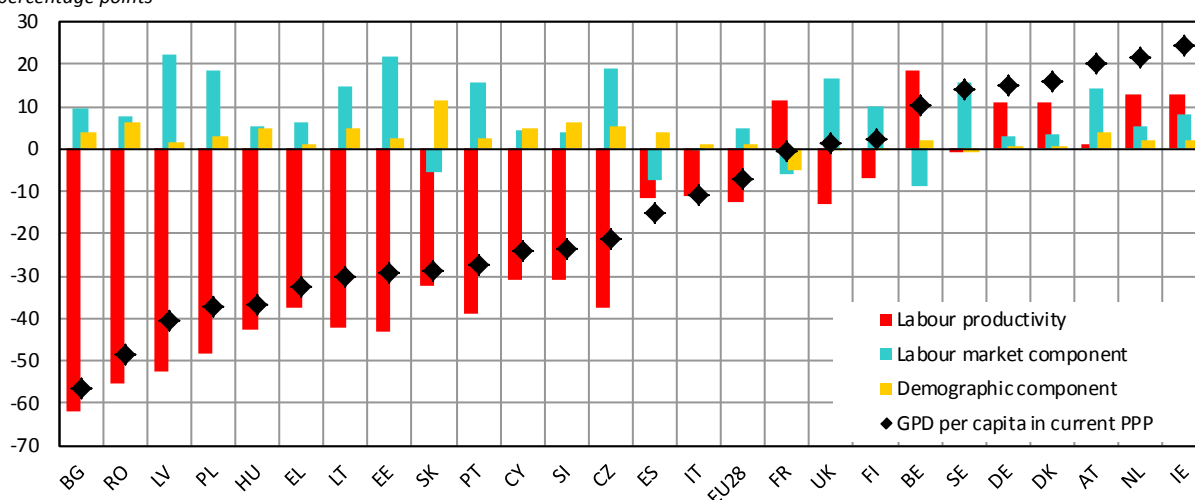
growth in %



Source: Eurostat, own calculations

**Graph C.5.5: Current PPP Adjusted GDP per Capita Level Relative to the EA12 Average in 2014**

in percentage points

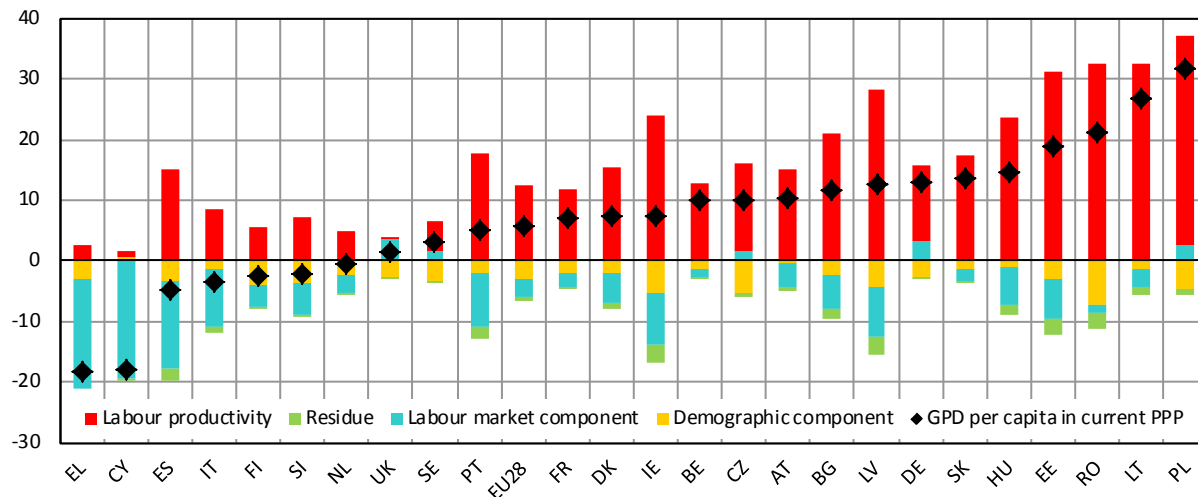


Note: The labour market component is defined as the ratio of total hours worked to working-age (15–64) population, the demographic component is the ratio of the working-age to total population.

Source: Eurostat, own calculations

**Graph C.5.6: Change in Current PPP Adjusted GDP per Capita during 2008–2014**

growth in %



Source: Eurostat, own calculations

## D Monitoring of Other Institutions' Forecasts

The Ministry of Finance of the Czech Republic monitors the macroeconomic forecasts of other institutions engaged in forecasting the future development of the Czech economy. The forecasts of 14 institutions are continuously monitored from publicly available data sources. Of these, eight institutions are domestic (CNB, Ministry of Labour and Social Affairs, domestic banks and investment companies) and others are foreign (European Commission, Organisation for Economic Co-operation and Development, IMF, etc.) The forecasts are summarised in Table D.1.

**Table D.1: Summary of the Monitored Forecasts**

		December 2015			January 2016
		min.	max.	average	MoF forecast
Gross domestic product (2016)	growth in % const.pr.	2.2	2.8	2.5	2.7
Gross domestic product (2017)	growth in % const.pr.	2.6	3.2	2.9	2.6
Average inflation rate (2016)	%	1.0	1.7	1.4	0.5
Average inflation rate (2017)	%	2.0	2.4	2.2	1.6
Average monthly wage (2016)	growth in %	3.5	4.4	3.9	4.3
Average monthly wage (2017)	growth in %	3.1	4.7	4.1	4.5
Current account / GDP (2016)	%	0.2	1.5	0.9	1.2
Current account / GDP (2017)	%	0.1	1.0	0.7	0.6

Source: forecasts of individual institutions, own calculations

In 2016 and 2017, the monitored institutions on average expect growth of real GDP to reach 2.5% or 2.9%, respectively. The MoF's forecast is in line with this estimate, even though it does expect the rate of economic growth to accelerate in 2017.

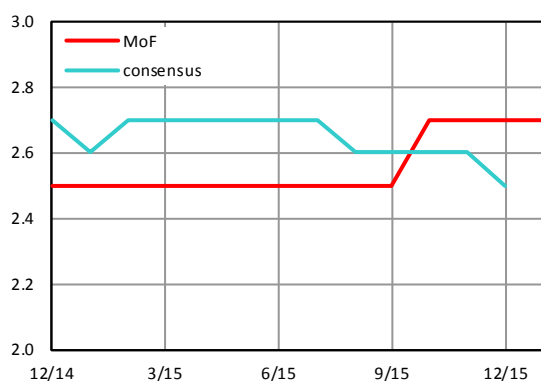
According to the institutions' estimates, the average inflation rate should be 1.4% in 2016 and 2.2% in 2017. According to the MoF's forecast, which already takes into account the current slump in the crude oil price, the return to the 2% target of the CNB should be considerably slower.

According to the monitored institutions' forecasts, the nominal average wage should increase by 3.9% in 2016 and by 4.1% in 2017. According to the MoF's forecast, the average wage growth should be marginally higher and reach 4.3% in 2016 and 4.5% in 2017.

In the opinion of the monitored institutions, the current account of the balance of payments should reach a slight surplus in 2016 and 2017 of 0.9% of GDP or 0.7% of GDP, respectively. The MoF's forecast is in line with these estimates.

**Graph D.1: Forecast of Real GDP Growth for 2015**

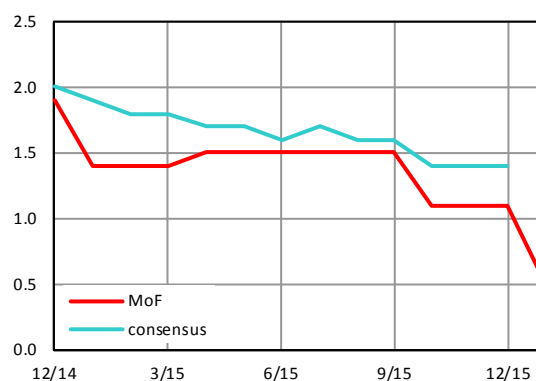
in %; the horizontal axis shows the month, in which the monitoring was conducted



Source: forecasts of individual institutions, own calculations

**Graph D.2: Forecast of Average Inflation Rate for 2015**

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



Source: forecasts of individual institutions, own calculations

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