Macroeconomic
Forecast
of the Czech Republic

January 2017

Macroeconomic Forecast
of the Czech Republic

January 2017

Table of Contents

List of Tables

List of Graphs

List of Abbreviations

const.pr.	constant prices
CNB	Czech National Bank
CPI	consumer price index
CR	Czech Republic
curr.pr.	current prices
CZSO	Czech Statistical Office
EA19	euro zone consisting of 19 countries
EC	European Commission
ECB	European Central Bank
ESI	Economic Sentiment Indicator
EU28	European Union consisting of 28 countries
Fed	Federal Reserve System
GDP	gross domestic product
GVA	gross value added
HICP	harmonised index of consumer prices
IMF	International Monetary Fund
LFS	Labour Force Survey
MFI	monetary financial institutions
MoF	Ministry of Finance
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 **12 January 2017**.

Notes

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

Data from the previous forecast (November 2016) are indicated by italics. Data relating to the years 2019 and 2020 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 the Forecast

In accordance with our expectations, economic growth in the Czech Republic slowed down in the third quarter of 2016. **Real GDP increased only by 0.2% QoQ** (seasonally adjusted), which was the lowest growth rate since the first quarter of 2014. In comparison with the same period of the previous year, real GDP **rose by 1.6%**. The slowdown of growth was caused mainly by one-off factors.

On the demand side, it was in particular the development of **foreign trade**. The YoY growth of real exports of goods and services slowed down from 7.9% in the second quarter of 2016 to 1.1%. Imports also saw a similar change in dynamics, and the contribution of net exports to GDP growth thus decreased from 2.1 pp to 0.5 pp in the third quarter. Slowdown of growth of **domestic demand** from 1.6% to 1.1%, to which government consumption contributed the most, was less marked. Investment of the general government sector decreased by more than one fourth in comparison with a very high base of the extraordinary year 2015. Conversely, an increase in investment activity in the non-financial corporations sector can be seen as a very positive phenomenon.

On the supply side, the YoY growth of **gross value added** in the third quarter of 2016 **slowed down to 1.3%**. The slowdown applied, with different degrees of intensity, to all sectors of the economy with the exception of financial and insurance activities, real estate activities and agriculture. A YoY decline was recorded in construction, which has been facing long-term problems, and in non-manufacturing industry, i.e. in mining and quarrying, electricity supply (where temporary shutdowns of nuclear power plants have apparently been reflected), and water supply.

However, we consider most of these factors to be one-off events. Therefore, we do not expect this rather poor performance to repeat also in the fourth quarter of 2016. Confidence indicators and the Purchasing Managers' Index, industrial production and retail sales point to stronger economic growth for this period.

This leads to a **slight increase in the estimate of real GDP growth in 2016** from 2.4% **to 2.5%**.

This year, the main change in comparison with 2016 will be, on the side of domestic demand, renewed growth in gross fixed capital formation. A gradual start of drawing of EU funds from the 2014–2020 programming period will support not only government but also private investment. Investment of the general government sector could thus increase again after a deep slump in 2016, whereas private investment growth should slightly accelerate. Along with a slowdown in the growth of exports, the dynamics of investment, which is the most import-intensive component of domestic demand, will be re-

flected in a reduction in the contribution of net exports to GDP growth.

Good labour market situation coupled with a relatively fast growth in wages should lead, despite higher expected inflation, to favourable developments of household consumption.

Prices of crude oil and mineral fuels, which can be expected to continue to increase, will probably weigh on economic growth. The expected discontinuation of the CNB's exchange rate commitment will be probably associated with a certain strengthening of the real exchange rate.

The forecast for real growth **in 2017** is also slightly raised from 2.5% **to 2.6%**. In **2018**, real GDP should increase **by 2.4%**.

For most of 2016, economic growth was accompanied by very low inflation. However, this changed in the last two months of the year. In December 2016, the YoY growth in **consumer prices** unexpectedly accelerated to 2.0% and inflation thus reached the CNB's inflation target. The acceleration of inflation was driven mainly by prices of food and fuel, which reflected the increasing prices of crude oil. The anti-inflationary effect of the decrease in prices of imported goods has declined significantly.

This acceleration of growth of consumer prices leads to an increase in the forecast for the average **inflation rate** in 2017 from 1.2% to 2.0%. The inflation rate is expected to reach 1.6% in 2018.

On the **labour market**, the economic growth is reflected in the dynamic development of all important indicators. Employment grew by strong 1.8% YoY in the third quarter. The seasonally adjusted unemployment rate (LFS) decreased further to 3.7% in November 2016 and it has been the lowest in the whole EU since the beginning of 2016. Low unemployment and certain mismatches between the supply of and demand for labour are reflected in fast growth of real wages and unit labour costs.

The **unemployment rate** (LFS) is probably already very close to its natural rate, and has therefore very limited room for further decline. For this reason, neither the estimate for the year 2016 (4.0%) nor the forecast for 2017 (3.9%) have changed. The forecast for 2018 is also 3.9%.

Since 2014, the **current account of the balance of payments** has been reaching steadily increasing surplus. In the third quarter of 2016, it reached 1.9% of GDP (in annual terms), and was therefore again the highest in the history of the independent Czech Republic. The surpluses on the balance of goods and services are thus already apparently exceeding the primary income deficit, which is mostly influenced by an outflow of income from

foreign direct investment in the form of dividends and reinvested earnings.

The expected higher prices of mineral fuels, lower export market growth and more accurate data for the past lead to a downward revision of the forecast for the **surplus of** **the current account** of the balance payments. The forecast for 2016 is lowered from 2.3% of GPD to 2.1% of GDP, the forecast for 2017 from 1.8% of GDP to 1.2% of GDP. For 2018 a surplus of 1.3% of GDP is forecasted.

Table: Main Macroeconomic Indicators

		2012	2013	2014	2015	2016	2017	2018	2016	2017
							Current forecast		Previous forecast	
Gross domestic product	bill. CZK	4 060	4 098	4 314	4 555	4 719	4 885	5 082	4 703	4 864
Gross domestic product	growth in %, const.pr.	-0.8	-0.5	2.7	4.5	2.5	2.6	2.4	2.4	2.5
Consumption of households	growth in %, const.pr.	-1.2	0.5	1.8	3.0	2.7	2.4	2.4	2.5	2.8
Consumption of government	growth in %, const.pr.	-2.0	2.5	1.1	2.0	2.0	1.6	1.4	2.3	1.6
Gross fixed capital formation	growth in %, const.pr.	-3.1	-2.5	3.9	9.0	-2.4	3.8	3.0	-3.6	2.8
Net exports	contr. to real GDP growth, pp	1.3	0.1	-0.5	0.1	1.1	0.2	0.3	1.3	0.2
Change in inventories	contr. to real GDP growth, pp	-0.2	-0.7	1.1	0.3	0.4	0.0	0.0	0.4	0.0
GDP deflator	growth in %	1.5	1.4	2.5	1.0	1.1	0.9	1.6	0.8	0.9
Average inflation rate	%	3.3	1.4	0.4	0.3	0.7	2.0	1.6	0.5	1.2
Employment (LFS)	growth in %	0.4	1.0	0.8	1.4	1.8	0.3	0.3	1.6	0.3
Unemployment rate (LFS)	average in %	7.0	7.0	6.1	5.1	4.0	3.9	3.9	4.0	3.9
Wage bill (domestic concept)	growth in %, curr.pr.	2.6	0.5	3.6	4.4	5.6	5.0	4.5	5.4	5.0
Current account balance	% of GDP	-1.6	-0.5	0.2	0.9	2.1	1.2	1.3	2.3	1.8
General government balance	% of GDP	-3.9	-1.2	-1.9	-0.6	0.5	.	.	-0.2	-0.2
Assumptions:										
Exchange rate CZK/EUR		25.1	26.0	27.5	27.3	27.0	26.9	26.3	27.0	26.9
Long-term interest rates	% p.a.	2.8	2.1	1.6	0.6	0.4	0.6	1.1	0.4	0.6
Crude oil Brent	USD/barrel	112	109	99	52	44	57	57	44	51
GDP in Eurozone	growth in %, const.pr.	-0.9	-0.3	1.2	2.0	1.6	1.4	1.6	1.4	1.1

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

Growth around 2.5% driven by domestic demand

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

Legend: Net exports; Final consumption; Gross capital formation; Gross domestic product

Forecast

2010 2012 2014 2016 2018
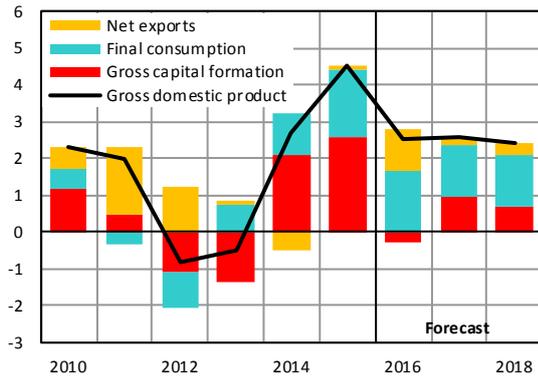
Source: CZSO. Calculations of the MoF.

GDP growth should continue

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

Legend: Net taxes on products; GVA; GDP

Forecast

I/13 I/14 I/15 I/16 I/17 I/18
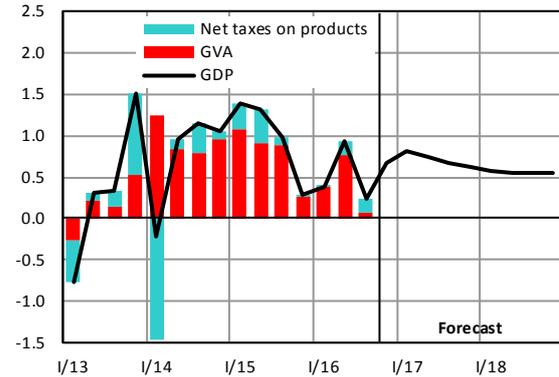
Source: CZSO. Calculations of the MoF.

Inflation should hover around 2% this year

decomposition of YoY growth of CPI, contributions in pp

Legend: Market increase; Administrative measures; CPI

Forecast

I/13 I/14 I/15 I/16 I/17 I/18
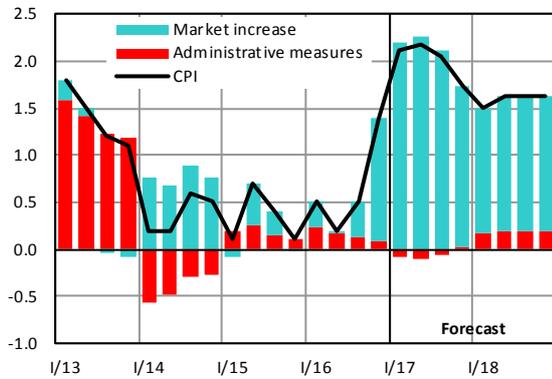
Source: CZSO. Calculations of the MoF.

Unemployment should continue to decline further

registered unemployment, in thous. of persons, seasonally adjusted

Forecast

I/13 I/14 I/15 I/16 I/17 I/18
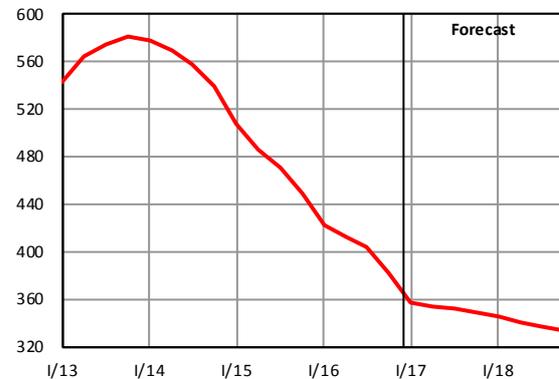
Source: Ministry of Labour and Social Affairs. Calculations of the MoF.

Growth of nominal wages should exceed 4%

average gross monthly wage, YoY growth rate, in %

Legend: nominal; real

Forecast

I/13 I/14 I/15 I/16 I/17 I/18
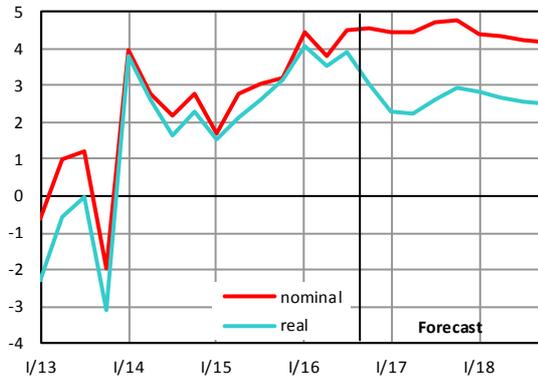
Source: CZSO. Calculations of the MoF.

Current account should remain in surplus

in % of GDP (yearly moving sums)

Legend: Incomes; Goods and services; Current account

Forecast

I/13 I/14 I/15 I/16 I/17 I/18
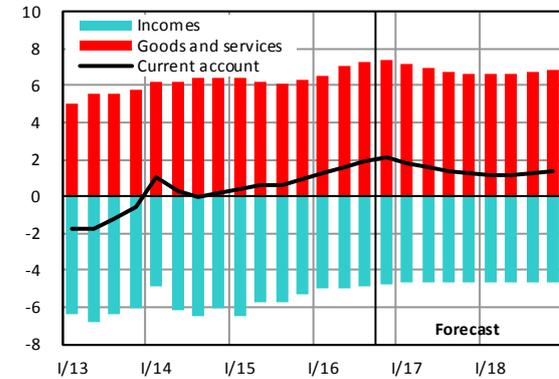
Source: CNB, CZSO. Calculations of the MoF.

Risks to the Forecast

Risks to the forecast are **tilted to the downside**, in particular due to the external environment.

In our view, the biggest risk is the uncertainty associated with the process and impacts **of the United Kingdom's withdrawal from the EU**. The Czech economy could be influenced in particular through foreign trade (slowdown in the growth of foreign demand), especially if the future arrangement of relationship between the UK and the EU in the area of international trade diverges significantly from the current state. On the side of domestic demand, some investment projects may be postponed as a result of slower growth of foreign demand or increased uncertainty.

Some **geopolitical factors** could also have an adverse effect. Conflicts in the Middle East and Northern Africa caused a deep **migration crisis**, the medium-term to long-term economic impact of which on individual EU states cannot be estimated yet. Provided, however, that the number of applicants for asylum in the Czech Republic does not increase considerably, direct impacts on the Czech economy should be negligible. Uncertainty may also increase with the upcoming **elections in France, Germany and the Netherlands**. Global economic growth could be negatively affected by a possible change in the **direction of economic policy of the United States**, in particular in the area of openness of foreign trade.

Economic growth in some countries of the EU, and indirectly via foreign trade also in the Czech Republic, could be affected negatively by possible materialization of **risks in the financial sector**, related to not only a high share of non-performing loans in the balance sheets of some European banks but also to concerns about future development of profitability and capital adequacy of some systemically important institutions. However, the results of the latest stress tests of the banking sector, published by the CNB in November 2016, once again confirmed high resilience of Czech banks to even very negative economic shocks.

Another negative risk is the possibility of a **more considerable slowdown of growth of the Chinese economy**. The expected continuation of a gradual slowdown of economic growth in China should not be crucial for the Czech Republic, despite the fact that the interconnectedness of the Czech and Chinese economies is higher than implied by data on their mutual foreign trade, due to their involvement in the global supply chains.

With the mid-2017 approaching, when the exchange rate commitment should likely be discontinued according to statements of the CNB Bank Board, **growing pressures on appreciation of the koruna** are apparent, supported by the acceleration in inflation at the end of the last year. Therefore, it cannot be ruled out that the CNB will resort to the use of other, less conventional, monetary policy instruments in response to these appreciation pressures or within its strategy of discontinuation of the exchange rate commitment. Any increased exchange rate volatility accompanying the discontinuation of the exchange rate commitment and/or the possibility of short-term significant appreciation of the koruna after the end of the current exchange regime could pose a problem for some companies. However, we believe that such a development would have a negative impact especially at the microeconomic level without significant effects on the entire economy.

The combination of the environment of low (not only monetary-policy) interest rates and economic growth is reflected in the Czech Republic by an acceleration of mortgage loan growth. Together with the factors limiting the supply of residential real estate (some of which are Prague-specific), this development contributes to growth of offer price of flats. Should the fast growth of housing loans and real estate prices continue, it could result in a **bubble in the real estate market** and influence negatively financial stability.

1 Forecast Assumptions

1.1 External Environment

After a slowdown of economic growth in the first half of 2016 due to weak performance of emerging economies, global economic growth accelerated slightly in the third quarter. In 2016 as a whole, it could have marginally exceeded the 3% threshold. However, developments in individual regions remain diverse. Whereas economic growth is still relatively modest in Western Europe, it has visibly accelerated in the USA. Some large emerging economies have a negative influence on global growth (Brazil, Russia and recently also Turkey, although the pace of decline in the first two is already slowing down).

Growth of the Chinese economy has long been slowing down, though it is still high and China thus remains the main driver of global economic growth. QoQ growth of real GDP, which was 1.8% in the third quarter, largely reflects fiscal and monetary stimuli through which the government is trying to achieve the planned rate of economic growth and increase household consumption as well as the share of services in the economy. Situation in industry is improving slightly, which is also indicated by the Purchasing Managers Index in Manufacturing and recently also by an increase in producer prices. However, some sectors are still struggling with excess capacities (e.g. coal mining or steel industry). After the turbulences at the beginning of 2016, the situation on the financial markets has already stabilized; however, the decrease in foreign exchange reserves has resumed. Considerable fear is also caused by the quick growth of loans despite tightening regulations, the aim of which is to limit speculative financial activities. Pressure on the banking sector is further increased by growing volume of non-performing loans. From a long-term perspective, demographic development is a major risk.

1.1.1 United States of America

Growth of the U.S. economy accelerated considerably in the third quarter of 2016, when GDP increased by 0.9% QoQ (*versus 0.5%*). Domestic and foreign demand contributed to the growth. The main driver of growth was again household consumption, which benefited from a good situation on the labour market. Government expenditure increased only slightly and business investment stagnated again. Growth of exports was largely due to poor harvest of soybeans in South America.

In reaction to the satisfactory performance of the US economy, solid job gains and expectations of the pick-up in inflation rate, the Fed raised interest rates by 0.25 pp to 0.50–0.75% in December 2016. It also noted that it intended to increase the interest rates gradually three times in 2017. The rise in the price level accelerated in the second half of 2016, reaching 1.7% YoY in November 2016. However, the Fed expects that the inflation rate will approach its 2% target as late as in the medium-term horizon as the effects of low prices of energies and imports fade and the situation on the labour market improves further.

We expect that economic activity will accelerate slightly, with household consumption remaining the key factor. Private consumption is supported by a good situation on the labour market, where unemployment rate decreased to 4.6% in November 2016 and average nominal wage increased by 4.5% YoY in the third quarter. Economic growth should be, with regard to strong USD exchange rate and continued relatively poor performance of emerging economies, slowed down mainly by exports. The economy can also be influenced by changes in fiscal and economic policies in connection with the election of the new president. Market expectations from the new American administration are very high, as evidenced by developments in financial markets and a number of confidence indicators in the last two months. We estimate that real GDP growth was 1.6% in 2016 (*versus 1.4%*). We expect that economic growth will accelerate to 2.3% (*versus 2.2%*) in 2017 and to 2.4% in the following year.

1.1.2 European Union

Economic recovery in the European Union still remains relatively fragile. In the third quarter of 2016, QoQ GDP growth reached 0.4% in the EU28 (*versus 0.3%*) and 0.3% in the EA19. In a YoY comparison, GDP of the EU28 rose by 1.9% (*versus 1.8%*), while GDP of the EA19 increased by 1.7%. Developments in individual states remain considerably differentiated. In many countries, structural problems, loss of competitiveness, low growth of investment or high debts of the public and private sectors are still acting as a brake on a more significant recovery.

The ECB aims to increase inflation and support the recovery in the Euro area. It has been keeping the main refinancing rate at 0.00% and the deposit rate at –0.40% since March 2016. Moreover, the ECB assumes that the benchmark interest rates will remain at the same or lower levels for a longer time, and definitely beyond the horizon of net asset purchases (monthly purchases of assets worth EUR 80 billion should take place until the end of March, and purchases worth EUR 60 billion from April to December or for a longer time if necessary). The aim of the eased monetary conditions is to increase credit activity and ensure that inflation, through an increase in investment and consumption, returns to the inflation target (inflation below, but close to, 2%). In the second half of 2016 the YoY HICP growth renewed, reaching 0.6% in the EA19 in November 2016.

Situation on the labour market is gradually improving due to the recovery of economic activity. Unemployment rate in the EU28 has been decreasing since mid-2013, reaching 8.3% in November 2016 (YoY decline of 0.7 pp). However, enormous differences still persist among individual economies. The worst situation is still in Greece, where the unemployment rate stood at 23.1% in September 2016. Of the EU28 countries, for which data for November 2016 was available as of the cut-off date, the unemployment rate was the highest in Spain (19.2%), Cyprus (14.2%) and Italy (11.9%); on the other hand, the lowest rates were recorded in the Czech Republic (3.7%) and Germany (4.1%).

Graph 1.1.1: Unemployment rate in the EU in November 2016
in %, seasonally adjusted data
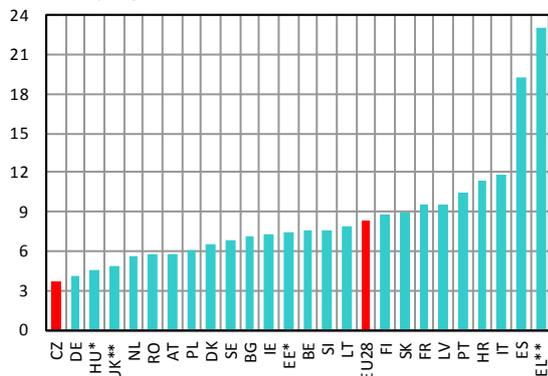
Note: *) October 2016. **) September 2016.
Source: Eurostat.

We expect that economic growth will be driven mainly by domestic demand in the following years. The main driver of economic growth will remain household consumption, which will be supported by low interest rates in the short term and by improving labour market situation in the long term. Investment, however, which will continue to be supported by the accommodative monetary policy of the ECB, will be negatively affected by the uncertainty associated with the United Kingdom's decision to leave the EU. The impacts on economic growth in the EU cannot be currently quantified because the United Kingdom is planning to launch negotiations about its withdrawal from the EU only at the end of March and the future arrangement of relationship between the United Kingdom and the EU is unknown. We expect, however, that these impacts will overall be relatively low. With respect to the expected gradual global economic recovery, the dynamics of exports should also slightly accelerate. The contribution of exports to economic growth will, however, be significantly lower in comparison with the contribution of domestic demand. Conversely, factors that will dampen economic growth include problems in the banking sector (a high share of non-performing loans on the balance sheets of some banks will influence the banks' ability and willingness to provide new loans) or high indebtedness in some euro area economies. Another factor of uncertainty is parlia-

mentary and presidential elections, which should be held in Germany, France and the Netherlands this year. We estimate that real GDP in the EA19 increased by 1.6% in 2016 (*versus 1.4%*). For this year we expect a growth of 1.4% (*versus 1.1%*), for 2017 a slight acceleration to 1.6%.

Graph 1.1.2: Growth of GDP in the EA19 and in the USA
QoQ growth rate, in %, seasonally and working day adjusted
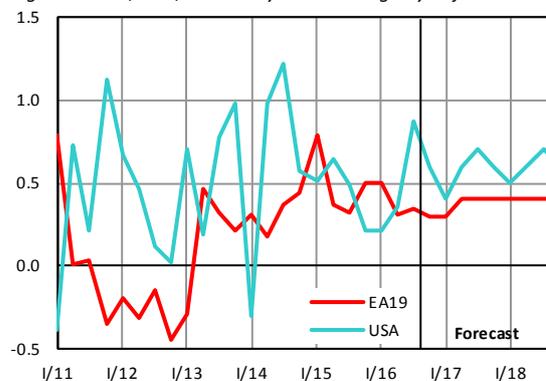
Source: Eurostat. Calculations of the MoF.

The growth rate of the **German** economy slowed down in the third quarter of 2016, with real GDP increasing by only 0.2% QoQ (*versus 0.3%*). The growth was driven mainly by household and general government consumption expenditure, with both of these components contributing to the growth equally. While households benefited from pension growth and especially the good situation on the labour market reflecting the growth in wages and employment, the general government sector consumption rose mainly in connection with an increase in expenditures associated with the migration crisis. After a decline in the previous quarter, gross fixed capital formation showed stagnation, thanks to strong growth in housing investment. Conversely, economic growth was dampened by the contribution of net exports. While the decrease in exports reflected the uncertainty associated with the United Kingdom's decision to leave the EU, weak foreign demand and slow recovery in the euro area, imports slightly increased with regard to the strong domestic demand.

The situation on the labour market is developing favourably. The YoY growth of real wages reaches almost 2% and the unemployment rate is steadily and slightly decreasing. The impact of the arrival of migrants has not yet manifested itself on the labour market; however, with regard to the increasing number of positively processed asylum applications, a slight increase in the unemployment rate may be expected in the following years. The Ifo indicator has reached the highest level since February 2014, with the assessment of current economic situation being the best since November 2011. The Purchasing Managers' Indexes in industry and in the area of services have also improved. The development of the consumer confidence index also remains encouraging.

Graph 1.1.3: Ifo (Germany) and Czech manufacturing production

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

Source: CESifo, CZSO.

Economic growth should be driven mainly by domestic demand. In the short-term horizon, the household consumption expenditure will mainly be supported by an increase of wages in the general government sector and of pensions, while a good labour market situation and the related growth of real wages will have a more permanent effect. The increase in government consumption expenditure will be supported mainly by expenditure related to the migration crisis, while investment in infrastructure and housing will particularly contribute to an increase in government investment. Growth of exports should be unfavourably affected by the United Kingdom's withdrawal from the EU, as it is the third biggest export market for the German economy (the share of exports to the UK in total exports was 7.5% in 2015, which corresponded to 3.9% of German GDP). Another risk for further development is parliamentary elections taking place in autumn this year. We estimate that growth of the German economy was 1.6% in 2016 (*versus 1.7%*). It should remain at similar level also in the coming years; we estimate real GDP growth to be 1.5% in 2017 (*versus 1.6%*), and 1.6% in the following year.

The performance of the **French** economy remained rather poor also in the third quarter of 2016, because it only increased by 0.2% QoQ after a slight decrease in the previous quarter. The growth rates of household consumption, government consumption and gross fixed capital formation reached rather insignificant values again. The only component which contributed to the economic growth more significantly was a change in inventories. Net exports had an opposite effect as the growth rate of imports overshadowed the poor growth rate of exports. The labour market situation started to improve slowly again, and the unemployment rate fell below 10% once more. The slight improvement of economic development is also indicated by leading indicators, many of them showing an increasing trend (consumer confidence, business sentiment or Purchasing Managers' Indexes in manufacturing and services). A faster recovery, however, will be hampered by long-term

problems of the French economy – low competitiveness and the associated declining share of export markets, continuing rigidities on the labour market or high level of government and private sector debts. Another risk for further development is presidential and parliamentary elections taking place in spring this year. We estimate that the real GDP growth was only 1.1% in 2016 (*versus 1.3%*). We expect that economic growth will remain relatively modest and the French economy will grow by 1.3% (*unchanged*) in 2017 as well as in the following year.

After a decent performance in the previous quarter, growth of the **Polish** economy has slowed down dramatically as GDP increased by only 0.2% QoQ (*versus 0.9%*). Economic growth was mainly driven by household consumption, which was supported by a decrease in consumer prices and social benefits growth; government consumption expenditure and a change in inventories also contributed positively to growth. Net exports had an impact in the opposite direction as the growth of imports due to the strong domestic demand exceeded the growth of exports. A decrease in investment, which further deepened in comparison with the previous quarter and reached 7.7% in a YoY comparison, is mainly due to a deep drop in public investment as a result of termination of projects from the previous financial perspective of the EU. The deep decline could also have been due to concerns of the private sector related to the increasing government interventions in the economy. In the coming two years, economic growth should continue to be driven mainly by household consumption, which will be supported by growth of social benefits, good labour market situation, low interest rates and increasing consumer confidence. Investment growth should resume with the start of programmes of the 2014–2020 financial perspectives; however, lower predictability of government policies is a risk. We estimate that real GDP increased by 2.3% in 2016 (*versus 2.7%*). For this year we expect a growth of 2.9% (*versus 3.3%*), for 2017 a slight acceleration to 3.1%.

Growth of the **Slovak** economy slowed down slightly in the third quarter of 2016, when GDP increased by 0.7% QoQ (*versus 0.8%*). Economic growth was driven by foreign demand, with decline in imports outweighing the drop in exports. A decrease in domestic demand was due to a fall in investment activity. In the private sector, investment related to electricity supply decreased and there was also a correction of strong growth of investment in the automotive industry in the previous quarter. In the public sector, the main cause of the drop in investment was related to completion of projects from the previous financial perspective of the EU. On the side of domestic demand, the fastest growing component was, despite a slight slowdown, household consumption. It was supported by a YoY real wage growth of 4% (amid decreasing price level) and falling unemployment rate, which reached 9.0% in November 2016 (a YoY decrease

by 1.9 pp). With a view to the steadily improving labour market situation and low-inflation environment, household consumption should show a steady growth in the coming years. A gradual recovery in investment will also be supported by government investment in infrastructure or continued investment in the automotive industry. Start of production of the Jaguar Land Rover car factory should significantly contribute to an acceleration of exports in 2018. Economic growth will also be supported by a decrease in the corporate income tax rate by 1 pp to 21% from 2017 or by an increase in lump-sum expenses for self-employed persons from 40% to 60% together with a sharp increase in their ceiling from 2018. We estimate that GDP increased by 3.4% in 2016 (*versus 3.6%*). For this year we expect a growth of 3.2% (*versus 3.4%*), for 2018 a slight acceleration to 3.5%.

1.1.3   Commodity Prices

In the fourth quarter of 2016, the average price of Brent crude oil reached USD 49.1/barrel (*in line with the forecast*). It thus increased by 7.2 % QoQ. As of the cut-off date of the Forecast, crude oil traded close to USD 56/barrel.

The price of Brent crude oil increased significantly after 30 November 2016, when an OPEC cartel agreement to limit output was announced. A reduction in daily output to 32.5 million barrels (i.e. by 1.2 million barrels) has been in effect since 1 January 2017. Although there are opinions that the quotas may not be adhered to, the price rather suggests that market participants see the agreement as trustworthy. The reason is that the price increase has not been followed by a correction as was the case after the previous agreement from the end of September 2016. Moreover, some non-OPEC countries joined the agreement; their daily output should decrease by a further 0.6 million barrels. The total restriction of output by 1.8 million barrels daily approxi-

mately corresponds to the growth in stocks that occurred in 2015. On the other hand, the market will be affected by an increase in output in non-OPEC countries which have not joined the agreement. These include in particular the United States of America, where the number of active drilling rigs has been increasing for more than half a year. The increase in crude oil stocks is likely almost over; stocks will probably decrease in the 2nd half of 2017.

In line with the relatively flat curve of futures prices, we expect the Brent crude oil prices to stagnate at current levels. The price should reach 57 USD/barrel in 2017 and 2018 (*versus 51 USD/barrel in 2017*). The average annual price in 2017 should thus increase after four consecutive years of decline (see Table 1.1.3).

In koruna terms, the YoY growth in the Brent crude oil price should reach the highest value in the first quarter of 2017 due to a very low comparison base (see Graph 1.1.4).

Graph 1.1.4: Koruna Price of Brent Crude Oil
YoY change of the koruna price of Brent crude oil in %, contributions of the CZK/USD exchange rate and USD price of Brent crude oil in pp
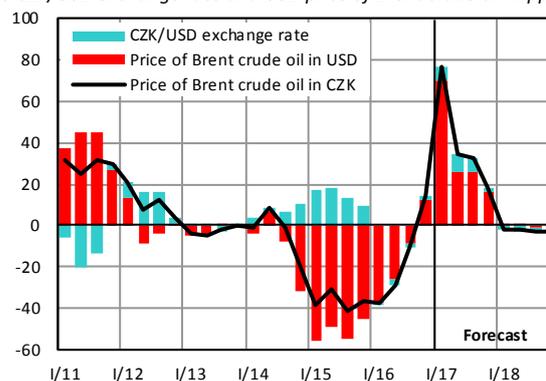
Source: CNB, U. S. Energy Information Admin.. Calculations of the MoF.

Table 1.1.1: Gross Domestic Product – yearly

YoY real growth rate, in %

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
								Estimate	Forecast	Forecast
World	-0.1	5.4	4.2	3.5	3.3	3.4	3.2	3.1	3.3	3.5
USA	-2.8	2.5	1.6	2.2	1.7	2.4	2.6	1.6	2.3	2.4
China	9.2	10.6	9.5	7.7	7.7	7.3	6.9	6.6	6.3	6.2
EU28	-4.4	2.1	1.7	-0.5	0.2	1.6	2.2	1.8	1.7	1.9
EA12	-4.5	2.1	1.5	-0.9	-0.3	1.2	2.0	1.6	1.4	1.6
Germany	-5.6	4.1	3.7	0.5	0.5	1.6	1.7	1.6	1.5	1.6
France	-2.9	2.0	2.1	0.2	0.6	0.6	1.3	1.1	1.3	1.3
United Kingdom	-4.3	1.9	1.5	1.3	1.9	3.1	2.2	2.0	1.2	1.2
Austria	-3.8	1.9	2.8	0.7	0.1	0.6	1.0	1.4	1.4	1.5
Hungary	-6.6	0.7	1.7	-1.6	2.1	4.0	3.1	2.1	2.4	2.6
Poland	2.6	3.7	5.0	1.6	1.4	3.3	3.9	2.3	2.9	3.1
Slovakia	-5.4	5.0	2.8	1.7	1.5	2.6	3.8	3.4	3.2	3.5
Czech Republic	-4.8	2.3	2.0	-0.8	-0.5	2.7	4.5	2.5	2.6	2.4

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

Graph 1.1.5: Gross Domestic Product

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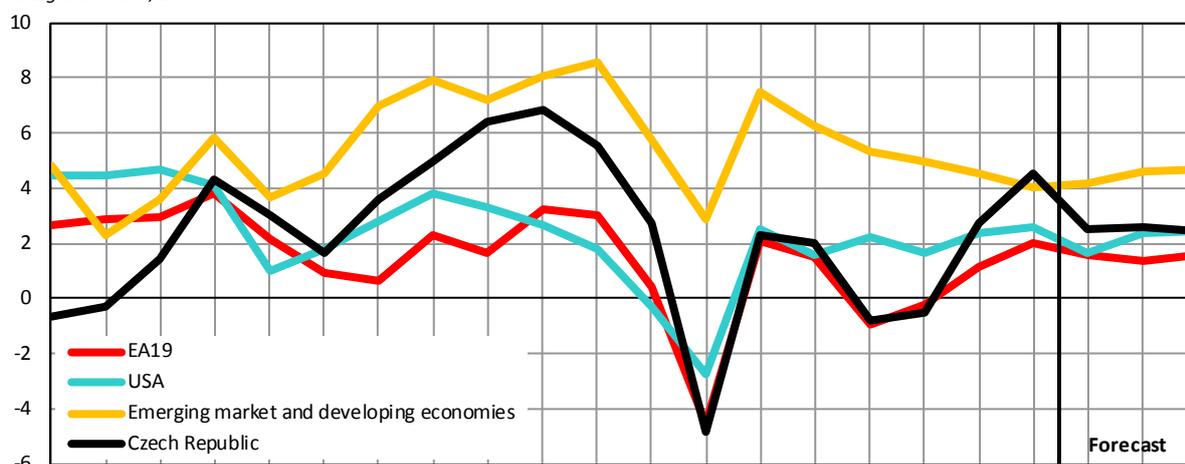
Note: Emerging market and developing economies comprising 154 countries (according to the IMF's classification)
Source: Eurostat, IMF. Calculations of the MoF.

Graph 1.1.6: Gross Domestic Product – Czech Republic and the neighbouring states

YoY real growth rate, in %
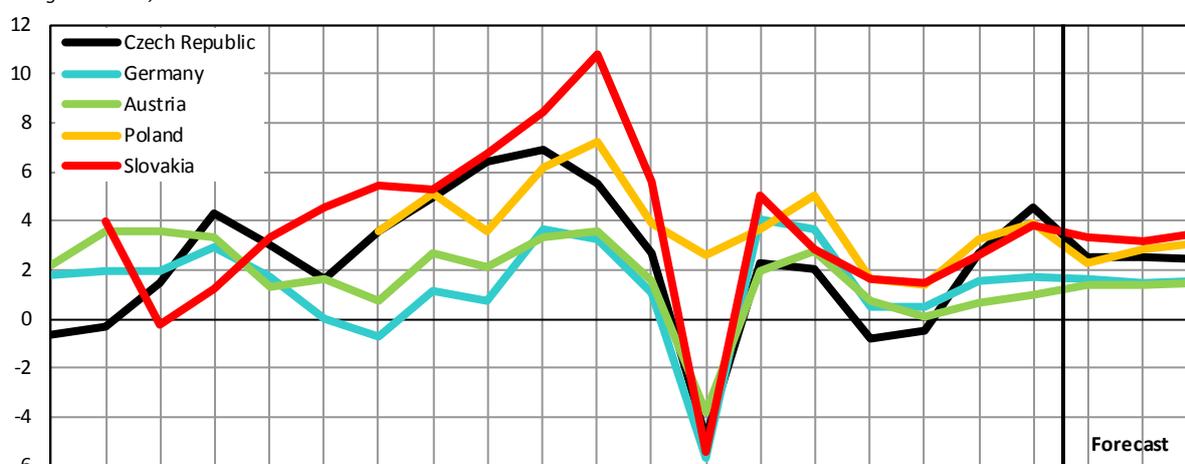
Source: Eurostat. Calculations of the MoF.

Table 1.1.2: Gross Domestic Product – quarterly

real growth rate, in %, seasonally adjusted data

		2016				2017			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
					Estimate	Forecast	Forecast	Forecast	Forecast
USA	QoQ	**0.2**	**0.4**	**0.9**	**0.6**	**0.4**	**0.6**	**0.7**	**0.6**
	YoY	1.6	1.3	1.7	2.0	2.2	2.5	2.3	2.3
China	QoQ	**1.2**	**1.9**	**1.8**	**1.5**	**1.4**	**1.5**	**1.6**	**1.5**
	YoY	6.6	6.6	6.7	6.6	6.8	6.3	6.1	6.1
EU28	QoQ	**0.5**	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**	**0.5**	**0.4**
	YoY	1.9	1.9	1.9	1.7	1.6	1.6	1.7	1.7
EA12	QoQ	**0.5**	**0.3**	**0.3**	**0.3**	**0.3**	**0.4**	**0.4**	**0.4**
	YoY	1.7	1.7	1.7	1.5	1.3	1.4	1.4	1.5
Germany	QoQ	**0.7**	**0.4**	**0.2**	**0.3**	**0.4**	**0.4**	**0.5**	**0.4**
	YoY	1.8	1.7	1.7	1.6	1.3	1.3	1.6	1.7
France	QoQ	**0.6**	**-0.1**	**0.2**	**0.3**	**0.3**	**0.4**	**0.5**	**0.4**
	YoY	1.2	1.1	1.0	1.0	0.7	1.2	1.5	1.6
United Kingdom	QoQ	**0.4**	**0.7**	**0.5**	**0.3**	**0.2**	**0.2**	**0.3**	**0.2**
	YoY	1.9	2.1	2.3	1.9	1.7	1.2	1.0	0.9
Austria	QoQ	**0.6**	**0.1**	**0.5**	**0.4**	**0.3**	**0.3**	**0.4**	**0.4**
	YoY	1.5	1.3	1.5	1.6	1.2	1.5	1.4	1.4
Hungary	QoQ	**-0.6**	**1.1**	**0.3**	**0.6**	**0.5**	**0.6**	**0.7**	**0.6**
	YoY	0.9	1.9	1.6	1.3	2.5	2.0	2.4	2.4
Poland	QoQ	**-0.1**	**0.8**	**0.2**	**0.6**	**0.8**	**0.9**	**0.9**	**0.8**
	YoY	2.8	3.1	2.2	1.4	2.4	2.5	3.2	3.4
Slovakia	QoQ	**0.7**	**0.9**	**0.7**	**0.6**	**0.8**	**0.9**	**0.9**	**0.8**
	YoY	3.7	3.6	3.2	2.9	3.0	3.0	3.2	3.4
Czech Republic	QoQ	**0.4**	**0.9**	**0.2**	**0.7**	**0.8**	**0.7**	**0.7**	**0.6**
	YoY	3.0	2.6	1.9	2.2	2.7	2.5	2.9	2.9

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

Graph 1.1.7: Gross Domestic Product – Czech Republic and the neighbouring states

Q3 2008=100, seasonally adjusted data, constant prices
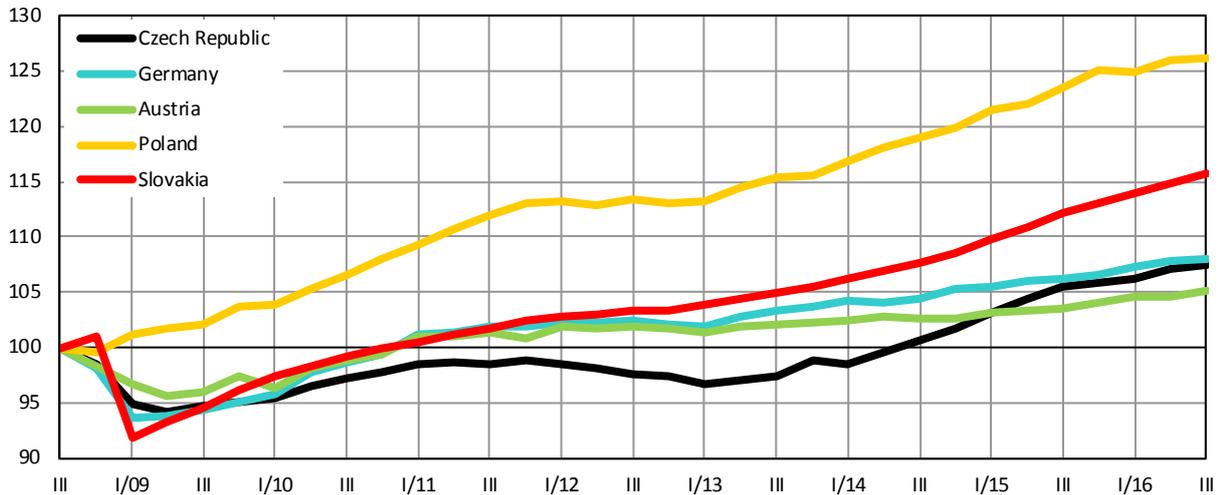
Source: Eurostat. Calculations of the MoF.

Graph 1.1.8: Cyclical Component of GDP – Czech Republic and Germany

in % of GDP, derived using the Hodrick-Prescott filter
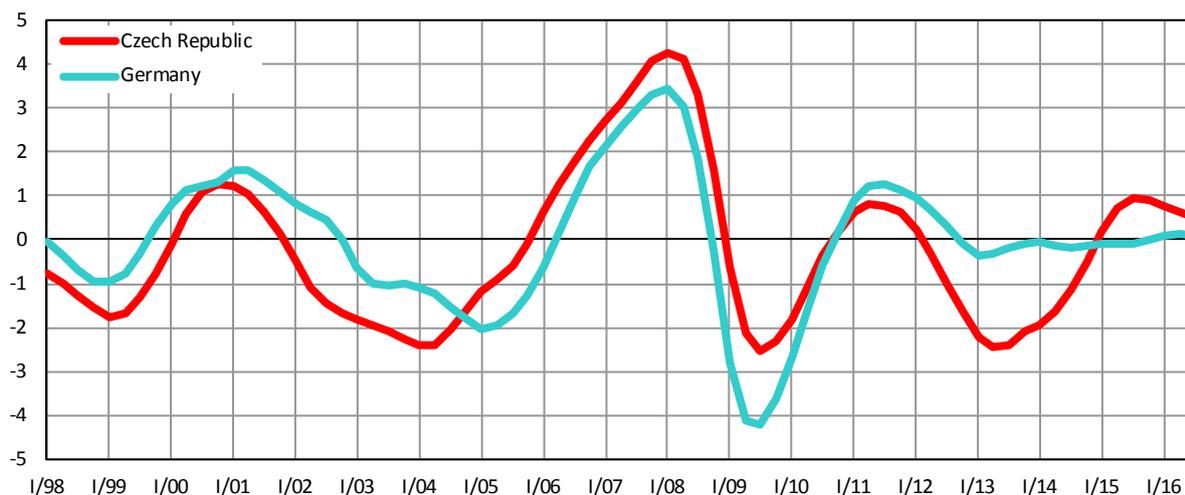
Source: Eurostat. Calculations of the MoF.

Table 1.1.3: Prices of Selected Commodities – yearly

spot prices

		2009	2010	2011	2012	2013	2014	2015	2016	2017 Forecast	2018 Forecast
Crude oil Brent	*USD/barrel*	**61.5**	**79.6**	**111.3**	**111.6**	**108.6**	**99.0**	**52.4**	**43.6**	**57**	**57**
	growth in %	-36.5	29.3	39.9	0.3	-2.6	-8.8	-47.1	-16.8	31.0	-0.2
Crude oil Brent index *(in CZK)*	*2005=100*	**76.1**	**100.0**	**129.5**	**143.8**	**139.9**	**134.6**	**85.1**	**70.1**	**96**	**94**
	growth in %	-28.6	31.4	29.5	11.0	-2.7	-3.8	-36.8	-17.5	37.3	-2.5
Wheat	*USD/t*	**190.1**	**194.5**	**280.0**	**276.1**	**265.8**	**242.5**	**185.6**	**143.2**	**.**	**.**
	growth in %	-33.7	2.3	44.0	-1.4	-3.8	-8.8	-23.5	-22.9	.	.
Wheat price index *(in CZK)*	*2005=100*	**98.5**	**100.0**	**133.6**	**146.4**	**140.6**	**135.7**	**123.7**	**94.5**	**.**	**.**
	growth in %	-24.7	1.5	33.6	9.6	-4.0	-3.5	-8.8	-23.6	.	.

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

Table 1.1.4: Prices of Selected Commodities – quarterly

spot prices

		2016				2017			
		Q1	**Q2**	**Q3**	**Q4**	**Q1** Forecast	**Q2** Forecast	**Q3** Forecast	**Q4** Forecast
Crude oil Brent	*USD/barrel*	**33.8**	**45.6**	**45.8**	**49.1**	**57**	**57**	**57**	**57**
	growth in %	-37.3	-26.1	-9.2	12.8	68.1	24.9	25.1	16.4
Crude oil Brent index *(in CZK)*	*2005=100*	**54.7**	**71.8**	**73.0**	**81.1**	**96**	**96**	**97**	**96**
	growth in %	-37.3	-28.6	-10.4	14.4	76.4	34.3	32.2	18.1
Wheat price	*USD/t*	**162.6**	**159.2**	**128.2**	**122.6**	**.**	**.**	**.**	**.**
	growth in %	-20.7	-18.9	-28.3	-24.5	.	.	.	.
Wheat price index *(in CZK)*	*2005=100*	**107.9**	**103.0**	**83.9**	**83.1**	**.**	**.**	**.**	**.**
	growth in %	-20.7	-21.7	-29.2	-23.4	.	.	.	.

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

Graph 1.1.9: Dollar Prices of Oil

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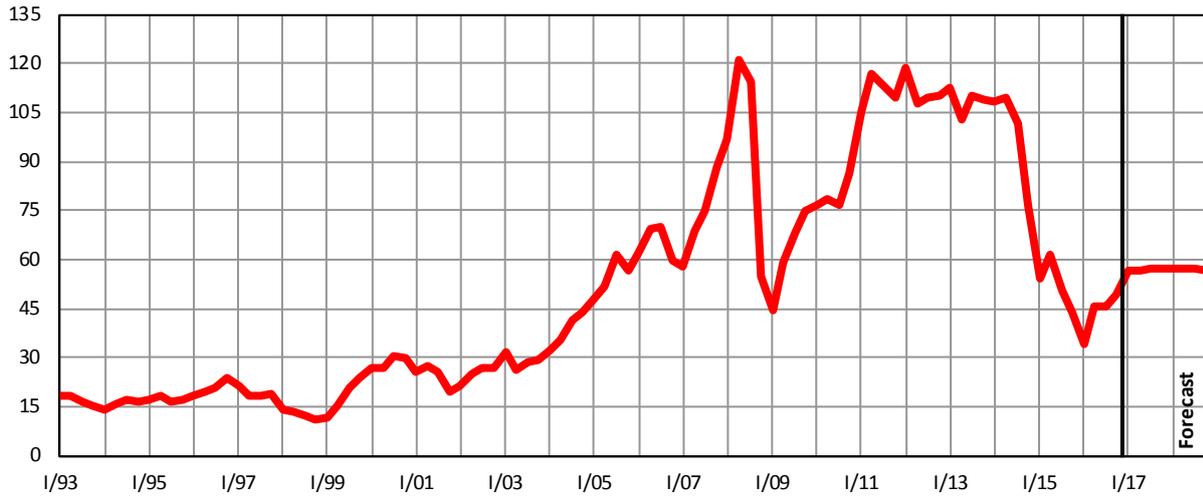
Source: U. S. Energy Information Administration. Calculations of the MoF.

Graph 1.1.10: Koruna Indices of Prices of Selected Commodities

index 2010=100
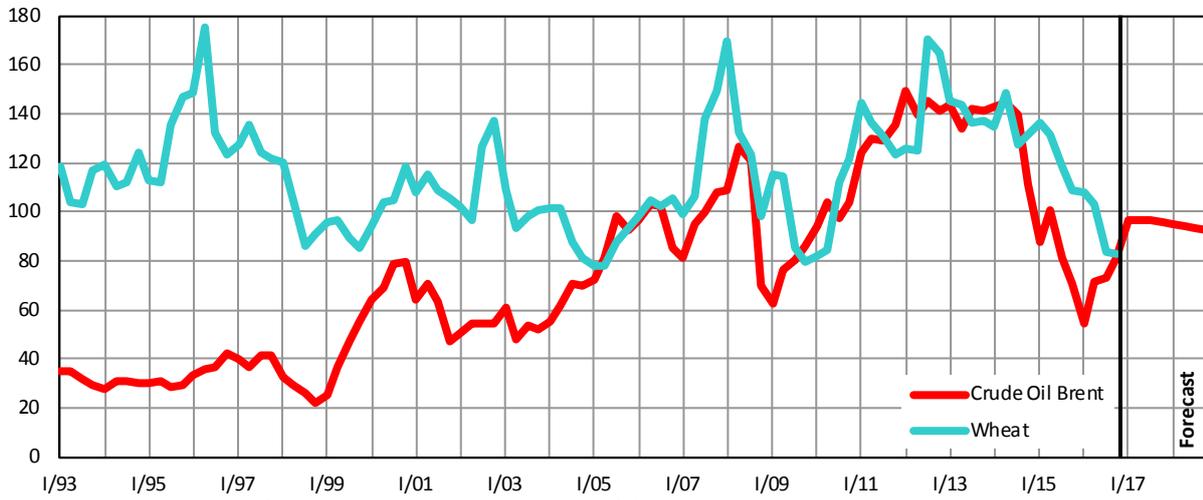
Source: CNB, IMF, U. S. Energy Information Administration. Calculations of the MoF.

1.2 Fiscal Policy

Based on available information, we estimate that the general government balance in 2016 reached, for the first time in the history of the CR, a surplus of 0.5% of GDP. This evidences the government's marked efforts for a sustainable fiscal policy, which is also testified by an improvement in the structural balance between 2015 and 2016 by 0.9 pp.

Although the Czech Statistical Office is going to publish complete ESA 2010 methodology data for the general government sector only on 1 April 2017, our first estimate is based on the results of cash collection of some units. These are mostly data from the state budget, which already include complete data for the entire year, and local budgets, for which results are known for most of 2016. Quarterly national accounts for the general government sector available for the first three quarters of the previous year were also used for the estimate. In comparison with the previous Macroeconomic Forecast, the change in the estimate of the general government sector balance in 2016 is due mainly to significantly better outcome of the state budget and local budgets.

In the national cash methodology, the state budget ended with a surplus of CZK 61.8 billion, which is the best result in the history of the CR. The surplus was achieved not only by higher than budgeted revenue from EU funds, but also by tax revenues (including social security contributions) higher by almost CZK 29 billion than the approved state budget. However, for the purposes of the ESA 2010 methodology, cash revenues from the EU and expenditure associated with EU programmes have to be adjusted to rule out the influence of cash flows on the accrual balance. However, even after adjusting for flows associated with EU programmes and estimate of accrual adjustments of taxes and social benefits, the budget far outperformed the plan. We estimate that in the ESA 2010 methodology, the state budget finances were better by almost CZK 25 billion in comparison with our original estimate. At the level of the state budget, there has been a YoY increase in tax collections by nearly CZK 69 billion. If we considered all tax revenue, that is, including revenue assigned to other components of the general government sector and social security contributions, the increase in these revenues, again as in 2015, exceeded CZK 100 billion.

One of the most closely watched items of tax revenue is the value-added tax, which has increased, on the cash basis, by 5.4% YoY at the level of public budgets, thus quite significantly exceeding the increase in household consumption and tax-effective parts of final consumption of the general government sector. The reason is, inter alia, the measures introduced which set up equal market conditions in the context of competition and reduce shadow economy.

As far as entities outside of the state budget are concerned, local budgets significantly contributed to the surplus, which repeatedly showed cash surpluses exceeding CZK 50 billion in the last months of 2016. After adjustment in terms of ESA 2010 methodology, we estimate the surplus at almost CZK 47 billion, which is by more than CZK 20 billion better than the originally expected outcome. One of the influences is, similarly to the state budget, higher shared tax revenue and also lower investment expenditure.

The aforementioned analysis is also supported by quarterly data from national accounts. The general government sector achieved a surplus of CZK 42 billion in the first three quarters; however, the outcome of the last quarter is important because it is usually negative and also relatively volatile. Tax revenue is exceptionally high also in accrual terms and it increased by almost CZK 70 billion in the first three quarters (including social security contributions). Since the revenue from taxes and social security contributions is usually highest in the last quarter, it is probable that the YoY increase in tax revenue in ESA 2010 methodology will also exceed CZK 100 billion. The decrease in investment of the general government sector is currently at 20% in accrual terms and according to a decrease in income subsidies from the EU it is solely a decrease due to projects co-financed by the EU. This development is quite common in terms of the turn of programming periods and it is also apparent in other EU states (for example, Slovakia, Hungary, Bulgaria and others).

The record general government sector performance is of course also reflected in the amount of debt. The general government debt has decreased YoY from 40.3% of GDP to an estimated 37.4% of GDP, of which the state debt decreased by almost CZK 60 billion from 36.7% of GDP in 2015 to 34.2% of GDP in 2016.

Graph 1.2.1: Decomposition of the Government Balance
in % of GDP
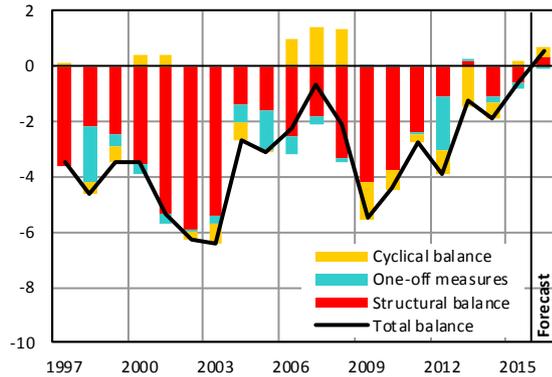
Source: CZSO. Calculations of the MoF.

Graph 1.2.2: Government Debt
in % of GDP
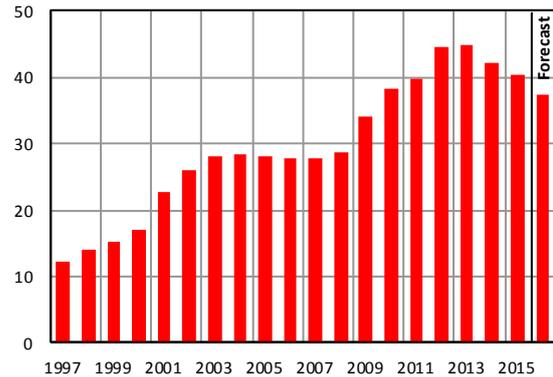
Source: CZSO. Calculations of the MoF.

Table 1.2.1: Net Lending/Borrowing and Debt

		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016 Estimate
General government balance [1]	% GDP	**-0.7**	**-2.1**	**-5.5**	**-4.4**	**-2.7**	**-3.9**	**-1.2**	**-1.9**	**-0.6**	**0.5**
	bill. CZK	-27	-85	-216	-175	-110	-160	-51	-83	-29	26
Cyclical balance	% GDP	**1.4**	**1.3**	**-1.3**	**-0.7**	**-0.3**	**-0.9**	**-1.5**	**-0.6**	**0.2**	**0.3**
Cyclically adjusted balance	% GDP	**-2.1**	**-3.5**	**-4.2**	**-3.7**	**-2.5**	**-3.1**	**0.2**	**-1.3**	**-0.8**	**0.2**
One-off measures [2]	% GDP	**-0.3**	**-0.1**	**0.0**	**0.0**	**-0.1**	**-2.0**	**0.0**	**-0.3**	**-0.2**	**-0.1**
Structural balance	% GDP	**-1.8**	**-3.4**	**-4.2**	**-3.7**	**-2.4**	**-1.1**	**0.2**	**-1.1**	**-0.6**	**0.3**
Fiscal effort [3]	pp	**0.7**	**-1.5**	**-0.9**	**0.5**	**1.4**	**1.3**	**1.3**	**-1.3**	**0.5**	**0.9**
Interest expenditure	% GDP	**1.1**	**1.0**	**1.2**	**1.3**	**1.3**	**1.4**	**1.3**	**1.3**	**1.1**	**1.0**
Primary balance	% GDP	**0.4**	**-1.1**	**-4.3**	**-3.1**	**-1.4**	**-2.5**	**0.1**	**-0.6**	**0.4**	**1.5**
Cyclically adjusted primary balance	% GDP	**-1.0**	**-2.4**	**-2.9**	**-2.4**	**-1.2**	**-1.6**	**1.5**	**0.0**	**0.2**	**1.2**
General government debt	% GDP	**27.8**	**28.7**	**34.1**	**38.2**	**39.8**	**44.5**	**44.9**	**42.2**	**40.3**	**37.4**
	bill. CZK	1 066	1 151	1 336	1 509	1 606	1 805	1 840	1 819	1 836	1 766
Change in debt-to-GDP ratio	pp	-0.1	0.9	5.4	4.1	1.7	4.6	0.4	-2.7	-1.9	-2.9

[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. Calculations of the MoF.

1.3 Monetary Policy, Financial Sector and Exchange Rates

1.3.1 Monetary Policy

For a long time, the CNB's monetary policy can be characterized as eased. Since November 2012, the two-week repo rate has been set at 0.05%. Since November 2013, the CNB has been using the exchange rate as an additional monetary policy instrument, through its commitment not to allow the koruna to strengthen below 27 CZK/EUR. Since the second half of 2015, the CNB has been actively intervening on the foreign exchange market to defend its exchange rate commitment. The volume of interventions between July 2015 and November 2016 totalled EUR 22.6 billion (according to estimates of some financial institutions, the volume of interventions grew sharply at the beginning of 2017). However, the CNB can intervene against pressures for the koruna's appreciation basically without limits.

Graph 1.3.1: FX Interventions of the CNB and the Exchange Rate

monthly volume of foreign exchange interventions in EUR billion, CZK/EUR exchange rate
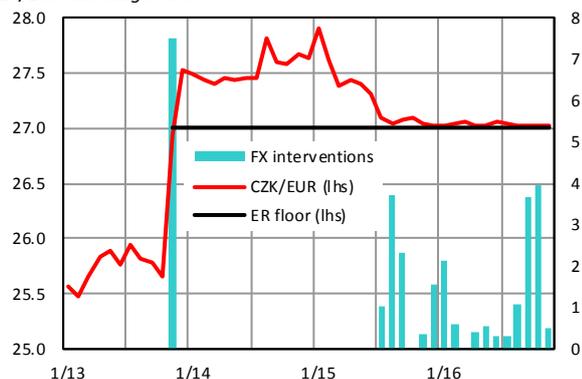
Source: CNB

1.3.2 Financial Sector and Interest Rates

In the fourth quarter of 2016 and the entire 2016, the **3M** (3-month) **PRIBOR** interbank market rate averaged 0.3% (*in line with the forecast*). With respect to the expected development of monetary policy rates, the 3M PRIBOR should remain at this level until mid-2018. The expected increase in the second half of the next year should be, however, very modest, only to 0.5% in the fourth quarter of 2018.

With respect to the technically zero reference interest rates of the CNB and inflation pressures that have long been very weak, long-term interest rates continue to hover at extremely low values. It can be said, however, that the lowest values have already been reached. The **yield to maturity on 10-year government bonds** for convergence purposes reached 0.5% in the fourth quarter of 2016 (*versus 0.4%*), averaging 0.4% (*in line with the forecast*) in 2016 as a whole. With regard to the expected monetary policy stance and development of inflation expectations, we expect only a slight increase in long-term interest rates to 0.6% in 2017 (*unchanged*), and a more significant increase to 1.1% in 2018.

Graph 1.3.2: Interest Rates

in % p.a.
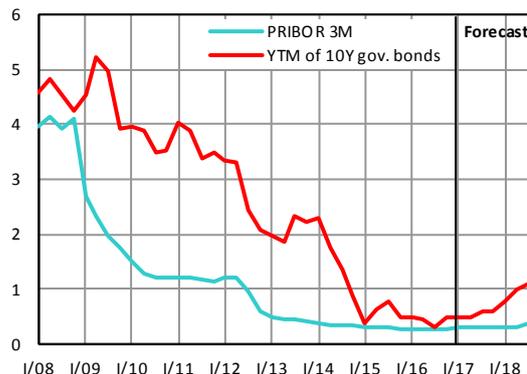
Source: CNB. Calculations of the MoF.

Growth of loans to households slowed down slightly in the third quarter of 2016, but growth of housing loans, whose volumes are the largest (they account for nearly 75%), has accelerated. Growth of mortgage loans together with factors which limit the supply of residential real estate contribute to growth of offer prices of flats (see Tables 3.2.1 and 3.2.2). This development could even lead to overheating of the real estate market in some regions. However, an amendment to the CNB Act approved by the government in January 2017 strengthens the powers of the CNB in the area of regulation of the mortgage market.

Graph 1.3.3: Loans

YoY growth rate, in %
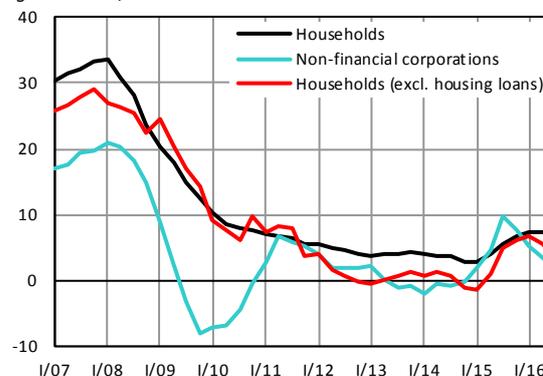
Source: CNB. Calculations of the MoF.

Consumer loans growth slowed down quite significantly in the third quarter of 2016, but it had previously been influenced by a merger of a bank with a non-banking entity and the related changes in the banking and monetary statistics. On the contrary, monthly data show an acceleration of growth in the second half of 2016, which is consistent with high optimism of consumers and a relatively dynamic growth of household consumption. So-called other loans, which include for example loans to sole traders, grew by 3.2 % YoY in the third quarter, and their growth was thus higher than in the second quarter.

The growth rate of loans to non-financial corporations decreased again in the third quarter, to 1.3 %. This was due not only to a strong decrease in short-term loans, but also to a weak growth in long-term loans. The dynamics of loans to non-financial corporations could, with regard to the development of their investment activity, be an evidence that companies preferred to finance investment with their own resources in the past period. On the other hand, the dynamics could also be the result of the fact that companies are to a greater extent paying off old loans.

Graph 1.3.4: Non-performing Loans
ratio of non-performing to total loans, in %
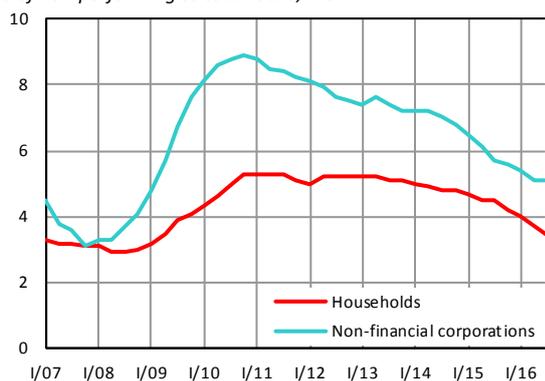
Source: CNB. Calculations of the MoF.

The decrease in the share of non-performing loans in total loans continued. In the third quarter of 2016, the share stood at 3.4 % for households (0.3 pp less QoQ, 1.1 pp less YoY) and at 5.1 % for non-financial corporations (stagnation QoQ and 0.6 pp less YoY). The quality of the loan portfolio should not therefore be a factor limiting the availability of bank loans thus hindering investment or consumer expenditure financed by these loans.

The results of stress tests, which were published in November 2016, confirmed sufficient resilience of the banking sector to potential adverse shocks. The main source of banks' resilience is a high total capital ratio and robust profitability.

Growth of household deposits (7.7 % in the third quarter of 2016) continues to gain momentum, apparently in connection with good economic situation of households. Growth in deposits of non-financial corporations slowed down to 2.5 %. In terms of the capacity of households and non-financial corporations to finance future consumption and investment from own resources, the continued growth of deposits may be assessed positively.

Graph 1.3.5: Deposits
YoY growth rate, in %
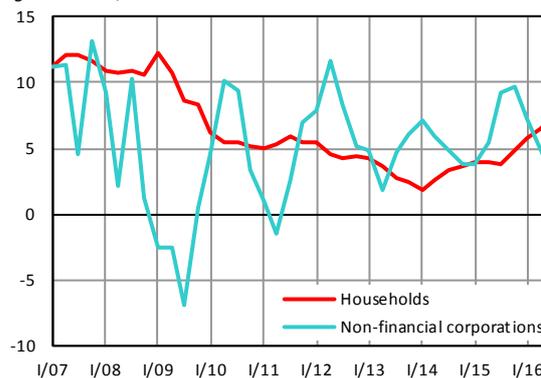
Source: CNB. Calculations of the MoF.

1.3.3 Exchange Rates

From the change in the exchange rate regime in November 2013 until approximately mid-2015, the CZK/EUR exchange rate hovered close to the level of 27.50 CZK/EUR. At the end of the second quarter of 2015, the exchange rate started strengthening in connection with favourable developments of the economy, approaching the exchange rate commitment of 27 CZK/EUR, close to which it remained in the second half of 2015 and in 2016.

At its most recent meeting at the end of December 2016, the CNB Bank Board again stated that it would not discontinue the use of exchange rate as a monetary policy instrument before the second quarter of 2017 and that it still considers it likely the commitment will be discontinued in mid-2017. Based on this, we have adopted a technical assumption of stability at the level of 27.0 CZK/EUR for the period until the second quarter of 2017. We expect that, subsequently, the koruna will again start strengthening slightly against the Euro, approximately by 0.6% QoQ. The CNB has sufficient instruments to limit eventually increased volatility of the exchange rate after the discontinuation of the current exchange rate regime. It can be expected that the CNB will use interventions on the foreign exchange market also after the discontinuation of 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 1.05 USD/EUR (*versus 1.10 USD/EUR*). The change was due to the current exchange rate development, which was influenced by increasing difference between the primary interest rates of the ECB and the Fed.

Table 1.3.1: Interest Rates – yearly

		2009	2010	2011	2012	2013	2014	2015	2016	2017 Forecast	2018 Forecast
Repo 2W rate CNB (end of period)	in % p.a.	1.00	0.75	0.75	0.05	0.05	0.05	0.05	0.05	.	.
Main refinancing rate ECB (end of period)	in % p.a.	1.00	1.00	1.00	0.75	0.25	0.05	0.05	0.00	.	.
Federal funds rate (end of period)	in % p.a.	0.25	0.25	0.25	0.25	0.25	0.25	0.50	0.75	.	.
PRIBOR 3M	in % p.a.	2.19	1.31	1.19	1.00	0.46	0.36	0.31	0.30	0.3	0.4
YTM of 10Y government bonds	in % p.a.	4.67	3.71	3.71	2.80	2.11	1.58	0.58	0.43	0.6	1.1

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

Table 1.3.2: Interest Rates – quarterly

		2016				2017			
		Q1	Q2	Q3	Q4	Q1 Forecast	Q2 Forecast	Q3 Forecast	Q4 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.	0.50	0.50	0.50	0.75	.	.	.	.
PRIBOR 3M	in % p.a.	0.29	0.29	0.29	0.29	0.3	0.3	0.3	0.3
YTM of 10Y government bonds	in % p.a.	0.48	0.45	0.30	0.48	0.5	0.5	0.6	0.6

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

Table 1.3.3: Interest Rates, Deposits and Loans – yearly

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Households – MFI (CR, unless stated otherwise)											
Interest rates on loans	in % p.a.	6.93	6.64	6.81	7.00	7.01	6.83	6.46	6.03	5.57	5.14
Loans	growth in %	32.2	31.7	29.0	16.3	8.7	6.5	4.8	4.0	3.5	4.8
Loans without housing loans	growth in %	28.3	27.3	25.3	19.1	8.3	6.8	1.4	0.4	0.3	2.7
Interest rates on deposits	in % p.a.	1.22	1.29	1.55	1.38	1.25	1.20	1.18	1.01	0.84	0.65
Deposits	growth in %	8.2	11.8	10.8	10.0	5.6	5.4	4.7	3.2	2.9	4.1
Share of non-performing loans	in %	3.7	3.2	3.0	3.7	4.8	5.3	5.2	5.2	4.9	4.5
Loans to deposits ratio	in %	43	51	59	62	64	65	65	65	65	66
Loans to deposits ratio (Eurozone)	in %	99	99	94	89	90	90	87	84	82	81
Non-financial firms – MFI (CR, unless stated otherwise)											
Interest rates on loans	in % p.a.	4.29	4.85	5.59	4.58	4.10	3.93	3.69	3.19	3.00	2.77
Loans	growth in %	17.3	18.5	18.6	0.0	-4.8	5.2	2.5	0.1	-0.9	6.1
Interest rates on deposits	in % p.a.	1.08	1.41	1.80	0.87	0.56	0.52	0.56	0.41	0.29	0.19
Deposits	growth in %	10.5	10.0	5.7	-2.9	6.9	2.3	8.2	4.4	5.4	7.0
Share of non-performing loans	in %	4.5	3.8	3.6	6.2	8.6	8.5	7.8	7.4	7.1	6.0
Loans to deposits ratio	in %	113	122	137	141	125	129	122	117	110	109
Loans to deposits ratio (Eurozone)	in %	306	308	329	326	308	301	291	264	239	211

Source: CNB, ECB. Calculations of the MoF.

Table 1.3.4: Interest Rates, Deposits and Loans – quarterly

		2014	2015				2016		
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Households – MFI (*CR, unless stated otherwise*)									
Interest rates on loans	*in % p.a.*	**5.40**	**5.28**	**5.18**	**5.11**	**4.97**	**4.85**	**4.70**	**4.54**
Loans	*growth in %*	**2.7**	**2.9**	**3.9**	**5.6**	**6.9**	**7.5**	**7.3**	**6.6**
Loans without housing loans	*growth in %*	**-1.2**	**-1.4**	**1.0**	**4.9**	**6.1**	**6.9**	**5.5**	**2.8**
Interest rates on deposits	*in % p.a.*	**0.77**	**0.72**	**0.66**	**0.62**	**0.59**	**0.55**	**0.48**	**0.43**
Deposits	*growth in %*	**3.7**	**4.0**	**3.9**	**3.8**	**4.8**	**5.8**	**6.5**	**7.7**
Share of non-performing loans	*in %*	**4.8**	**4.7**	**4.5**	**4.5**	**4.2**	**4.0**	**3.7**	**3.4**
Loans to deposits ratio	*in %*	**65**	**65**	**65**	**67**	**66**	**66**	**66**	**66**
Loans to deposits ratio (*Eurozone*)	*in %*	**81**	**81**	**81**	**81**	**81**	**81**	**80**	**80**
Non-financial firms – MFI (*CR, unless stated otherwise*)									
Interest rates on loans	*in % p.a.*	**2.93**	**2.88**	**2.80**	**2.72**	**2.67**	**2.63**	**2.60**	**2.58**
Loans	*growth in %*	**-0.1**	**2.0**	**4.8**	**9.8**	**7.8**	**5.3**	**3.5**	**1.3**
Interest rates on deposits	*in % p.a.*	**0.24**	**0.22**	**0.20**	**0.17**	**0.15**	**0.13**	**0.11**	**0.09**
Deposits	*growth in %*	**3.8**	**3.8**	**5.4**	**9.2**	**9.7**	**7.2**	**4.9**	**2.5**
Share of non-performing loans	*in %*	**6.8**	**6.5**	**6.1**	**5.7**	**5.6**	**5.4**	**5.1**	**5.1**
Loans to deposits ratio	*in %*	**107**	**110**	**111**	**111**	**105**	**108**	**109**	**110**
Loans to deposits ratio (*Eurozone*)	*in %*	**230**	**217**	**216**	**210**	**202**	**203**	**202**	**197**

Source: CNB, ECB. Calculations of the MoF.

Graph 1.3.6: Ratio of Bank Loans to Households to GDP
yearly moving sums, in %
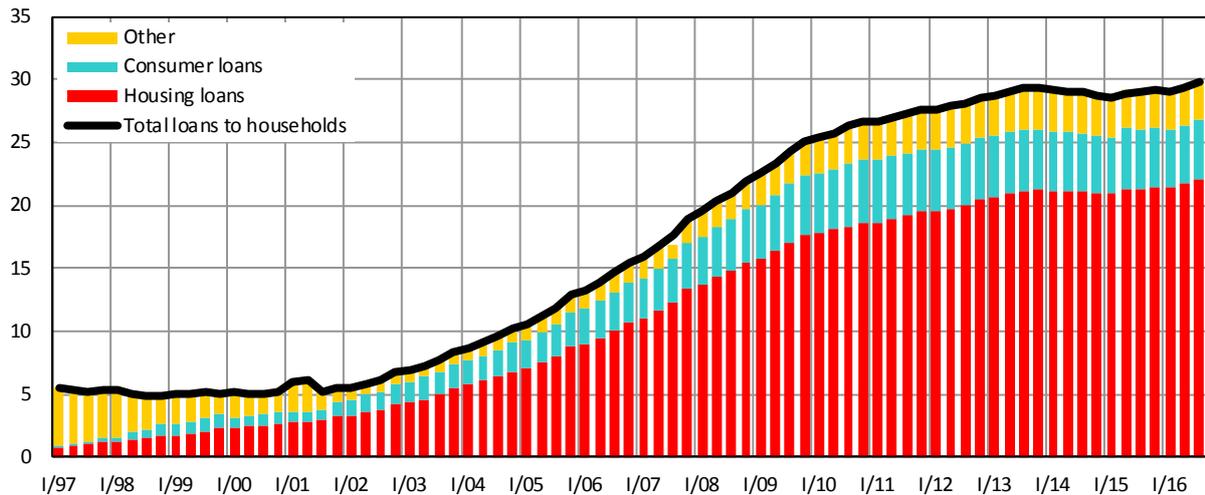
Source: CNB, CZSO. Calculations of the MoF.

Table 1.3.5: Exchange Rates – yearly

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
							Estimate	*Forecast*	*Forecast*	*Outlook*	*Outlook*
Nominal exchange rates											
CZK / EUR	*average*	**24.59**	**25.14**	**25.98**	**27.53**	**27.28**	**27.04**	**26.9**	**26.3**	**25.6**	**25.0**
	appreciation in %	2.8	-2.2	-3.2	-5.6	0.9	0.9	0.5	2.4	2.5	2.5
CZK / USD	*average*	**17.69**	**19.59**	**19.57**	**20.75**	**24.65**	**24.44**	**25.6**	**25.0**	**24.4**	**23.8**
	appreciation in %	8.0	-9.7	0.1	-5.7	-15.8	0.8	-4.6	2.4	2.5	2.5
NEER	*average of 2010=100*	**103.1**	**99.5**	**97.3**	**92.5**	**92.5**	**94.6**	**95**	**97**	**99**	**102**
	appreciation in %	3.1	-3.5	-2.2	-4.9	-0.1	2.4	-0.1	2.4	2.5	2.5
Real exchange rate to EA19[1]	*average of 2010=100*	**101.7**	**99.7**	**96.7**	**92.7**	**93.4**	**94**	**94**	**97**	**100**	**103**
	appreciation in %	1.7	-2.0	-3.0	-4.1	0.8	0.8	0.2	2.8	3.1	3.2
REER	*average of 2010=100*	**102.1**	**99.2**	**96.9**	**91.8**	**91.3**	**.**	**.**	**.**	**.**	**.**
(*Eurostat, CPI deflated, 42 countries*)	*appreciation in %*	2.1	-2.8	-2.3	-5.2	-0.6	.	.	.	.	.

[1] Deflated by GDP deflators.
Source: CNB, Eurostat. Calculations of the MoF.

Table 1.3.6: Exchange Rates – quarterly

		2016				2017			
		Q1	Q2	Q3	Q4 Estimate	Q1 Forecast	Q2 Forecast	Q3 Forecast	Q4 Forecast
Nominal exchange rates									
CZK / EUR	average	**27.04**	**27.04**	**27.03**	**27.03**	**27.0**	**27.0**	**26.9**	**26.7**
	appreciation in %	2.2	1.3	0.2	0.1	0.0	0.0	0.6	1.3
CZK / USD	average	**24.54**	**23.94**	**24.21**	**25.07**	**25.7**	**25.7**	**25.6**	**25.4**
	appreciation in %	0.0	3.6	1.3	-1.4	-4.7	-7.0	-5.4	-1.4
NEER	average of 2010=100	**94.9**	**94.7**	**94.7**	**94.4**	**94**	**94**	**95**	**95**
	appreciation in %	3.5	3.9	1.3	0.8	-0.8	-0.6	0.0	1.0
Real exchange rate to EA19 [1]	average of 2010=100	**94.2**	**93.9**	**94.1**	**94**	**93**	**94**	**95**	**95**
	appreciation in %	2.4	0.9	0.2	-0.2	-0.9	0.2	0.4	1.1
REER	average of 2010=100	**94.1**	**93.5**	**.**	**.**	**.**	**.**	**.**	**.**
(Eurostat, CPI deflated, 42 countries)	appreciation in %	3.8	4.1	.	.	.	.	.	.

[1] Deflated by GDP deflators.

Source: CNB, Eurostat. Calculations of the MoF.

Graph 1.3.7: Nominal Exchange Rates
quarterly averages, average 2010=100 (rhs)
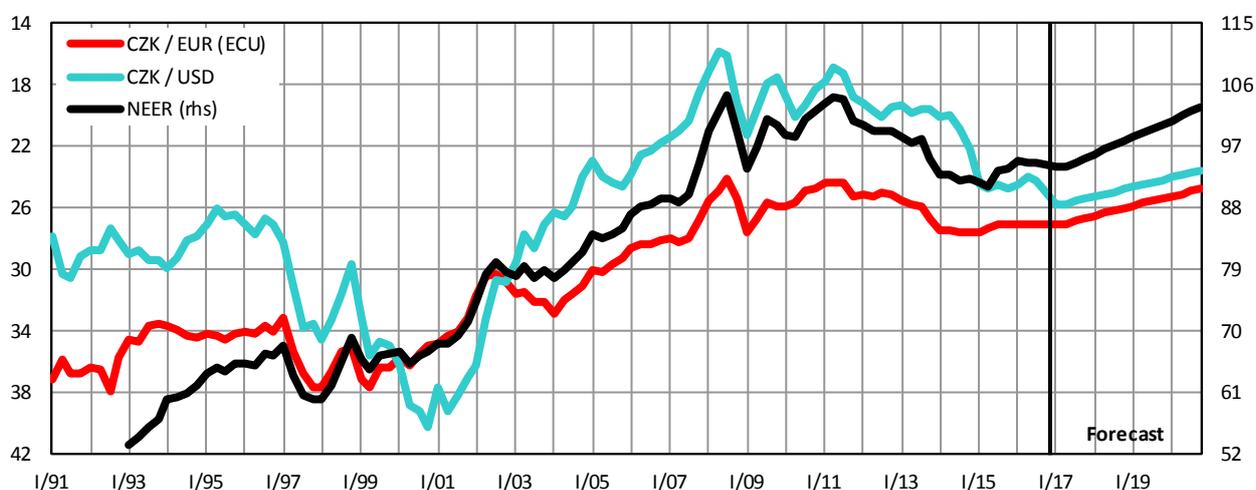
Source: CNB. Calculations of the MoF.

Graph 1.3.8: Real Exchange Rate to EA19
quarterly averages, deflated by GDP deflators, average 2010=100
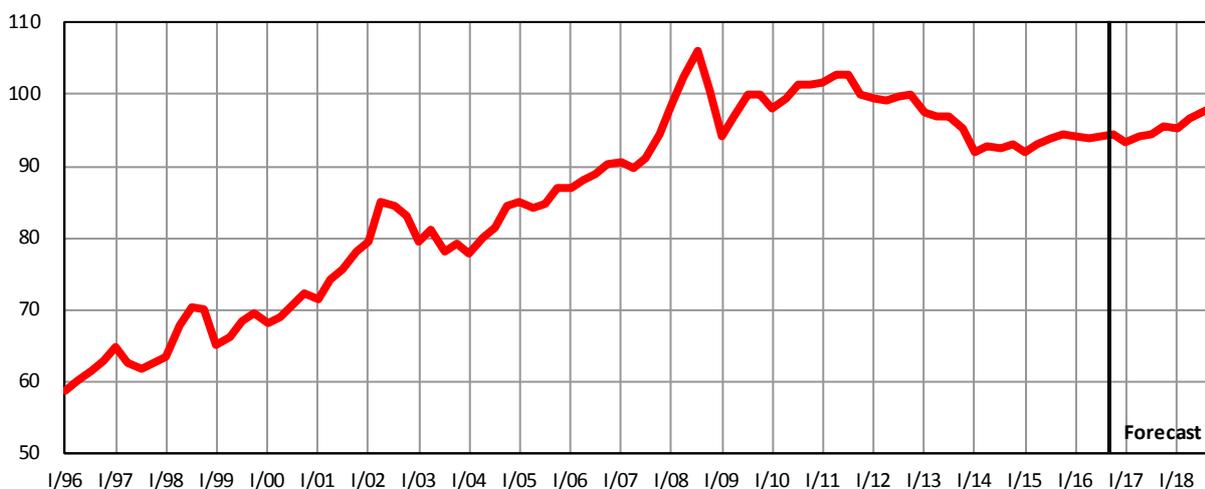
Source: CNB, Eurostat. Calculations of the MoF.

Graph 1.3.9: Real Exchange Rate to EA19

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

Legend:
- Contribution of nominal ER
- Contribution of GDP deflator differential
- Appreciation of real exchange rate
- Forecast
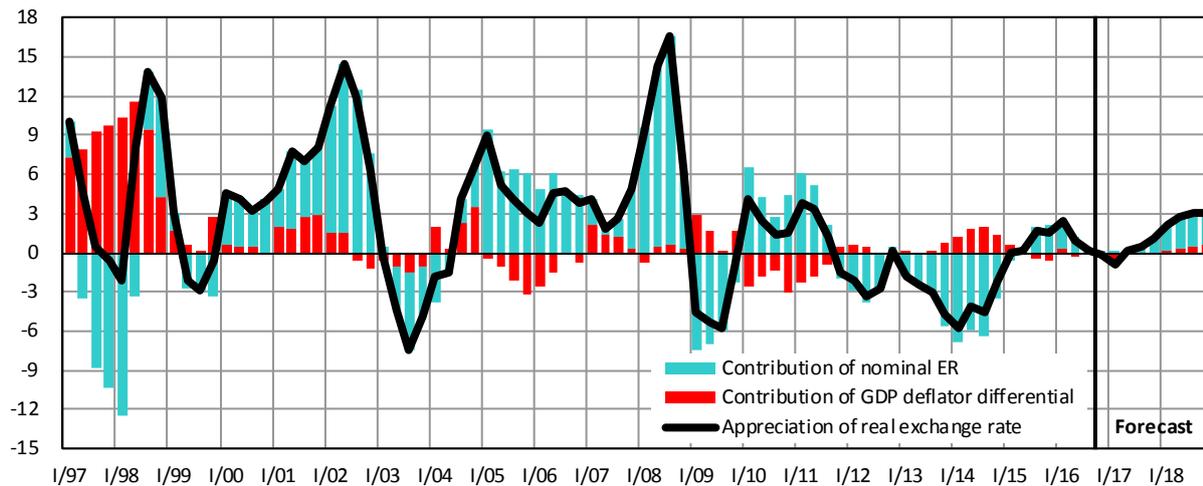
Source: CNB, Eurostat. Calculations of the MoF.

1.4 Structural Policies

1.4.1 Business Environment

An amendment to the Insolvency Act, approved by the Chamber of Deputies on 9 December 2016, should enhance the transparency of insolvency proceedings and reduce administrative tasks of insolvency courts. It will also strengthen regulation of entities providing services related to the institution of debt relief and it will introduce stronger protection against vexatious insolvency petitions.

1.4.2 Taxes

The **Act on Fiscalization of Cash Payments**, which came into effect on 1 December 2016, obliges selected business entities to carry out fiscalization of cash payments through a permanent electronic connection. Companies engaged in the accommodation and food services sectors joined the system in the first stage. Companies in the wholesale and retail sectors will join on 1 March 2017, the remaining entrepreneurial sectors (e.g. freelance professions, transport, agriculture) on 1 March 2018, and selected craftsmen professions and production activities on 1 June 2018.

Together with the previous bill, an **Act amending some laws in connection with the adoption of the Act on Fiscalization of Cash Payments** came into effect on the same day. In order to compensate the costs of introducing fiscalization of cash payments, a single tax allowance of CZK 5,000 was provided to personal income tax payers. At the same time, food services excluding the sale of beverages containing alcohol were reclassified from the basic VAT rate (21%) to the first reduced VAT rate (15%).

The **Act on Gambling** and the related **Act on Gambling Tax**, which came into effect on 1 January 2017, should prevent and fight against social pathological phenomena related to gambling, open the Czech gambling market for operators located in the EU and make tax collection more effective. In this connection, a gambling tax has been introduced; the tax rate was set at 35% for technical games and 23% for other types of gambling.

On 19 December 2016, the President signed the **amendment to the Act on Excise Duties**, introducing returns of excise duty on fuels for animal husbandry farmers, fish farmers and forest management companies. The amendment will come into effect on 1 March 2017.

On 13 January 2017, the Chamber of Deputies approved a **draft Act amending some acts in the sphere of taxes**. In order to strengthen the fight against tax evasion, the institute of unreliable person was introduced, i.e. a natural or legal person breaching its duties related to VAT administration in a serious manner. Further, the draft increases tax credits for the second, third and any additional child, tightens conditions for the payment of a tax bonus for a maintained child and regulates the tax regime for incomes from small-scale dependant activity up to CZK 2,500. Last but not least, it lowers the limit for lump-sum expenses of self-employed persons to CZK 1 million. The Act should come into effect on 1 April 2017.

An **amendment to the Value Added Tax Act**, which was re-approved by the Chamber of Deputies on 10 January 2017, reduces the VAT rate for newspapers and magazines from 15% to 10%. The amendment is scheduled to come into effect on the fifteenth day following its publication.

1.4.3 Financial Markets

The **Act on Consumer Loans**, transposing into the Czech legal system the Directive on credit agreements for consumers relating to residential immovable properties (the Mortgage Credit Directive, MCD) and, at the same time, unifying regulation of all types of consumer loans, came into effect on 1 December 2016. The new legal regulation has strengthened the position of consumers, limited sanctions for late loan repayments and strengthened the responsibility of creditors for granting loans. At the same time, it solves serious and systematic problems in the sector of non-banking providers and loan intermediaries, in particular unfair trading practices and the low expertise and credibility of some loan distributors. Supervision over all loan providers and intermediaries has been transferred to the CNB.

1.4.4 Labour Market

The **Government Regulation on the minimum wage** of 5 October 2016 entered into effect on 1 January 2017, increasing the minimum wage to 11,000 CZK monthly (i.e. an increase by 11.1%) for all categories of employees, including recipients of disability pensions, and increasing the lowest levels of guaranteed wage for all categories of work.

1.5 Demographic Trends

The population of the Czech Republic is steadily and slightly rising. As of 30 September 2016, 10.572 million people lived in the CR. Its population increased by 18.6 thousand persons during the first three quarters of 2016. This increase was mainly due to positive net migration of 12.6 thousand persons. Similarly as in previous years, most persons who moved to the CR were from Slovakia and Ukraine.

According to the newly published data, these states also account for the highest shares among foreigners living in the Czech Republic. In 2015, 105.6 thousand Ukrainian citizens lived in the CR, thus making 1.0 % of the population of the CR. There were only slightly fewer Slovak citizens (101.6 thousand). Citizens of Vietnam, Russia, Poland and Germany also have a significant share in the number of foreigners in the CR. In total, 464.7 thousand foreigners resided in the CR, with the share of citizens of other states in the population of the CR being 4.4 %.

Foreign nationals make up a considerable part of the workforce. 407 thousand foreigners worked in the CR in 2015, who thus contributed to the overall employment with approximately 8 %.

Graph 1.5.1: Age Groups
shares on total population, in %
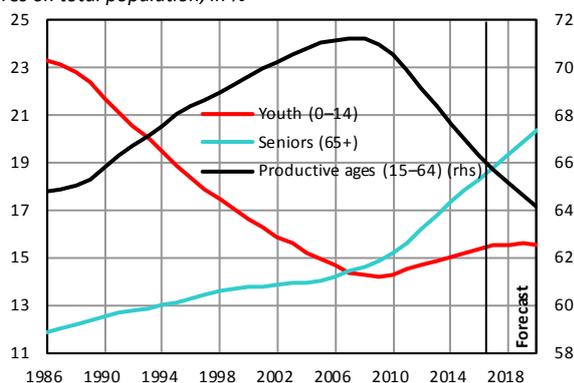
Source: CZSO. Calculations of the MoF.

As far as the age structure of the population is concerned, the fastest growing age category is that of seniors over the age of 64; their number in the third quarter of 2016 increased by 51 thousand YoY. The number of children under the age of 14 increased by 25 thousand.

A long-term trend is a gradual **decrease in the working-age population** (15–64 years). In the third quarter of 2016, the YoY decrease in this category was 55 thousand persons, which corresponds to 0.8 % (see Graph 1.5.2). However, the development of its structure is not homogeneous. There has been a considerable increase in the number of citizens in the age group 40–54 years, by 61 thousand. People of this age group show the highest employment and participation rates, which fully eliminates, thus far, the impact of population ageing on the size of the labour force.

Graph 1.5.2: Population Aged 15–64
based on LFS, YoY increases of quarterly averages, in thousands
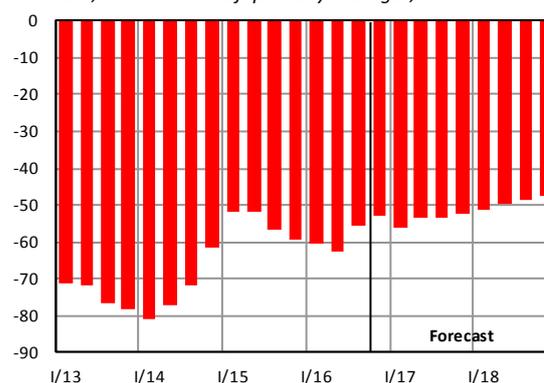
Source: CZSO. Calculations of the MoF.

The share of **seniors aged over 64 years** in the total population reached 18.6 % in the third quarter of 2016 and, due to the lengthening life expectancy and demographic structure, it should regularly increase approximately by 0.5 pp per year. The number of seniors in the population should thus exceed 2 million persons during the year 2017. From the perspective of the sustainability of the pension system, however, increases in the retirement age are adequate to match the lengthening of life expectancy in the next 20–25 years. Problems, however, could occur after 2040, when boomers born around 1975 are going to retire.

The number of **old-age pensioners** in 2012–2014 more or less stagnated, which was a result of a high increase in their number following a parametric change in the system in 2011 (see Graph 1.5.5). Since 2015, growth of the number of pensioners resumed, being roughly in line with demographic development and the increasing statutory retirement age. At the end of September 2016, the YoY increase was 19 thousand pensioners. The entire increase is manifested in the category of reduced old-age pensions (after early retirement), whereas the number of full pensions stagnates (see Graph 1.5.5).

Graph 1.5.3: Life Expectancy at Birth
in years
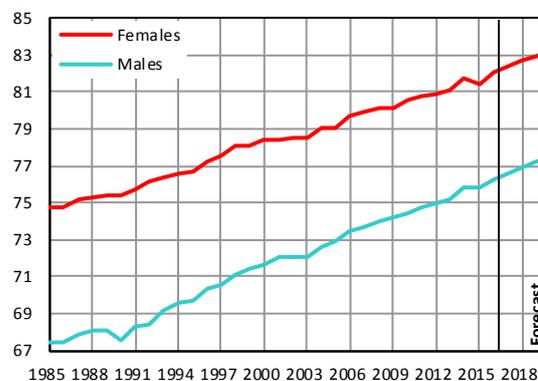
Source: CZSO.

Table 1.5.1: Demographics

in thousands of persons (unless stated otherwise)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
						Estimate	*Forecast*	*Forecast*	*Outlook*	*Outlook*
Population (as of 1 January)	**10 487**	**10 505**	**10 516**	**10 512**	**10 538**	**10 554**	**10 569**	**10 583**	**10 596**	**10 608**
growth in %	-0.2	0.2	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.1
0–14 years	**1 522**	**1 541**	**1 560**	**1 577**	**1 601**	**1 624**	**1 638**	**1 646**	**1 651**	**1 650**
growth in %	1.8	1.3	1.2	1.1	1.5	1.4	0.9	0.5	0.3	0.0
15–64 years	**7 328**	**7 263**	**7 188**	**7 109**	**7 057**	**6 998**	**6 942**	**6 889**	**6 842**	**6 801**
growth in %	-1.2	-0.9	-1.0	-1.1	-0.7	-0.8	-0.8	-0.8	-0.7	-0.6
65 and more years	**1 637**	**1 701**	**1 768**	**1 826**	**1 880**	**1 932**	**1 989**	**2 048**	**2 103**	**2 157**
growth in %	2.4	3.9	3.9	3.3	3.0	2.8	2.9	3.0	2.7	2.5
Old-age pensioners (as of 1 January) [1]	**2 260**	**2 340**	**2 341**	**2 340**	**2 355**	**2 377**	**2 396**	**2 414**	**2 430**	**2 443**
growth in %	.	3.5	0.0	0.0	0.6	0.9	0.8	0.8	0.6	0.6
Old-age dependency ratios (as of 1 January, in %)										
Demographic [2]	**22.3**	**23.4**	**24.6**	**25.7**	**26.6**	**27.6**	**28.7**	**29.7**	**30.7**	**31.7**
Under current legislation [3]	**37.4**	**37.8**	**38.3**	**38.8**	**39.3**	**39.8**	**40.2**	**40.6**	**40.9**	**41.2**
Effective [4]	**45.9**	**47.9**	**47.6**	**47.2**	**46.9**	**46.8**	**46.5**	**46.8**	**46.9**	**47.0**
Fertility rate	**1.427**	**1.452**	**1.456**	**1.528**	**1.570**	**1.46**	**1.46**	**1.47**	**1.47**	**1.48**
Population increase	**19**	**11**	**-4**	**26**	**16**	**15**	**14**	**13**	**12**	**10**
Natural increase	**2**	**0**	**-2**	**4**	**0**	**-4**	**-5**	**-6**	**-8**	**-9**
Live births	**109**	**109**	**107**	**110**	**111**	**101**	**99**	**98**	**96**	**95**
Deaths	**107**	**108**	**109**	**106**	**111**	**105**	**105**	**104**	**104**	**104**
Net migration	**17**	**10**	**-1**	**22**	**16**	**19**	**19**	**19**	**20**	**20**
Immigration	**23**	**30**	**30**	**42**	**35**	.	.	.	.	.
Emigration	**6**	**20**	**31**	**20**	**19**	.	.	.	.	.

[1] *In 2010 disability pensions of pensioners over 64 were transferred into old-age pensions.*
[2] *Demographic dependency: ratio of people in senior ages (65 and more) to people in productive age (15–64).*
[3] *Dependency under current legislation: ratio of people above the official retirement age to the people over 19 below the official retirement age.*
[4] *Effective dependency: ratio of old-age pensioners to working people (LFS methodology).*
Source: Czech Social Security Administration, CZSO. Calculations of the MoF.

Graph 1.5.4: 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
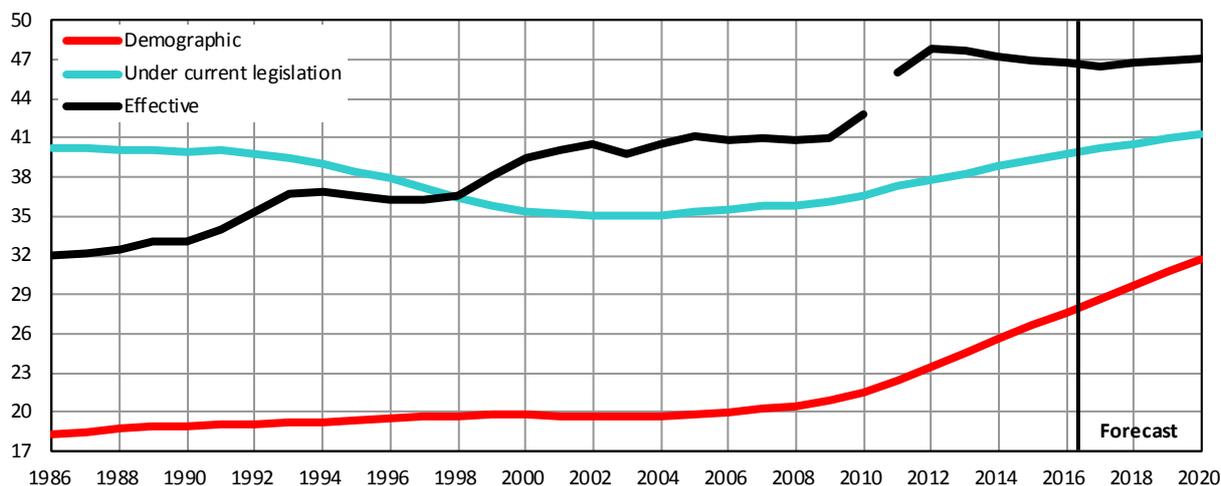
Source: CZSO. Calculations of the MoF.

Graph 1.5.5: Old-Age Pensioners

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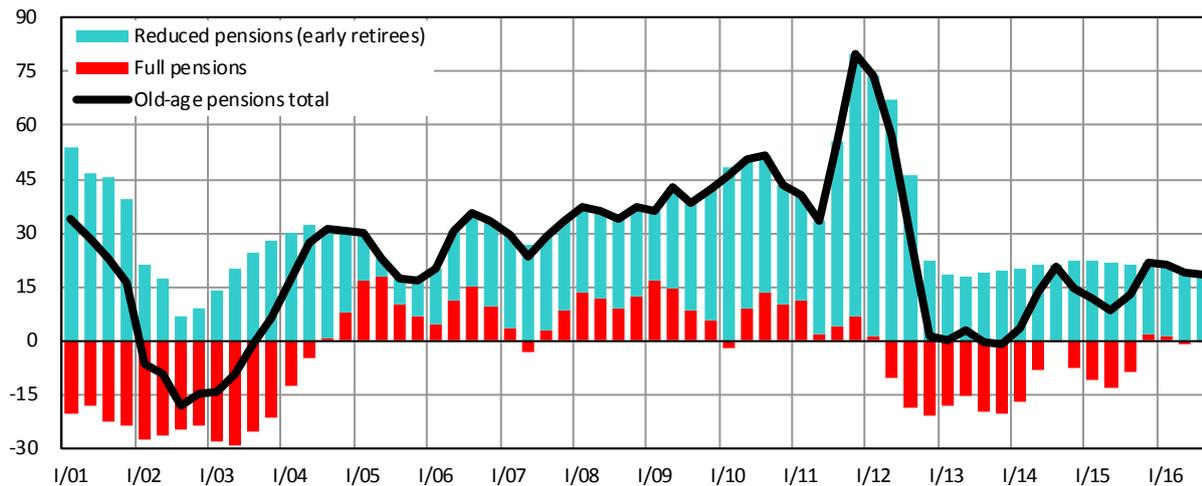
Note: Adjusted for the transfer of disability pensions to old-age pensions for people over 64 years in 2010.
Source: Czech Social Security Administration, CZSO. Calculations of the MoF.

2 Economic Cycle

2.1 Position within the Economic Cycle

Approximately since the beginning of 2015, the economy has been, according to our calculations, in the conditions of a slightly **positive output gap** (see Graph 2.1.1), which, however, has not been expanding so far. Compared with the previous quarter, the output gap narrowed to an estimated 0.5% of potential product in the third quarter of 2016, owing to a slowdown in the growth of GVA. Given the forecast of economic growth and the expected development of potential product, the positive output gap should expand in the course of this year and subsequently remain relatively stable.

In the economy the positive output gap manifests itself mainly on the labour market. Since the beginning of 2014, the unemployment rate (LFS) has been under its long-term average, and it continues to decline. The number of vacancies recorded by the Ministry of Labour and Social Affairs highly exceeds the average level, showing considerable YoY increases. In the case of some professions or regions, mismatches between supply and demand have been manifesting themselves more and more. This fact is reflected in a dynamic wage growth.

The positive output gap can be considered, in addition to cost factors, to be one of the causes of the current acceleration in the consumer prices growth (see Chapter 3.2).

The YoY growth in **potential product** (based on GVA) has been accelerating since 2014 and it reached 2.1 % in the third quarter of 2016. We consider this a result approaching growth possibilities of the Czech economy, which we approximate by long-term average of growth in GVA (and potential product).

Total factor productivity is the main driver of acceleration of potential growth. The contribution of its trend component, derived by the Hodrick-Prescott filter, increased from a minimum of 0.3 pp during the recession in 2012 to 1.5 pp in the third quarter of 2016.

The decrease or only modest growth of investments in 2008–2013 has contributed to the slowdown of potential product growth. The 2015 investment wave, supported by efforts for maximal possible utilization of EU funds, has led to an increase in the contribution of **capital stock** from 0.3 pp at the turn of 2013 and 2014 to 0.6 pp in the fourth quarter of 2015. The current decrease in investment, however, leads to a repeated, yet only a slight, reduction in the contribution of capital stock to 0.5 pp.

Labour supply is being affected by a long-lasting decrease in the working-age population, caused by the process of population ageing (see Chapter 1.5). In the third quarter of 2016, **demographic development** slowed potential product growth by 0.4 pp.

The negative impact of the decline in the population aged 15–64 years on labour supply is more than compensated by an increase in the **participation rate**. Its increase by 6.0 pp in comparison with the beginning of 2011 is exceptional both in the historical context of the Czech economy and when compared to other European countries. Structural factors – an increase in the number of inhabitants in age groups with naturally high participation, labour market flexibility and an increase in the statutory and effective retirement age – are predominating here. In the third quarter of 2016, the contribution of the participation rate to potential product growth reached 0.8 pp.

From a long-run perspective, the regular **average working time** is shortening in the Czech Republic. As the economic cycle progresses, however, the intensity of this factor's effect is decreasing. In the third quarter of 2016, the contribution of the number of hours usually worked was only 0.1 pp versus 0.4 pp at the end of the recession in the first quarter of 2013.

Table 2.1.1: Output Gap and Potential Product

		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016 Q1-3
Output gap	%	3.9	3.9	-3.7	-2.0	-0.7	-2.3	-3.8	-1.6	0.6	0.7
Potential product [1]	growth in %	4.0	3.4	2.1	0.9	0.7	0.9	1.0	1.1	1.8	2.1
Contributions											
Trend TFP	pp	2.9	2.0	1.2	0.7	0.4	0.4	0.6	0.9	1.3	1.4
Fixed assets	pp	1.1	1.2	0.8	0.6	0.6	0.5	0.4	0.4	0.5	0.5
Demography [2]	pp	0.3	0.3	0.1	-0.2	-0.4	-0.5	-0.5	-0.5	-0.4	-0.4
Participation rate	pp	-0.2	0.0	0.3	0.1	0.3	0.8	1.0	0.5	0.5	0.7
Usually worked hours	pp	0.0	-0.1	-0.3	-0.3	-0.2	-0.3	-0.3	-0.2	-0.1	-0.1

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

Graph 2.1.1: Output Gap
in % of potential product
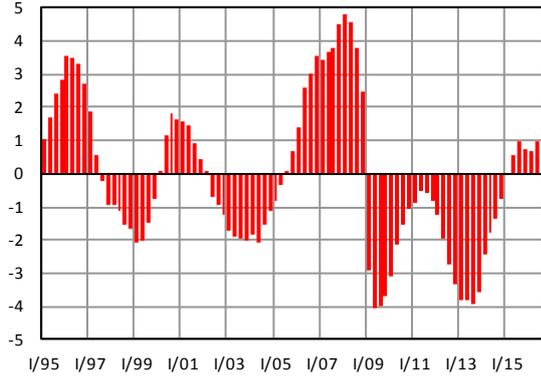
Source: CZSO. Calculations of the MoF.

Graph 2.1.2: Potential Product
YoY growth rate in %, contributions in percentage points
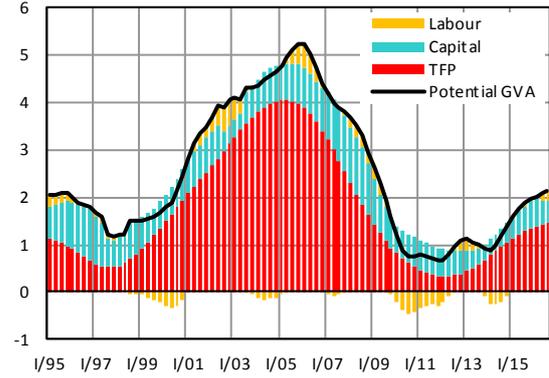
Source: CZSO. Calculations of the MoF.

Graph 2.1.3: Potential Product and GVA
YoY growth rate, in %
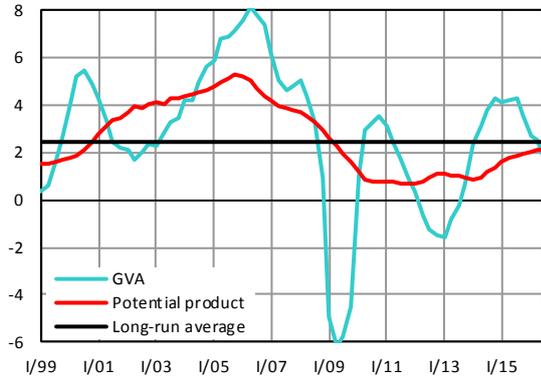
Note: Long-run average growth of potential GVA.
Source: CZSO. Calculations of the MoF.

Graph 2.1.4: Levels of Potential Product and GVA
in bill. CZK of 2010
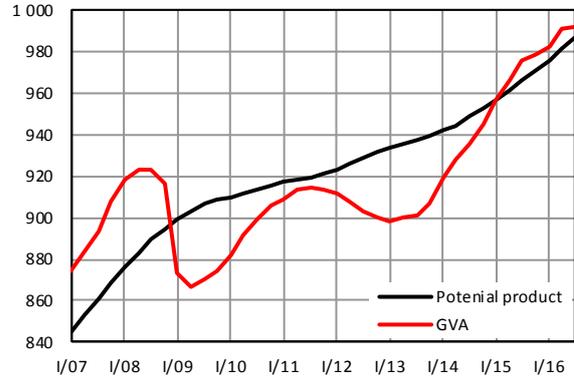
Source: CZSO. Calculations of the MoF.

Graph 2.1.5: Capacity Utilisation in Industry
smoothed by Hodrick-Prescott filter, in %
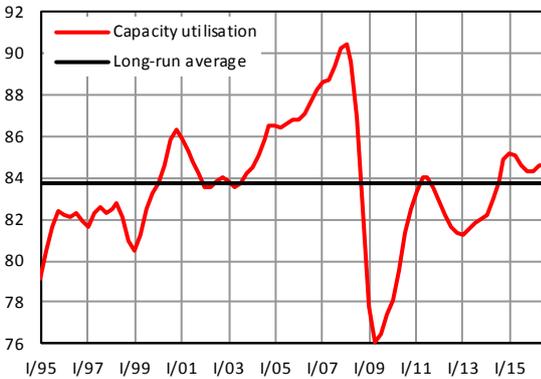
Source: CZSO.

Graph 2.1.6: Total Factor Productivity
YoY growth rate, in %
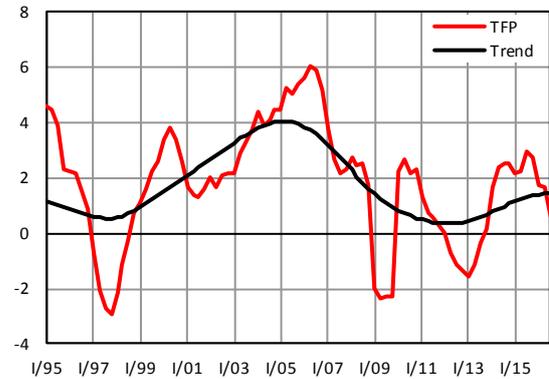
Source: CZSO. Calculations of the MoF.

2.2 Business Cycle Indicators

Confidence indicator in industry continued to grow in the fourth quarter of 2016, which points to a likely increase in the YoY dynamics of GVA in industry.

Having dropped sharply in previous quarters, the confidence indicator in construction recorded a slight increase. This indicates that the YoY decline of GVA in the sector, which was strongly influenced by a lower volume of investment from EU funds, stopped deepening. However, we cannot omit here the fact that the correlation between the development of confidence and GVA in construction is very low, as is apparent from Graph 2.2.2.

Growth of confidence in trade and services accelerated in the fourth quarter of 2016, which points to a resumption of the high rate of YoY growth of GVA in this sector.

The consumer confidence indicator developed similarly. It increased sharply in the fourth quarter of 2016 and reached a record-breaking value, which indicates an increase in the growth momentum of household consumption at the end of 2016 and the beginning of 2017. This conclusion results from the fact that the development of the consumer confidence indicator leads household consumption by 1–2 quarters.

For the fourth quarter of 2016 the composite confidence indicator (owing to the strengthening of all its components) signals an acceleration in the YoY growth of GVA.

Throughout 2016, the composite leading indicator predicted the development of the relative cyclical component of GVA very precisely. For the fourth quarter of 2016 it indicates rather a stabilization of the relative cyclical component, though for the first quarter of 2017 it forecasts a marked increase in the positive output gap.

Graph 2.2.1: Confidence and GVA in Industry
2005=100 (lhs), YoY growth in % (rhs)
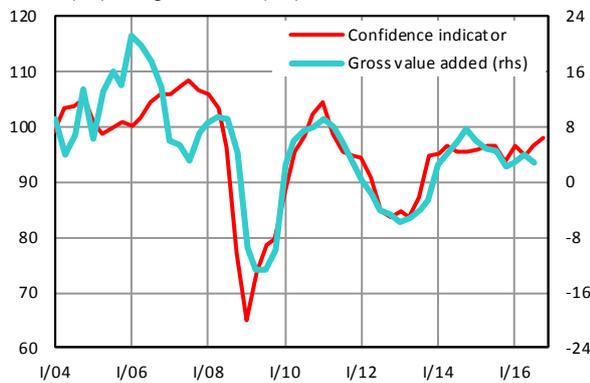
Source: CZSO.

Graph 2.2.2: Confidence and GVA in Construction
2005=100 (lhs), YoY growth in % (rhs)
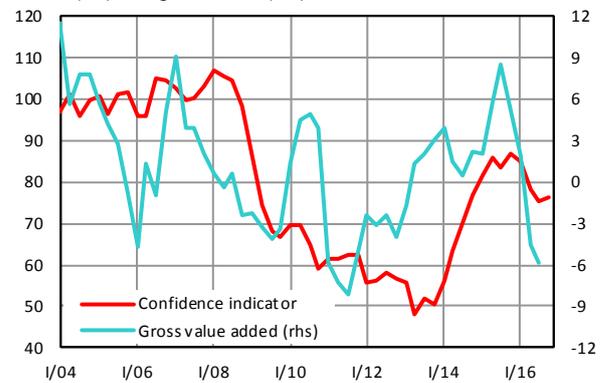
Source: CZSO.

Graph 2.2.3: Confidence and GVA in Trade and Services
2005=100 (lhs), YoY growth in % (rhs)
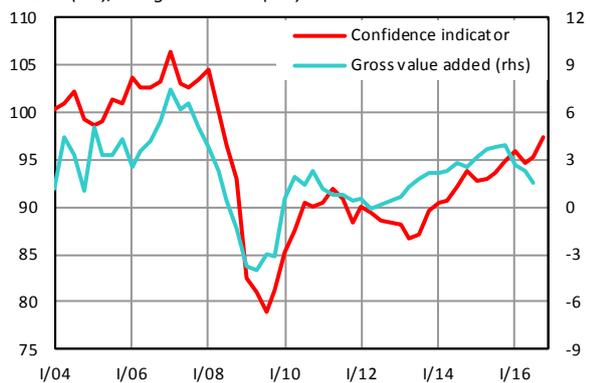
Source: CZSO. Calculations of the MoF.

Graph 2.2.4: Consumer Confidence and Consumption
2005=100 (lhs), YoY growth in % (rhs)
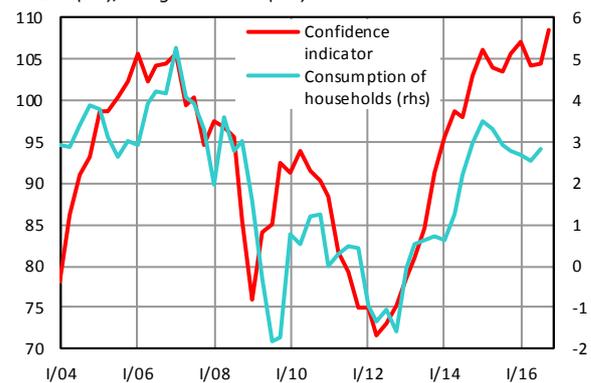
Source: CZSO.

Graph 2.2.5: Composite Confidence Indicator and GVA
2005=100 (lhs), YoY growth in % (rhs)
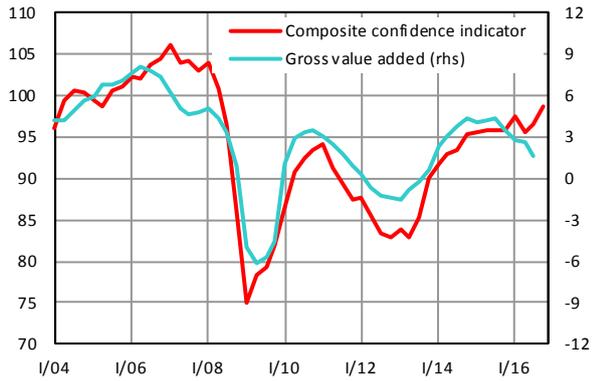
Source: CZSO.

Graph 2.2.6: Composite Leading Indicator
2005=100 (lhs), in % of GVA (rhs)
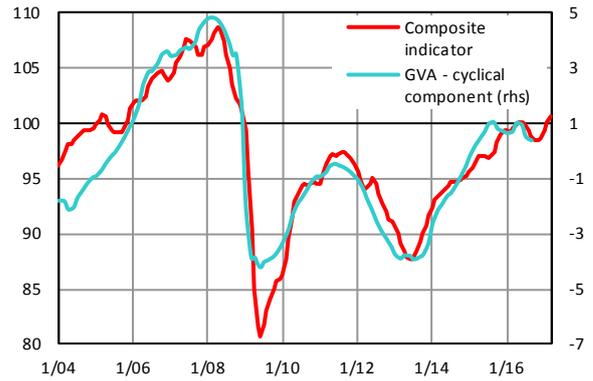
Note: Synchronized with the cyclical component of GVA derived from the Cobb-Douglas production function (see Chapter 2.1), on a monthly basis.
Source: CZSO. Calculations of the MoF.

3 Forecast of the Development of Macroeconomic Indicators

3.1 Economic Output

3.1.1 GDP in the Third Quarter of 2016

Economic performance measured by real GDP rose by 1.6% YoY (*versus 1.5%*) in the third quarter of 2016; seasonally adjusted GDP increased by 0.2% QoQ (*versus 0.3%*). Gross value added was up by 0.1% QoQ, driven mainly by manufacturing and real estate activities. On the contrary, only non-manufacturing industry (mining and quarrying, electricity supply and water supply) weighed on the growth of GVA. Contributions of other sectors were negligible. The Czech Statistical Office revised the structure of GDP growth for the second quarter of 2016 while maintaining its overall dynamics. Growth of household and general government consumption was revised up, as well as investment in fixed capital (smaller decrease). However, modifications of the dynamics of import and export offset these changes.

The YoY increase in GDP in the third quarter of 2016 reflected growing foreign and, most importantly, domestic demand. The main growth driver was final consumption expenditure of both households and the government. Gross fixed capital formation had a negative effect on GDP growth; however, the negative contribution of total investment was mitigated by an increase in inventories. Growth rate of exports and imports has decreased significantly; however, the balance of foreign trade in goods and services contributed positively to real GDP growth.

The increase in household consumption was due to increasing disposable income and high consumer confidence. Final consumption expenditure of households were also supported by a significant YoY decrease in the savings rate, which declined by 1.1 pp to 11.3%. Expenditure on durable goods were the most dynamically growing component of household consumption, which is an evidence that households are optimistic about future economic developments, as expenditure on durable goods may be postponed to a certain extent. Expenditure on semi-durable goods, services and mainly non-durable goods, which are less sensitive to economic fluctuations, also contributed to total household consumption growth. Household consumption increased by 2.7% (*versus 2.3%*) in real terms. General government consumption increased by 1.2% (*versus 2.2%*) due to purchases of goods and services and, to a lesser extent, to growing employment in public administration.

The increased investment activity co-financed by the EU funds from the previous financial perspective had subsided, which was fully reflected in a decrease of gross fixed capital formation by 2.8% (*versus 5.3%*). This effect influenced in particular investment of the general government sector but also to a large extent private investment activity, which has nevertheless posted an acceleration of growth. Gross fixed capital formation was dragged down by a slump in investment in other buildings and structures, and to a lesser extent by a fall in investment in information and communication technologies and other machinery and equipment. Purchases of transport equipment, investment in dwellings and intellectual property products had an impact in the opposite direction. Considering the positive contribution of inventories, gross capital formation decreased less than investment in fixed capital, specifically by 1.4% (*versus 3.8%*).

Amid a slowdown of exports of both components, the YoY growth of exports of goods and services decreased by 6.8 pp to 1.1% (*versus 5.4%*) compared to the previous quarter, due to slower export market growth and recently also deteriorated export performance. Imports of goods and services increased by 0.6% (*versus 4.3%*) and its weaker dynamics reflected mainly a significant export slowdown and a slump in import-intensive investment demand.

A higher decrease in import prices compared to export prices resulted in an improvement of the terms of trade of 1.1% (*versus 0.6%*). The trading gain resulting from foreign trade brought about a situation where real gross domestic income, which unlike GDP includes this factor, increased by 2.4% YoY (*versus 2.0%*).

Gross operating surplus fell by 0.2% (*versus 0.7%*), compensation of employees rose by 6.1% (*versus 5.3%*) and net taxes on production were up by 6.0% YoY (*versus 4.7%*). As a result, nominal GDP recorded growth of 2.9% (*versus 2.1%*).

3.1.2 Estimate for the Fourth Quarter of 2016

The estimate of GDP and its structure is based on the aforementioned revision of data for the second quarter of 2016 and the deviation of the estimate for the third quarter from the actual outcome. We estimate that in the fourth quarter of 2016 real GDP increased by 2.2% YoY (*versus 2.1%*) and by 0.7% QoQ (*versus 0.5%*). The estimated increase in the QoQ dynamics of GDP reflects the data on the development of the economy in the fourth quarter available as of the cut-off date of the Forecast (industrial and construction production, sales in retail and in services, and confidence indicators).

We suppose that GDP growth was mainly due to the growth of household consumption and foreign trade.

Due to increasing disposable income and record-high consumer confidence, the final consumption expenditure of households and the government could have increased by 2.8% YoY (*versus 2.5%*) and 2.0% (*versus 2.1%*), respectively. According to our estimate, gross fixed capital formation decreased by 3.1% (*versus 4.1%*) due to a gradual start of utilization of EU funds from the 2014–2020 financial perspective. The growth rate of investment was also adversely affected by the effect of high comparison base from the end of 2015, which was influenced by culminating utilization of EU funds from the previous programming period and a one-off imputation of financial lease of military aircraft. Despite the one-off effects, growth of nationally funded projects was apparent in the accelerating dynamics of private investment activity.

Foreign trade may have had a positive impact on GDP dynamics, mainly thanks to an increase in export performance and export market growth. We estimate that exports of goods and services increased by 4.8% (*versus 4.5%*) and imports, in relation to the development of domestic demand and exports, by 3.7% (*versus 3.8%*).

3.1.3 Forecast for the Years 2017 and 2018

In 2017, economic growth should be driven mainly by domestic demand lead by final consumption expenditure of households and resumed investment activity of firms and the government. GDP growth should also be strengthened by government consumption and foreign trade. We expect real GDP to grow by 2.6% (*versus 2.5%*) in 2017 and by 2.4% in 2018.

Household consumption will be supported by growth of real disposable income, which will, however, be slower than in 2016, and by a decrease in the savings rate. In 2017, the development of household consumption should positively reflect also the dynamics of consumer loans and consumers' optimistic expectations (see Chapter 2.2). Household consumption could thus increase by 2.4% (*versus 2.8%*) in 2017 as well as in 2018.

We expect general government consumption to increase by 1.6% (*unchanged*) in 2017 and by 1.4% in 2018. The main driver of government consumption growth in 2017 will be an increase in the compensation of employees, partially related to the planned creation of up to 7.5 thousand new jobs (in particular in the regional school system and the army). The contribution of expenditure on goods and services should be lower than in 2016 due to reduced growth of operating expenses asso-

ciated with transport infrastructure in favour of resumption of investment activity of the government.

In 2017, private investment activity and government sector investment will influence the growth of gross fixed capital formation positively. Private investment will be supported by growth in gross operating surplus, eased monetary conditions (we expect recovery of growth in loans to non-financial corporations in 2017) and above-average utilization of production capacities in manufacturing due to the position of the economy in the economic cycle. Also, increasing lack of employees could motivate businesses to invest in increasing labour productivity. Conversely, increased risks in the external environment could weigh on private investment. In the case of the government sector investment, we expect stable growth of investment expenditure financed from national resources in both 2017 and 2018. Government investment financed from national resources has so far been lagging behind its pre-crisis levels. Furthermore, government and private investment activity in 2017 and 2018 should be supported by the start of drawdown of EU funds from the 2014–2020 financial perspective.

Gross fixed capital formation could thus increase by 3.8% in 2017 (*versus 2.8%*) and by 3.0% in 2018 with a positive contribution of government and especially private investment.

Contribution of a change in inventories to GDP growth should be zero both in 2017 and in 2018. We expect gross capital formation to increase by 3.6% (*versus 2.4%*) in 2017 and by 2.7% in 2018. The forecast of total investment has been revised exclusively due to a revision of the forecast for gross fixed capital formation growth.

We expect that exports of goods and services will grow by 4.0% (*versus 4.8%*) in 2017 and by 4.3% in 2018. Lower growth dynamics compared to 2016 reflects the expected slowdown of export market growth without a sufficient acceleration of export performance (see Chapter 3.4). The development of exports reflects weakening of mainly German foreign trade. The pro-growth effect of low crude oil price will have been exhausted in 2017. On the side of imports of goods and services, we expect influence of a slower growth rate of exports, which will, however, be offset by the growth of gross domestic expenditure and in that context mainly by import-intensive investment demand. Hence, imports will probably grow by 4.1% (*versus 5.0%*) in 2017 and by 4.2% in 2018.

Table 3.1.1: Real GDP by Type of Expenditure – yearly

chained volumes, reference year 2010

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
							Estimate	*Forecast*	*Forecast*	*Outlook*	*Outlook*
Gross domestic product	*bill. CZK 2010*	4 033	4 001	3 981	4 089	4 275	4 382	4 494	4 603	4 716	4 826
	growth in %	2.0	-0.8	-0.5	2.7	4.5	2.5	2.6	2.4	2.4	2.3
Private consumption expenditure [1]	*bill. CZK 2010*	1 952	1 929	1 939	1 973	2 034	2 089	2 139	2 189	2 238	2 285
	growth in %	0.3	-1.2	0.5	1.8	3.0	2.7	2.4	2.4	2.2	2.1
Government consumption exp.	*bill. CZK 2010*	792	776	796	804	820	837	850	862	873	885
	growth in %	-2.2	-2.0	2.5	1.1	2.0	2.0	1.6	1.4	1.3	1.4
Gross capital formation	*bill. CZK 2010*	1 094	1 051	997	1 083	1 191	1 178	1 221	1 254	1 288	1 324
	growth in %	1.8	-3.9	-5.1	8.6	10.0	-1.1	3.6	2.7	2.7	2.8
Gross fixed capital formation	*bill. CZK 2010*	1 075	1 042	1 016	1 056	1 151	1 123	1 166	1 201	1 237	1 274
	growth in %	0.9	-3.1	-2.5	3.9	9.0	-2.4	3.8	3.0	3.0	3.0
Change in stocks and valuables	*bill. CZK 2010*	18	9	-19	26	40	56	55	54	51	50
Exports of goods and services	*bill. CZK 2010*	2 856	2 978	2 984	3 242	3 492	3 657	3 802	3 965	4 141	4 327
	growth in %	9.2	4.3	0.2	8.7	7.7	4.7	4.0	4.3	4.4	4.5
Imports of goods and services	*bill. CZK 2010*	2 661	2 732	2 734	3 008	3 256	3 375	3 514	3 662	3 820	3 989
	growth in %	6.7	2.7	0.1	10.1	8.2	3.7	4.1	4.2	4.3	4.4
Gross domestic expenditure	*bill. CZK 2010*	3 838	3 756	3 733	3 860	4 043	4 103	4 208	4 303	4 397	4 491
	growth in %	0.2	-2.1	-0.6	3.4	4.7	1.5	2.6	2.3	2.2	2.1
Methodological discrepancy [2]	*bill. CZK 2010*	0	-1	0	-4	-5	-4	-4	-4	-5	-5
Real gross domestic income	*bill. CZK 2010*	3 990	3 942	3 956	4 112	4 303	4 441	4 518	4 642	4 771	4 900
	growth in %	0.9	-1.2	0.4	3.9	4.6	3.2	1.7	2.7	2.8	2.7
Contributions to GDP growth [3]											
Gross domestic expenditure	*pp*	0.2	-2.1	-0.6	3.2	4.4	1.4	2.4	2.1	2.0	2.0
Consumption	*pp*	-0.3	-1.0	0.8	1.1	1.8	1.7	1.4	1.4	1.3	1.2
Household expenditure	*pp*	0.1	-0.6	0.3	0.9	1.5	1.3	1.1	1.1	1.1	1.0
Government expenditure	*pp*	-0.5	-0.4	0.5	0.2	0.4	0.4	0.3	0.3	0.2	0.3
Gross capital formation	*pp*	0.5	-1.1	-1.3	2.1	2.6	-0.3	0.9	0.7	0.7	0.7
Gross fixed capital formation	*pp*	0.2	-0.8	-0.6	1.0	2.3	-0.6	1.0	0.8	0.8	0.8
Change in stocks	*pp*	0.3	-0.2	-0.7	1.1	0.3	0.4	0.0	0.0	0.0	0.0
Foreign balance	*pp*	1.8	1.3	0.1	-0.5	0.1	1.1	0.2	0.3	0.4	0.4
External balance of goods	*pp*	2.0	1.4	0.1	-0.1	-0.6	0.9	0.1	0.2	0.3	0.3
External balance of services	*pp*	-0.2	-0.1	0.0	-0.4	0.7	0.2	0.1	0.1	0.1	0.1
Gross value added	*bill. CZK 2010*	3 655	3 624	3 606	3 729	3 876	.	.	.	.	.
	growth in %	2.0	-0.8	-0.5	3.4	3.9	.	.	.	.	.
Net taxes and subsidies on products	*bill. CZK 2010*	378	376	375	363	399	.	.	.	.	.

[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. Calculations of the MoF.

Table 3.1.2: Real GDP by Type of Expenditure – quarterly

chained volumes, reference year 2010

		2016				2017			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		Prelim.	*Prelim.*	*Prelim.*	*Estimate*	*Forecast*	*Forecast*	*Forecast*	*Forecast*
Gross domestic product	*bill. CZK 2010*	1 022	1 113	1 110	1 137	1 059	1 126	1 139	1 170
	growth in %	**2.7**	**3.6**	**1.6**	**2.2**	**3.6**	**1.2**	**2.6**	**2.9**
	growth in % [1]	**3.0**	**2.6**	**1.9**	**2.2**	**2.7**	**2.5**	**2.9**	**2.9**
	QoQ in % [1]	**0.4**	**0.9**	**0.2**	**0.7**	**0.8**	**0.7**	**0.7**	**0.6**
Private consumption expenditure [2]	*bill. CZK 2010*	496	522	528	543	512	532	540	555
	growth in %	**2.4**	**3.0**	**2.7**	**2.8**	**3.3**	**1.8**	**2.2**	**2.2**
Government consumption exp.	*bill. CZK 2010*	194	204	203	236	197	207	206	240
	growth in %	**2.3**	**2.8**	**1.2**	**2.0**	**1.7**	**1.5**	**1.6**	**1.6**
Gross capital formation	*bill. CZK 2010*	246	303	326	303	257	305	342	317
	growth in %	**1.7**	**-1.6**	**-1.4**	**-2.4**	**4.2**	**0.8**	**4.8**	**4.7**
Gross fixed capital formation	*bill. CZK 2010*	249	270	290	314	258	276	302	329
	growth in %	**-0.5**	**-3.1**	**-2.8**	**-3.1**	**3.7**	**2.3**	**4.2**	**5.0**
Change in stocks and valuables	*bill. CZK 2010*	-3	33	36	-11	-1	29	40	-12
Exports of goods and services	*bill. CZK 2010*	897	942	861	957	958	957	890	997
	growth in %	**5.0**	**7.9**	**1.1**	**4.8**	**6.8**	**1.6**	**3.3**	**4.3**
Imports of goods and services	*bill. CZK 2010*	811	857	807	900	864	873	837	940
	growth in %	**4.6**	**5.8**	**0.6**	**3.7**	**6.5**	**1.8**	**3.8**	**4.3**
Gross domestic expenditure	*bill. CZK 2010*	936	1 029	1 057	1 082	966	1 044	1 087	1 112
	growth in %	**2.2**	**1.6**	**1.1**	**1.2**	**3.2**	**1.5**	**2.8**	**2.8**
Methodological discrepancy [3]	*bill. CZK 2010*	0	-1	-2	-1	-1	-2	-2	0
Real gross domestic income	*bill. CZK 2010*	1 042	1 131	1 125	1 143	1 062	1 136	1 148	1 173
	growth in %	**3.9**	**4.8**	**2.4**	**1.9**	**1.9**	**0.5**	**2.0**	**2.6**
Gross value added	*bill. CZK 2010*	930	1 009	1 001	.	.	.	.	.
	growth in %	**2.3**	**3.6**	**1.3**	**.**	**.**	**.**	**.**	**.**
	growth in % [1]	**2.7**	**2.6**	**1.6**	**.**	**.**	**.**	**.**	**.**
	QoQ in % [1]	**0.4**	**0.8**	**0.1**	**.**	**.**	**.**	**.**	**.**
Net taxes and subsidies on products	*bill. CZK 2010*	93	104	109	.	.	.	.	.

[1] *From seasonally and working day adjusted data*

[2] *The consumption of non-profit institutions serving households (NPISH) is included in the private consumption.*

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

Source: CZSO. Calculations of the MoF.

Table 3.1.3: Nominal GDP by Type of Expenditure – yearly

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
							Estimate	Forecast	Forecast	Outlook	Outlook
Gross domestic product	bill. CZK	**4 034**	**4 060**	**4 098**	**4 314**	**4 555**	**4 719**	**4 885**	**5 082**	**5 298**	**5 522**
	growth in %	2.0	0.6	0.9	5.3	5.6	3.6	3.5	4.0	4.2	4.2
Private consumption expenditure [1]	bill. CZK	**1 979**	**1 998**	**2 025**	**2 074**	**2 140**	**2 213**	**2 314**	**2 407**	**2 504**	**2 604**
	growth in %	1.6	1.0	1.4	2.4	3.2	3.4	4.5	4.0	4.0	4.0
Government consumption exp.	bill. CZK	**813**	**804**	**826**	**849**	**890**	**926**	**962**	**986**	**1 010**	**1 035**
	growth in %	0.4	-1.1	2.7	2.8	4.8	4.0	3.9	2.5	2.4	2.5
Gross capital formation	bill. CZK	**1 087**	**1 063**	**1 011**	**1 116**	**1 246**	**1 234**	**1 291**	**1 345**	**1 401**	**1 460**
	growth in %	1.2	-2.2	-4.9	10.4	11.6	-1.0	4.6	4.2	4.2	4.2
Gross fixed capital formation	bill. CZK	**1 067**	**1 052**	**1 027**	**1 084**	**1 198**	**1 173**	**1 232**	**1 287**	**1 346**	**1 406**
	growth in %	0.1	-1.4	-2.4	5.5	10.5	-2.1	5.0	4.5	4.5	4.5
Change in stocks and valuables	bill. CZK	**20**	**11**	**-16**	**32**	**48**	**61**	**59**	**57**	**55**	**54**
External balance	bill. CZK	**154**	**195**	**236**	**275**	**279**	**346**	**318**	**345**	**383**	**423**
Exports of goods and services	bill. CZK	**2 876**	**3 092**	**3 150**	**3 561**	**3 778**	**3 817**	**3 977**	**4 112**	**4 302**	**4 529**
	growth in %	9.9	7.5	1.9	13.0	6.1	1.0	4.2	3.4	4.6	5.3
Imports of goods and services	bill. CZK	**2 722**	**2 897**	**2 914**	**3 286**	**3 499**	**3 470**	**3 659**	**3 767**	**3 919**	**4 106**
	growth in %	9.1	6.5	0.6	12.8	6.5	-0.8	5.4	3.0	4.1	4.8
Gross national income	bill. CZK	**3 728**	**3 808**	**3 854**	**4 022**	**4 255**	**4 453**	**4 614**	**4 800**	**5 007**	**5 223**
	growth in %	2.0	2.1	1.2	4.4	5.8	4.6	3.6	4.0	4.3	4.3
Primary income balance	bill. CZK	**-305**	**-252**	**-245**	**-292**	**-299**	**-266**	**-271**	**-283**	**-291**	**-299**

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

Table 3.1.4: Nominal GDP by Type of Expenditure – quarterly

		2016				2017			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		Prelim.	Prelim.	Prelim.	Estimate	Forecast	Forecast	Forecast	Forecast
Gross domestic product	bill. CZK	**1 095**	**1 194**	**1 196**	**1 234**	**1 138**	**1 224**	**1 239**	**1 283**
	growth in %	4.0	4.5	2.9	3.2	3.9	2.5	3.6	3.9
Private consumption expenditure [1]	bill. CZK	**521**	**551**	**561**	**581**	**550**	**574**	**585**	**604**
	growth in %	2.6	3.1	3.5	4.5	5.7	4.2	4.4	4.0
Government consumption exp.	bill. CZK	**207**	**223**	**223**	**272**	**218**	**233**	**231**	**280**
	growth in %	4.3	4.2	3.1	4.5	5.0	4.8	3.5	2.8
Gross capital formation	bill. CZK	**259**	**316**	**341**	**318**	**271**	**321**	**361**	**338**
	growth in %	2.2	-2.0	-1.4	-1.9	4.7	1.7	5.8	6.1
Gross fixed capital formation	bill. CZK	**260**	**281**	**303**	**329**	**272**	**291**	**320**	**349**
	growth in %	-0.3	-3.1	-2.4	-2.3	4.6	3.4	5.4	6.3
Change in stocks and valuables	bill. CZK	**-1**	**35**	**38**	**-11**	**-1**	**31**	**41**	**-12**
External balance	bill. CZK	**108**	**104**	**70**	**63**	**99**	**96**	**62**	**62**
Exports of goods and services	bill. CZK	**934**	**978**	**898**	**1 006**	**1 000**	**1 001**	**931**	**1 046**
	growth in %	0.1	2.6	-2.0	3.1	7.0	2.3	3.6	4.0
Imports of goods and services	bill. CZK	**826**	**874**	**828**	**942**	**900**	**905**	**869**	**984**
	growth in %	-1.7	-0.8	-3.6	2.5	9.0	3.5	5.0	4.4

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

Graph 3.1.1: Gross Domestic Product (real)

bill. CZK in const. prices of 2010, seasonally adjusted, black lines with labels show the average level and growth rate of GDP in the given year
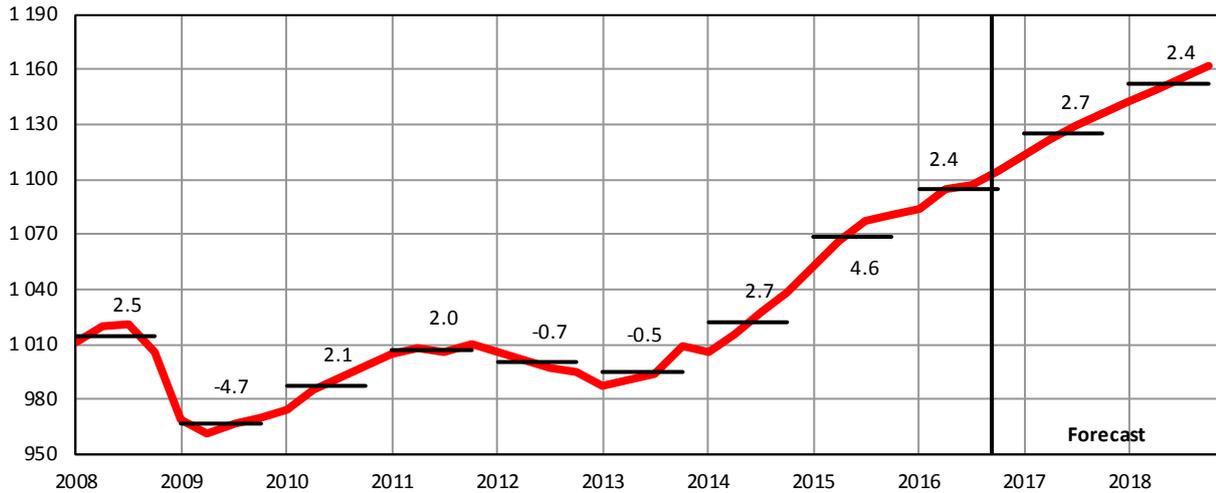
Source: CZSO. Calculations of the MoF.

Graph 3.1.2: 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
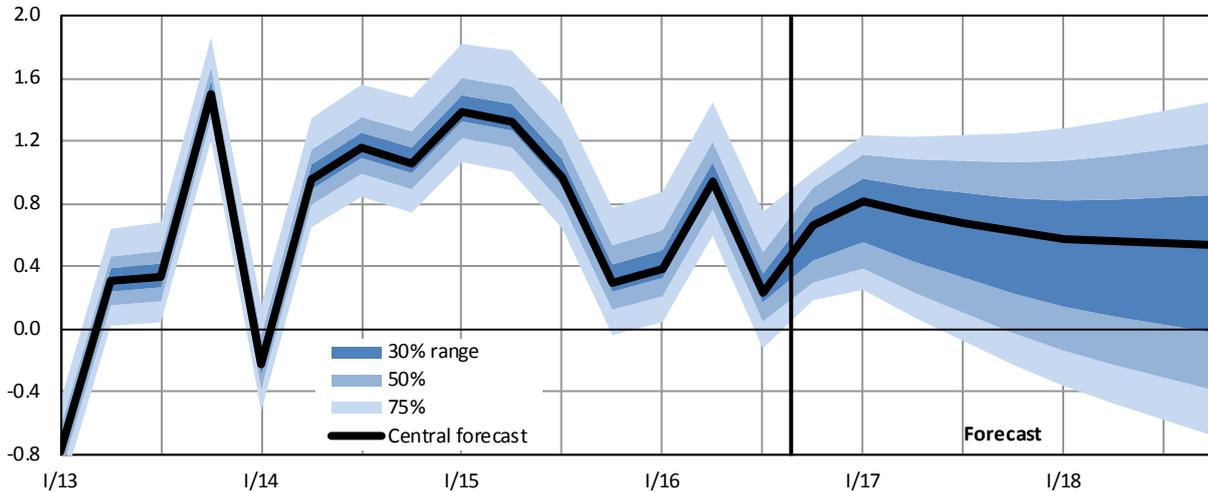
Source: CZSO. Calculations of the MoF.

Graph 3.1.3: Resources of Gross Domestic Product

QoQ real growth rate of GDP in %, contributions of individual components in percentage points, seasonally adjusted
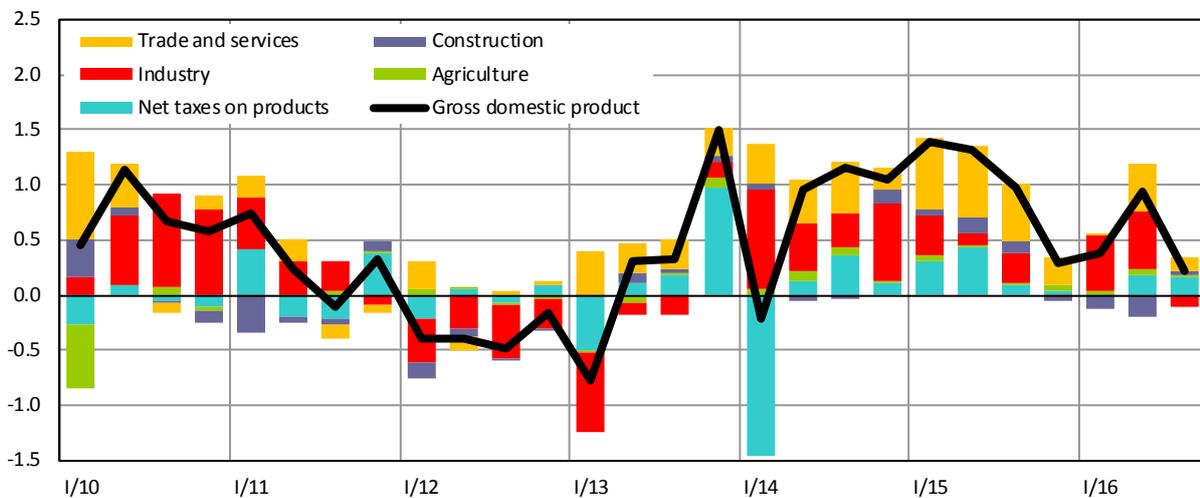
Source: CZSO. Calculations of the MoF.

Graph 3.1.4: Gross Domestic Product by Type of Expenditure

YoY real growth rate of GDP in %, contributions of individual components in percentage points
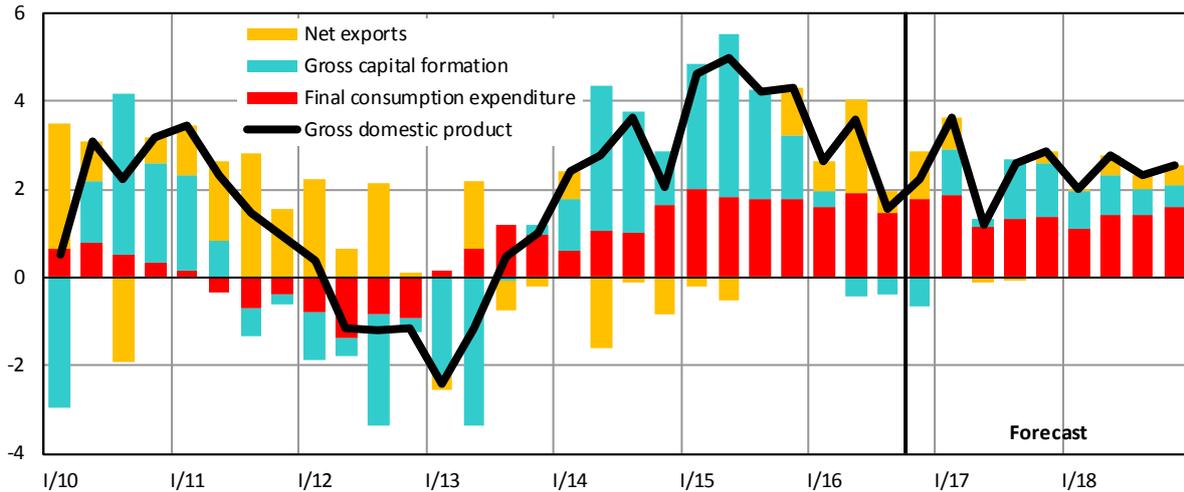
Source: CZSO. Calculations of the MoF.

Graph 3.1.5: Consumption of Households

consumption of households in domestic concept, YoY real growth rate in %, contributions of individual components in percentage points
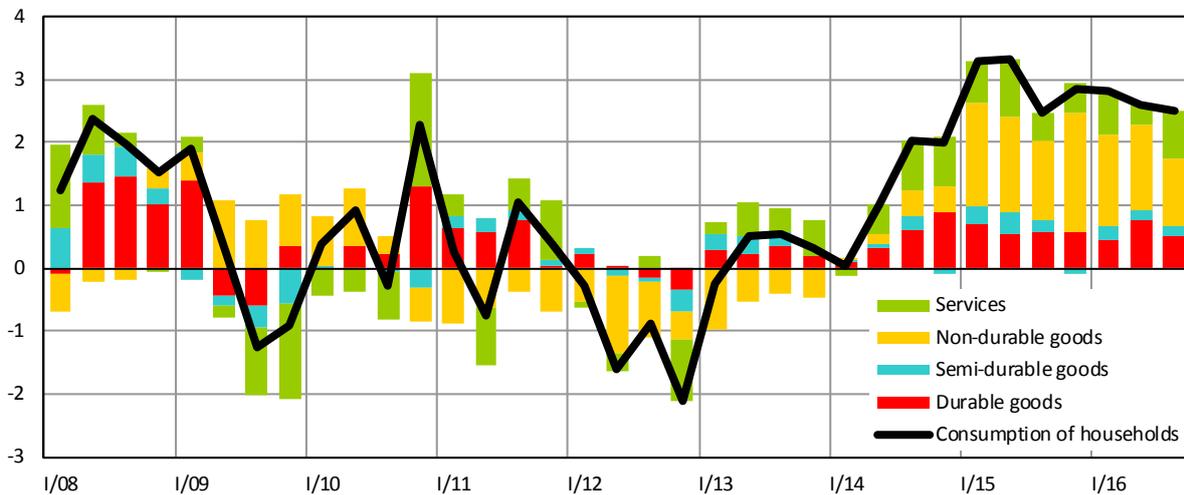
Source: CZSO. Calculations of the MoF.

Graph 3.1.6: Gross Fixed Capital Formation

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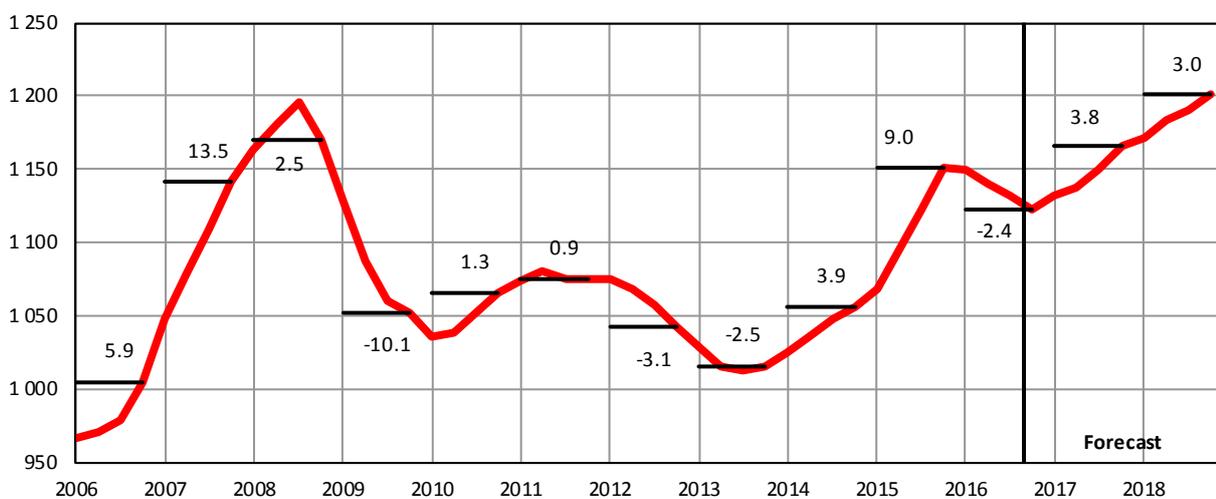
Source: CZSO. Calculations of the MoF.

Graph 3.1.7: Gross Fixed Capital Formation by Type of Expenditure
YoY real growth rate in %, contributions of individual components in percentage points

Legend: Other; ICT, other machinery and equipment; Transport equipment; Other buildings and structures; Dwellings; Gross fixed capital formation
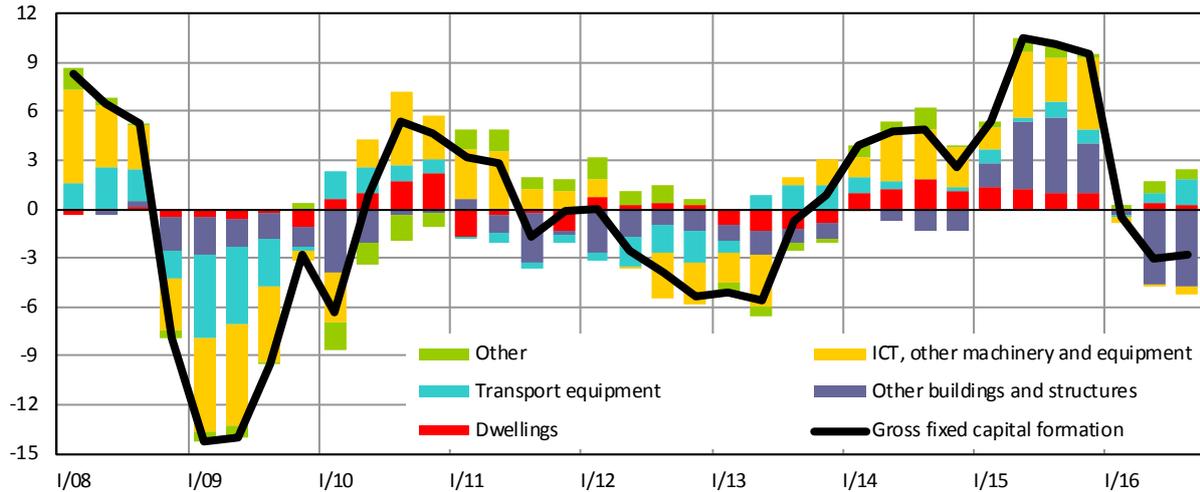
Source: CZSO. Calculations of the MoF.

Graph 3.1.8: Gross Fixed Capital Formation by Sector
YoY real growth rate in %, contributions of individual sectors in percentage points

Legend: Households; Firms; General government; Gross fixed capital formation
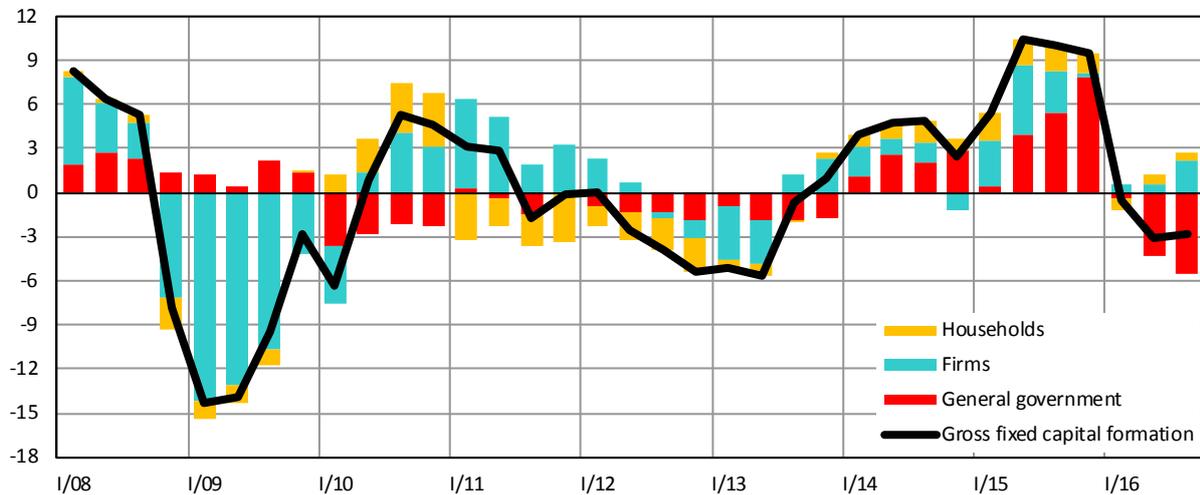
Source: CZSO. Calculations of the MoF.

Graph 3.1.9: Nominal Gross Domestic Product
YoY growth rate of GDP in %, contributions of individual components in percentage points

Legend: Balance of taxes and subsidies; Gross operating surplus; Compensation of employees; Gross domestic product; Forecast
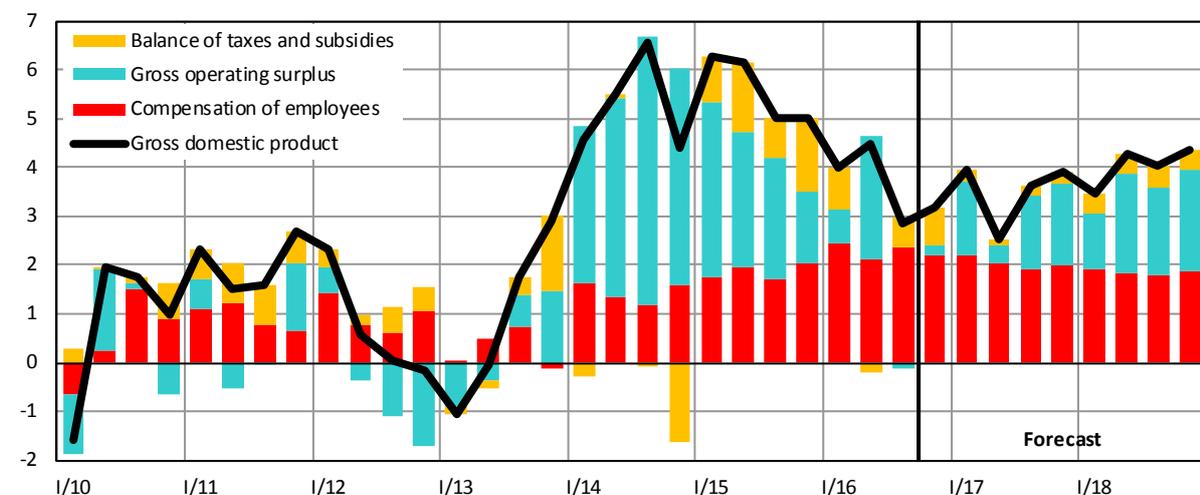
Source: CZSO. Calculations of the MoF.

Table 3.1.5: GDP by Type of Income – yearly

		2011	2012	2013	2014	2015	2016 Estimate	2017 Forecast	2018 Forecast	2019 Outlook	2020 Outlook
GDP	bill. CZK	**4 034**	**4 060**	**4 098**	**4 314**	**4 555**	**4 719**	**4 885**	**5 082**	**5 298**	**5 522**
	growth in %	2.0	0.6	0.9	5.3	5.6	3.6	3.5	4.0	4.2	4.2
Balance of taxes and subsidies	bill. CZK	**369**	**385**	**402**	**381**	**433**	**456**	**466**	**487**	**502**	**517**
	% of GDP	9.1	9.5	9.8	8.8	9.5	9.7	9.5	9.6	9.5	9.4
	growth in %	8.4	4.4	4.2	-5.1	13.4	5.4	2.2	4.4	3.1	3.1
Taxes on production and imports	bill. CZK	**488**	**508**	**528**	**518**	**566**	.	.	.	.	.
	growth in %	9.2	4.1	3.9	-1.8	9.3	.	.	.	.	.
Subsidies on production	bill. CZK	**119**	**123**	**126**	**137**	**134**	.	.	.	.	.
	growth in %	11.8	3.0	2.7	8.5	-2.2	.	.	.	.	.
Compensation of employees	bill. CZK	**1 626**	**1 665**	**1 676**	**1 735**	**1 815**	**1 919**	**2 015**	**2 105**	**2 200**	**2 292**
(domestic concept)	% of GDP	40.3	41.0	40.9	40.2	39.9	40.7	41.2	41.4	41.5	41.5
	growth in %	2.3	2.4	0.7	3.5	4.7	5.7	5.0	4.5	4.5	4.2
Wages and salaries	bill. CZK	**1 237**	**1 269**	**1 275**	**1 321**	**1 379**	**1 457**	**1 529**	**1 598**	**1 670**	**1 740**
	growth in %	2.3	2.6	0.5	3.6	4.4	5.6	5.0	4.5	4.5	4.2
Social security contributions	bill. CZK	**390**	**396**	**402**	**414**	**436**	**462**	**485**	**507**	**530**	**552**
	growth in %	2.5	1.6	1.4	3.1	5.4	6.0	5.0	4.5	4.5	4.2
Gross operating surplus	bill. CZK	**2 038**	**2 010**	**2 020**	**2 198**	**2 307**	**2 344**	**2 404**	**2 491**	**2 596**	**2 712**
	% of GDP	50.5	49.5	49.3	50.9	50.6	49.7	49.2	49.0	49.0	49.1
	growth in %	0.7	-1.4	0.5	8.8	5.0	1.6	2.5	3.6	4.2	4.5
Consumption of capital	bill. CZK	**864**	**880**	**906**	**939**	**981**	**1 002**	**1 038**	**1 082**	**1 129**	**1 174**
	growth in %	1.7	1.8	3.0	3.6	4.5	2.2	3.6	4.2	4.3	4.1
Net operating surplus	bill. CZK	**1 174**	**1 130**	**1 114**	**1 259**	**1 325**	**1 342**	**1 366**	**1 409**	**1 467**	**1 538**
	growth in %	0.0	-3.8	-1.4	13.0	5.3	1.2	1.8	3.2	4.2	4.8

Source: CZSO. Calculations of the MoF.

Table 3.1.6: GDP by Type of Income – quarterly

		2016				2017			
		Q1 Prelim.	Q2 Prelim.	Q3 Prelim.	Q4 Estimate	Q1 Forecast	Q2 Forecast	Q3 Forecast	Q4 Forecast
GDP	bill. CZK	**1 095**	**1 194**	**1 196**	**1 234**	**1 138**	**1 224**	**1 239**	**1 283**
	growth in %	4.0	4.5	2.9	3.2	3.9	2.5	3.6	3.9
Balance of taxes and subsidies	bill. CZK	**100**	**112**	**126**	**119**	**102**	**113**	**129**	**122**
	growth in %	10.4	-1.9	6.0	8.3	2.7	1.2	2.1	2.9
Compensation of employees	bill. CZK	**460**	**475**	**475**	**509**	**484**	**499**	**498**	**534**
(domestic concept)	growth in %	5.9	5.4	6.1	5.4	5.2	5.1	4.8	4.8
Wages and salaries	bill. CZK	**347**	**360**	**361**	**389**	**365**	**378**	**378**	**407**
	growth in %	6.0	5.4	5.7	5.4	5.2	5.1	4.8	4.8
Social security contributions	bill. CZK	**113**	**115**	**114**	**121**	**119**	**121**	**119**	**126**
	growth in %	5.6	5.5	7.6	5.4	5.2	5.1	4.8	4.8
Gross operating surplus	bill. CZK	**535**	**608**	**595**	**606**	**552**	**612**	**613**	**627**
	growth in %	1.4	5.0	-0.2	0.5	3.1	0.8	3.0	3.4

Source: CZSO. Calculations of the MoF.

3.2 Prices

3.2.1 Consumer Prices

The average inflation rate in 2016 reached 0.7% (*versus 0.5%*) and was thus very low for the third year in a row. Like in 2015, the low inflation was mainly due to factors from the external environment, in particular a decrease in crude oil price and the associated decrease in producer prices in the euro area. However, these effects subsided in the fourth quarter of 2016, which contributed to an acceleration of YoY inflation. Domestic economic development, which was characterised in 2016 by growing demand, positive output gap, very low unemployment rate and renewed growth in unit labour costs, had a pro-inflationary effect. Administrative measures contributed to consumer prices growth only very slightly.

Compared with the November forecast, the acceleration in YoY inflation in the fourth quarter of 2016 was much more rapid. In December 2016, the YoY growth in consumer prices was 2.0% (*versus 1.0%*), hence reaching the CNB's inflation target. The contribution of administrative measures to December YoY inflation was zero. The observed YoY inflation deviated from the forecast mainly due to unexpectedly fast growth in prices in the food and non-alcoholic beverages division. Its contribution to December YoY inflation amounting to 0.6 pp was the greatest of all divisions of the consumer basket. The deviation of the forecast from the actual outcome was also due to an increase in prices in the food services and accommodation division (a number of entities took advantage of the introduction of fiscalization of cash payments to increase prices). According to the Czech Statistical Office, the reduction in VAT in food services from 21% to 15% was reflected in consumer prices by an impact of –0.2 pp.

The aforementioned error in the November forecast is a key reason for a significant increase in the forecast of average inflation rate **in 2017**. Another, although less important, reason is an increase in the expected crude oil price (see Chapter 1.1.3). Administrative measures should play only a negligible role in this year's inflation. As regards regulated prices, probably the greatest impact will be due to cheaper natural gas (contribution –0.1 pp) and as regards tax changes, further increase in excise duty on tobacco products (contribution 0.1 pp). The impact of reduced VAT for printed matter will be negligible. We expect the contribution of administrative measures to the YoY increase in consumer prices in December 2017 to reach 0.1 pp (*unchanged*).

The YoY inflation should hover near 2% in the first three quarters of 2017, and it should slow down in the fourth quarter mainly due to the base effect. The main factors of price development will have a pro-inflationary effect in 2017 because we expect, in comparison with 2016, higher crude oil prices, continued growth in unit labour costs and a positive output gap. We also assume that the koruna will start appreciating only slightly from the third quarter of 2017, and the effect of the exchange rate on this year's inflation should therefore be negligible. Food prices pose a slight pro-inflationary risk.

In 2017, the **average inflation rate** should reach 2.0% (*versus 1.2%*), with a YoY increase in consumer prices of 1.6% (*versus 1.5%*) in December.

With a small contribution of appreciating koruna, inflation should slightly decrease **in 2018** after the probably one-off factors from the fourth quarter of 2016 (food prices, introduction of fiscalization of cash payments) subside. Stagnating price of crude oil should have a neutral effect and administrative measures should have only a very slight pro-inflationary effect. Similarly to this year, inflation should reflect the growth in unit labour costs, domestic demand and the positive output gap. In 2018, the average inflation rate should be 1.6%, with a YoY increase in consumer prices of 1.6% in December.

3.2.2 Deflators

Growth of GDP deflator by 1.3% (*versus 0.6%*) in the third quarter of 2016 was due to an increase in the gross domestic expenditure deflator by 0.8% (*versus 0.4%*) and an improvement in terms of trade by 1.1% (*versus 0.6%*).

Lower crude oil prices played a role in the development of price indexes. Terms of trade improved, in comparison with the forecast, due to a greater decrease in import prices. In comparison with the forecast, the household and government consumption deflator growth increased due to growing demand pressures and increase in average nominal wages in the general government sector. The gross fixed capital formation deflator grew in line with the forecast.

We expect the GDP deflator to increase by 0.9% in 2017 (*unchanged*) and by 1.6% in 2018 due to gradually growing inflation pressures. Terms of trade should decrease by 1.0% (*versus 0.3%*) in 2017 and increase, in contrast, by 0.4% in 2018. The gross domestic expenditure deflator could increase by 1.8% (*versus 1.3%*) in 2017 and by 1.5% in 2018. The main change in the forecast for 2017, which is an accelerated growth in the household and government consumption deflator with deterioration of terms of trade, is based on growing demand pressure in the domestic economy in an environment of a positive output gap and the increasing price of crude oil, which is reflected in a more moderate decline of the import deflator. For 2018 we expect an increase in the gross domestic expenditure deflator despite lower prices of imported goods, and an improvement in terms of trade due to a decrease in import prices influenced by appreciation of the nominal exchange rate.

Table 3.2.1: Prices – yearly

		2011	2012	2013	2014	2015	2016 Estimate	2017 Forecast	2018 Forecast	2019 Outlook	2020 Outlook
Consumer Price Index											
Average of a year	average 2005=100	117.1	121.0	122.7	123.2	123.6	124.4	126.9	128.9	131.2	133.3
	growth in %	**1.9**	**3.3**	**1.4**	**0.4**	**0.3**	**0.7**	**2.0**	**1.6**	**1.8**	**1.8**
December	average 2005=100	118.3	121.1	122.8	122.9	123.0	125.4	127.4	129.5	131.9	134.4
	growth in %	**2.4**	**2.4**	**1.4**	**0.1**	**0.1**	**2.0**	**1.6**	**1.6**	**1.9**	**1.9**
Of which the contribution of:											
Administrative measures [1]	percentage points	**1.2**	**2.2**	**1.0**	**-0.2**	**0.1**	**0.0**	**0.1**	**0.2**	**0.2**	**0.2**
Market increase	percentage points	**1.2**	**0.1**	**0.4**	**0.3**	**0.0**	**2.0**	**1.4**	**1.4**	**1.8**	**1.7**
HICP	average 2005=100	116.2	120.3	121.9	122.4	122.8	123.6	126.1	128.2	130.5	132.8
	growth in %	**2.1**	**3.5**	**1.4**	**0.4**	**0.3**	**0.6**	**2.1**	**1.6**	**1.8**	**1.7**
Offering prices of flats											
Czech Republic	average 2010=100	95.1	96.1	97.2	100.7	106.9	117.6	.	.	.	.
	growth in %	**-4.9**	**1.1**	**1.1**	**3.6**	**6.2**	**10.0**	.	.	.	.
Czech Republic excluding Prague	average 2010=100	96.6	92.5	91.3	93.0	97.7	107.1	.	.	.	.
	growth in %	**-3.4**	**-4.2**	**-1.3**	**1.9**	**5.1**	**9.6**	.	.	.	.
Prague	average 2010=100	93.6	99.6	103.1	108.5	116.1	128.2	.	.	.	.
	growth in %	**-6.4**	**6.4**	**3.5**	**5.2**	**7.0**	**10.4**	.	.	.	.
Deflators											
GDP	average 2010=100	100.0	101.5	102.9	105.5	106.5	107.7	108.7	110.4	112.3	114.4
	growth in %	**0.0**	**1.5**	**1.4**	**2.5**	**1.0**	**1.1**	**0.9**	**1.6**	**1.8**	**1.8**
Domestic final use	average 2010=100	101.1	102.9	103.5	104.6	105.7	106.6	108.5	110.1	111.8	113.5
	growth in %	**1.1**	**1.8**	**0.5**	**1.1**	**1.1**	**0.8**	**1.8**	**1.5**	**1.5**	**1.6**
Consumption of households	average 2010=100	101.4	103.6	104.5	105.1	105.2	105.9	108.2	110.0	111.9	114.0
	growth in %	**1.4**	**2.2**	**0.8**	**0.6**	**0.1**	**0.7**	**2.1**	**1.6**	**1.8**	**1.8**
Consumption of government	average 2010=100	102.7	103.6	103.8	105.6	108.5	110.6	113.2	114.4	115.7	117.0
	growth in %	**2.7**	**0.9**	**0.2**	**1.7**	**2.8**	**2.0**	**2.3**	**1.1**	**1.1**	**1.1**
Fixed capital formation	average 2010=100	99.2	100.9	101.1	102.7	104.1	104.5	105.7	107.2	108.8	110.4
	growth in %	**-0.8**	**1.7**	**0.1**	**1.6**	**1.4**	**0.4**	**1.1**	**1.5**	**1.5**	**1.5**
Exports of goods and services	average 2010=100	100.7	103.8	105.6	109.8	108.2	104.4	104.6	103.7	103.9	104.7
	growth in %	**0.7**	**3.1**	**1.7**	**4.0**	**-1.5**	**-3.5**	**0.2**	**-0.9**	**0.2**	**0.8**
Imports of goods and services	average 2010=100	102.3	106.1	106.6	109.2	107.5	102.8	104.1	102.8	102.6	102.9
	growth in %	**2.3**	**3.7**	**0.5**	**2.5**	**-1.6**	**-4.3**	**1.3**	**-1.2**	**-0.2**	**0.3**
Terms of trade	average 2010=100	98.5	97.9	99.0	100.5	100.7	101.5	100.5	100.8	101.2	101.7
	growth in %	**-1.5**	**-0.6**	**1.2**	**1.5**	**0.1**	**0.8**	**-1.0**	**0.4**	**0.4**	**0.4**

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

Table 3.2.2: Prices – quarterly

		2016				2017			
		Q1	**Q2**	**Q3**	**Q4** *Estimate*	**Q1** *Forecast*	**Q2** *Forecast*	**Q3** *Forecast*	**Q4** *Forecast*
Consumer Price Index	*average 2005=100*	123.7	124.3	124.5	125.0	126.3	127.0	127.1	127.2
	growth in %	**0.5**	**0.2**	**0.5**	**1.4**	**2.1**	**2.2**	**2.1**	**1.7**
Of which the contribution of:									
Administrative measures [1]	*percentage points*	**0.2**	**0.2**	**0.1**	**0.1**	**-0.1**	**-0.1**	**-0.1**	**0.0**
Market increase	*percentage points*	**0.3**	**0.0**	**0.4**	**1.3**	**2.2**	**2.3**	**2.1**	**1.7**
HICP	*average 2005=100*	122.9	123.5	123.7	124.2	125.5	126.3	126.3	126.4
	growth in %	**0.5**	**0.2**	**0.6**	**1.5**	**2.2**	**2.2**	**2.1**	**1.7**
Offering prices of flats									
Czech Republic	*average 2010=100*	113.4	116.5	118.8	121.9	.	.	.	.
	growth in %	**10.2**	**10.3**	**9.9**	**9.9**	**.**	**.**	**.**	**.**
Czech Republic excluding Prague	*average 2010=100*	103.5	106.1	108.4	110.2	.	.	.	.
	growth in %	**10.1**	**9.9**	**10.1**	**8.5**	**.**	**.**	**.**	**.**
Prague	*average 2010=100*	123.2	126.8	129.2	133.7	.	.	.	.
	growth in %	**10.2**	**10.5**	**9.8**	**11.3**	**.**	**.**	**.**	**.**
Deflators									
GDP	*average 2010=100*	107.2	107.3	107.8	108.5	107.5	108.7	108.8	109.6
	growth in %	**1.3**	**0.9**	**1.3**	**0.9**	**0.3**	**1.3**	**1.0**	**1.0**
Domestic final use	*average 2010=100*	105.4	105.9	106.5	108.2	107.6	108.2	108.4	109.8
	growth in %	**0.7**	**0.2**	**0.8**	**1.5**	**2.0**	**2.1**	**1.7**	**1.5**
Consumption of households	*average 2010=100*	105.0	105.6	106.2	106.9	107.4	108.0	108.5	108.8
	growth in %	**0.1**	**0.1**	**0.8**	**1.6**	**2.3**	**2.3**	**2.1**	**1.8**
Consumption of government	*average 2010=100*	107.0	109.1	110.0	115.4	110.5	112.6	112.1	116.7
	growth in %	**2.0**	**1.4**	**1.9**	**2.5**	**3.3**	**3.2**	**1.9**	**1.1**
Fixed capital formation	*average 2010=100*	104.5	104.3	104.5	104.7	105.4	105.4	105.7	106.1
	growth in %	**0.3**	**0.0**	**0.4**	**0.8**	**0.9**	**1.1**	**1.2**	**1.3**
Exports of goods and services	*average 2010=100*	104.2	103.9	104.3	105.1	104.4	104.6	104.6	104.8
	growth in %	**-4.7**	**-4.9**	**-3.1**	**-1.6**	**0.2**	**0.7**	**0.3**	**-0.3**
Imports of goods and services	*average 2010=100*	101.9	102.0	102.6	104.6	104.2	103.7	103.8	104.7
	growth in %	**-6.0**	**-6.2**	**-4.1**	**-1.1**	**2.3**	**1.7**	**1.2**	**0.1**
Terms of trade	*average 2010=100*	102.2	101.8	101.6	100.5	100.1	100.9	100.7	100.1
	growth in %	**1.4**	**1.4**	**1.1**	**-0.4**	**-2.0**	**-1.0**	**-0.9**	**-0.4**

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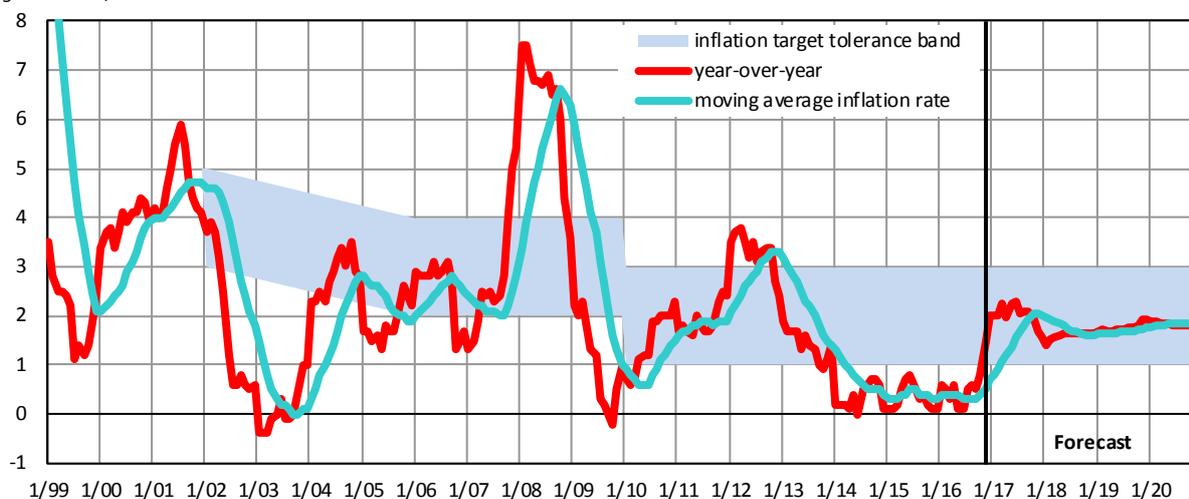*Source: CZSO, Eurostat. Calculations of the MoF.*

Graph 3.2.1: Consumer Prices

YoY growth rate, in %

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

Graph 3.2.2: Consumer Prices

decomposition of YoY growth of CPI, contributions in pp, CPI growth rate in %, Transport excluding administrative measures and excises
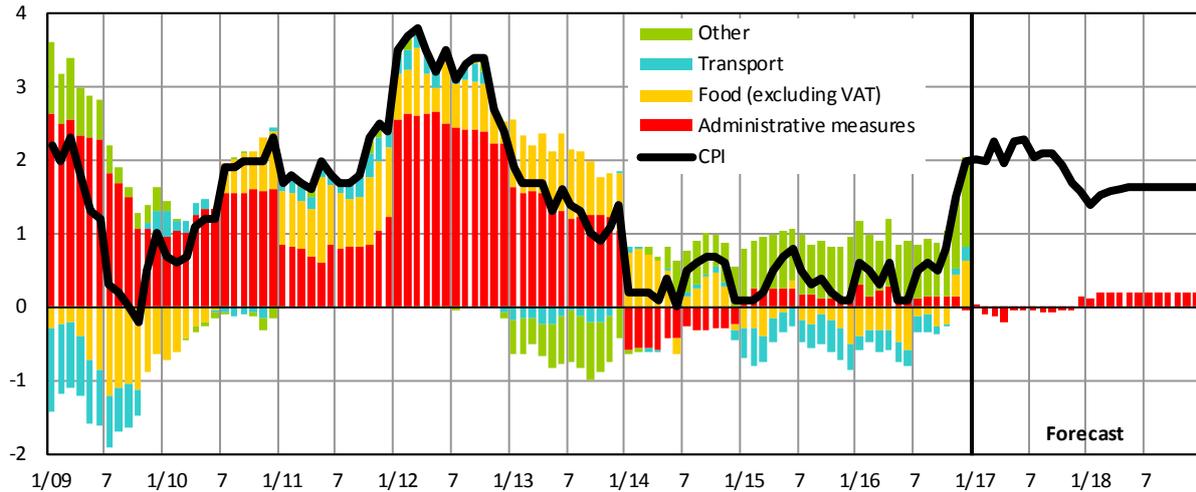
Source: CZSO. Calculations of the MoF.

Graph 3.2.3: Indicators of Consumer Prices

YoY growth rate, in %
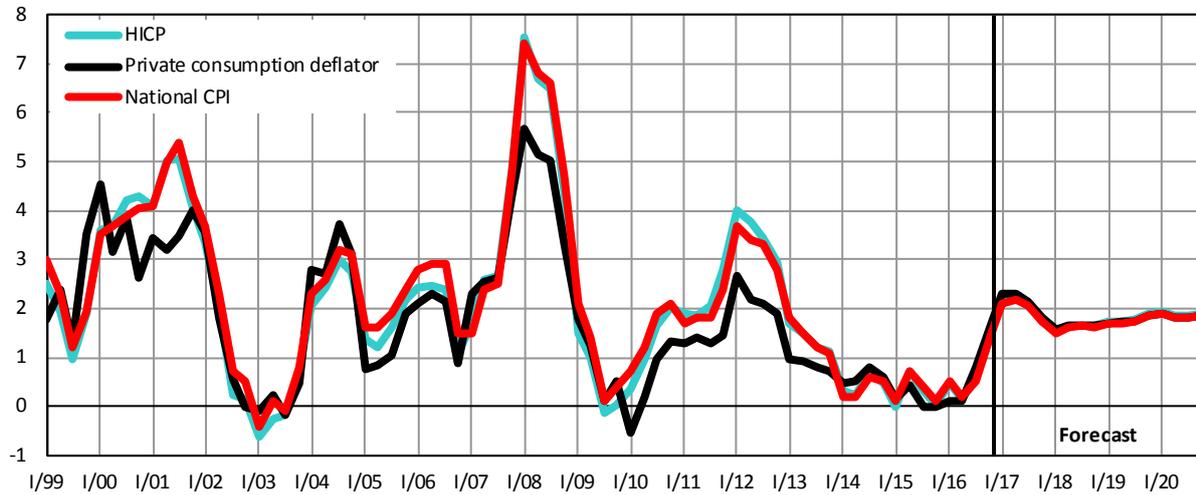
Source: CZSO, Eurostat. Calculations of the MoF.

Graph 3.2.4: GDP Deflator

YoY growth rate, in %
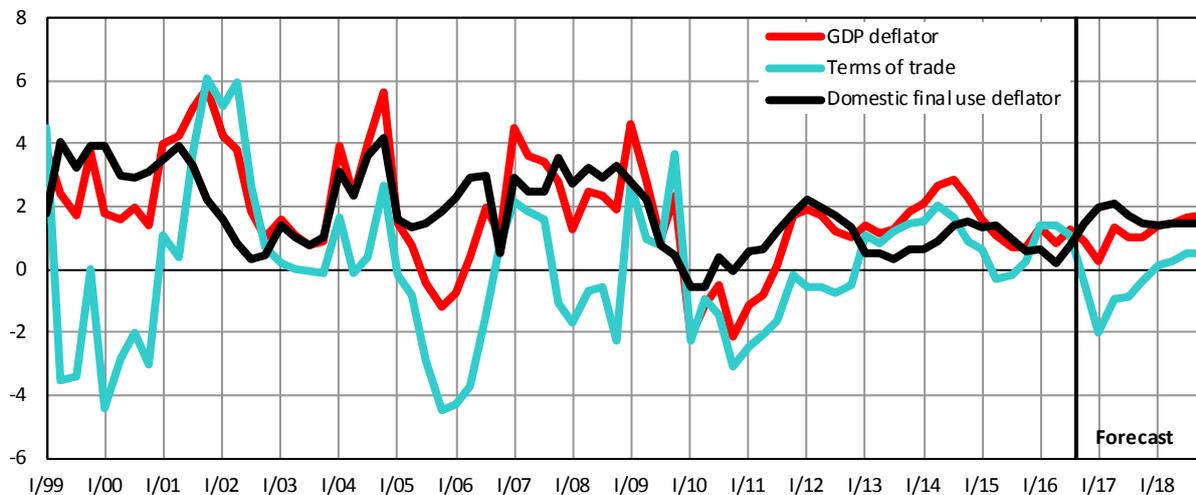
Source: CZSO. Calculations of the MoF.

Graph 3.2.5: Terms of Trade

YoY growth rate, in %
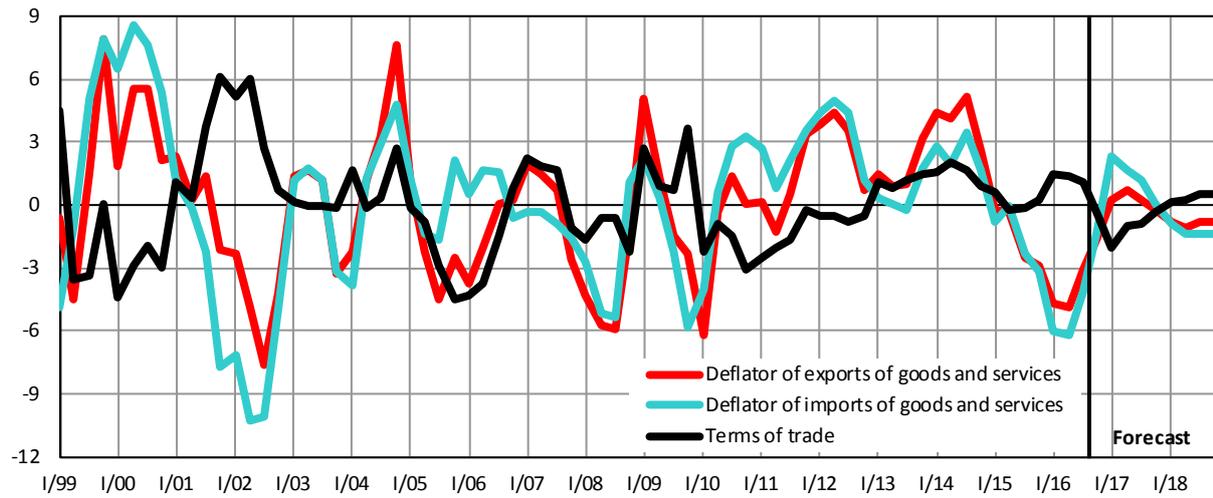
Source: CZSO. Calculations of the MoF.

3.3 Labour Market

The labour market developed in line with the economic cycle in the second half of 2016. A dynamic YoY growth in employment driven by the number of employees and entrepreneurs continued. The rates of employment and economic activity for the age group 15–64 reached other historically record-breaking values in the third quarter of 2016 (72.2% and 75.3%, respectively). The development of the unemployment rate (LFS) was determined by a low unemployment gap; as regards registered unemployment, there has been, conversely, an acceleration in the YoY decline. The number of vacancies remained high. A slight decrease at the end of the year was due to seasonal factors. This environment determined a dynamic growth of the wage bill and the average wage.

3.3.1 Employment

Employment (LFS) grew by 1.8% YoY (*versus 1.6%*) in the third quarter of 2016. The number of employees increased by 1.9% (*versus 2.1%*), the number of entrepreneu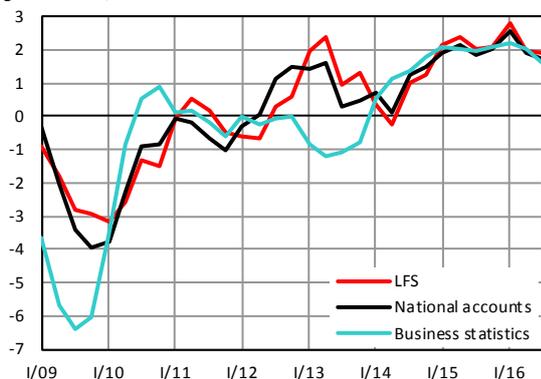rs was up by 1.3% (*versus decrease of 0.8%*). The numbers of entrepreneurs without employees continued to grow (by 5.3%) and, conversely, the number of entrepreneurs with employees again declined dramatically (by 10.9%).

Graph 3.3.1: Employees in Different Statistics
YoY growth rate, in %

Source: CZSO.

From a sectoral perspective, employment growth (in business statistics) was driven by manufacturing, but there was strong growth also in the areas of real estate and professional, scientific and technical activities. In contrast, a decrease was recorded in mining and quarrying (by more than 5%), construction and agriculture.

The lack of workers is already manifested in a wide range of industries – in addition to manufacturing, it is in accommodation, food services, transport and other sections of the tertiary sector. An increasing number of companies are forced to tackle this problem by hiring foreign workers.

We estimate that employment increased by 1.8 % in 2016 (*versus 1.6%*). For 2017 and 2018, we expect only a slight increase in employment by 0.3% (*unchanged*).

Here we take into account the fact that due to demographic factors and very low unemployment rate there is only very little room for further growth of employment (LFS methodology).

3.3.2 Unemployment

The continued economic growth has led to a further reduction in the number of registered unemployed persons (by 72 thousand YoY in December) as well as those according to the LFS statistics (by 44 thousand YoY in the third quarter).

Graph 3.3.2: Indicators of Unemployment
seasonally adjusted data, in %
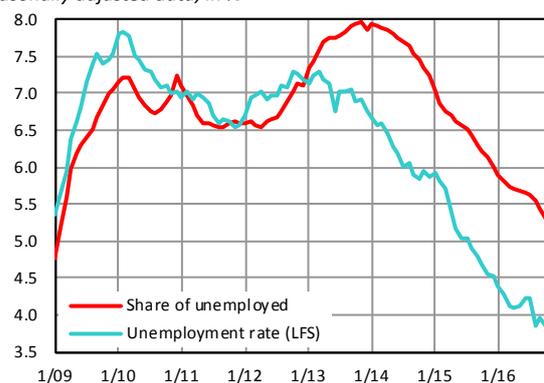
Source: CZSO, Ministry of Labour and Social Affairs. Calculations of the MoF.
Note: Share of unemployed (Ministry of Labour and Social Affairs) is defined as a share of available job seekers aged 15 to 64 years in the population of the same age.

Despite stronger than estimated decrease in the share of unemployed persons to 5.0% (*versus 5.2%*) in the fourth quarter of 2016, this indicator reached 5.6% (*in line with the forecast*) in 2016 as a whole. For 2017 and 2018 we expect a faster decline in the share of unemployed persons to 4.9% and 4.7%, respectively (*versus 5.2% and 5.1%, respectively*). In addition to the aforementioned sharper decline at the end of the last year, this is also due to the fact that with the current labour market situation even the hard-to-employ, who gave up looking for a job in the previous period, can find work (the share of long-term unemployed persons is decreasing). Pending legislative changes (limitation of the possibility of a non-colliding job) can also have some effect.

The **unemployment rate** (LFS) reached 4.0% in the third quarter of 2016 (*in line with the estimate*); the same value is estimated also for the year 2016 as a whole (*unchanged*). Since there is very little room for a further decline in LFS unemployment (the unemployment rate in this methodology is already very close to the natural rate), we expect only a slight drop to 3.9% in 2017 (*unchanged*) and 2018.

3.3.3 Economic Activity Rate

The **economic activity rate** (15–64 year-olds) grew by 1.1 pp YoY to 75.3% in the third quarter of 2016 (*in line with the estimate*). We suppose there is still some room for a further growth in the participation rate (see Graph 3.3.6), with demographic aspects in the form of rising weight of cohorts with a naturally high economic activity rate (especially of those aged 40–49 years) and gradual increases in the statutory retirement age playing a crucial role.

3.3.4 Wages

Growth of the **wage bill** (national accounts methodology, domestic concept) accelerated to 5.7% in the third quarter of 2016 (*versus 5.3%*). The fastest growth was recorded in the information and communication section (7.1%), where employment grew by 5.0%. In the economically important manufacturing, the wage bill grew by 6.5%. On the contrary, the lowest growth in the third quarter (by 2.4%) was recorded – as expected – in construction.

Graph 3.3.3: Collection of Social Security Contributions and Total Wage Bill
YoY growth rate, in %
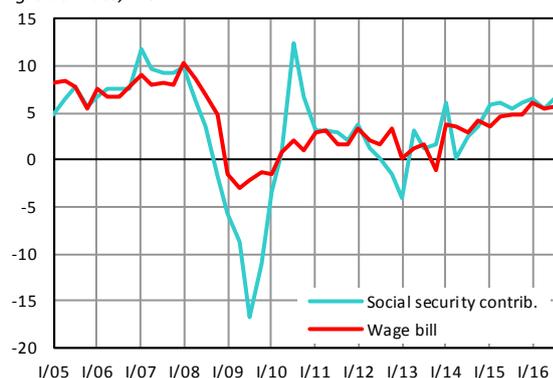
Note: Time series of the collection of social security contributions is influenced, among other factors, by a legislative change in 2009 and a payout of exceptional bonuses at the end of 2012.
Source: CZSO, Ministry of Finance.

In the fourth quarter of 2016, an increase in pay tariffs of civil servants by 5% on average and a previous increase in pay tariffs in the school system were reflected in the general government sector. The development of cash collection of social security contributions in the fourth quarter of 2016 confirms the wage dynamics, and the wage bill growth in the fourth quarter could have reached 5.4% (*versus 5.2%*). The wage bill growth in the entire 2016 could then have been 5.6% (*versus 5.4%*).

This year, the wage bill growth should reflect the solid economic growth as well as the increase in the minimum (and guaranteed) wage by 11% effective from January. Another pro-growth factor will probably be a shortage of employees mainly in manufacturing enterprises. Hence, the wage bill could grow by 5.0% in 2017 (*unchanged*). With regard to the envisaged changes in 2017 (for example, a possible increase in pay tariffs of security force members), the wage growth may be slightly higher in the following quarters of 2017. With regard to expected growth in unit labour costs in 2016 and 2017, the growth of the wage bill could decelerate slightly to 4.5% in 2018.

The **average wage** (business statistics, full-time equivalent) increased by 4.5% (*versus 4.4%*) in the third quarter of 2016. Faster growth in medium earning categories was reflected in a continued higher growth rate of the median wage compared with the average wage (by 0.6 pp). In the last quarter of 2016, the average nominal wage could have grown by 4.5% (*unchanged*), which would be reflected in a 4.3% growth (*unchanged*) in 2016 as a whole. The expected lower growth in the number of employees in 2017 in comparison with the previous year should lead, together with the aforementioned factors, to an acceleration of the growth of the average nominal wage to 4.6% (*unchanged*) in 2017. In 2018, the average wage might increase by 4.3%.

Graph 3.3.4: Nominal Monthly Wage
YoY growth rate, in %
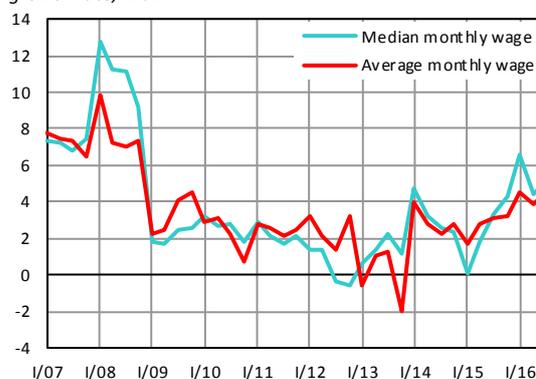
Source: CZSO.

Table 3.3.1: Labour Market – yearly

		2011	2012	2013	2014	2015	2016 Estimate	2017 Forecast	2018 Forecast	2019 Outlook	2020 Outlook
Labour Force Survey											
Employment	av. in thous.persons	4 872	4 890	4 937	4 974	5 042	5 131	5 147	5 162	5 178	5 193
	growth in %	0.4	0.4	1.0	0.8	1.4	1.8	0.3	0.3	0.3	0.3
Employees	av. in thous.persons	3 993	3 990	4 055	4 079	4 168	4 257	4 279	4 292	4 306	4 319
	growth in %	0.0	-0.1	1.6	0.6	2.2	2.1	0.5	0.3	0.3	0.3
Entrepreneurs and	av. in thous.persons	880	901	882	895	874	874	869	870	872	874
self-employed	growth in %	2.0	2.4	-2.1	1.5	-2.3	-0.1	-0.6	0.1	0.2	0.2
Unemployment	av. in thous.persons	351	367	369	324	268	216	210	207	207	208
Unemployment rate	average in %	6.7	7.0	7.0	6.1	5.1	4.0	3.9	3.9	3.8	3.8
Long-term unemployment [1]	av. in thous.persons	144	161	163	141	127	.	.	.	.	.
Labour force	av. in thous.persons	5 223	5 257	5 306	5 298	5 310	5 347	5 357	5 369	5 385	5 401
	growth in %	-0.2	0.7	0.9	-0.2	0.2	0.7	0.2	0.2	0.3	0.3
Population aged 15–64	av. in thous.persons	7 295	7 229	7 154	7 081	7 026	6 968	6 914	6 865	6 822	6 763
	growth in %	-0.7	-0.9	-1.0	-1.0	-0.8	-0.8	-0.8	-0.7	-0.6	-0.9
Employment/Pop. 15–64	average in %	66.8	67.6	69.0	70.2	71.8	73.6	74.4	75.2	75.9	76.8
Employment rate 15–64 [2]	average in %	65.7	66.5	67.7	69.0	70.2	71.9	72.7	73.4	74.1	75.0
Labour force/Pop. 15–64	average in %	71.6	72.7	74.2	74.8	75.6	76.7	77.5	78.2	78.9	79.9
Participation rate 15–64 [3]	average in %	70.5	71.6	72.9	73.5	74.0	75.0	75.7	76.4	77.1	78.0
Registered unemployment											
Unemployment	av. in thous.persons	507.8	504.4	564.4	561.4	478.9	406.0	354	339	328	320
Share of unemployed [4]	average in %	6.7	6.8	7.7	7.7	6.6	5.6	4.9	4.7	4.6	4.5
Wages and salaries											
Average monthly wage [5]											
Nominal	CZK	24 455	25 067	25 035	25 768	26 467	27 600	28 900	30 100	31 400	32 600
	growth in %	2.5	2.5	-0.1	2.9	2.7	4.3	4.6	4.3	4.1	3.9
Real	CZK 2005	20 884	20 717	20 403	20 916	21 413	22 200	22 800	23 400	23 900	24 400
	growth in %	0.6	-0.8	-1.5	2.5	2.4	3.6	2.5	2.6	2.3	2.3
Median monthly wage	CZK	20 743	20 828	21 110	21 786	22 310	.	.	.	.	.
	growth in %	2.2	0.4	1.4	3.2	2.4	.	.	.	.	.
Wage bill	growth in %	2.3	2.6	0.5	3.6	4.4	5.6	5.0	4.5	4.5	4.2
Labour productivity	growth in %	2.3	-1.2	-0.8	2.2	3.1	0.8	2.2	2.1	2.1	2.0
Unit labour costs [6]	growth in %	0.6	3.0	0.5	0.4	-0.5	2.8	2.2	2.0	2.0	1.8
Compens. of employees / GDP	%	40.3	41.0	40.9	40.2	39.9	40.7	41.2	41.4	41.5	41.5

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

Table 3.3.2: Labour Market – quarterly

		2016				2017			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
					Estimate	Forecast	Forecast	Forecast	Forecast
Labour Force Survey									
Employment	av. in thous. persons	**5 087**	**5 128**	**5 152**	**5 157**	**5 118**	**5 153**	**5 157**	**5 161**
	YoY growth in %	2.0	1.7	1.8	1.6	0.6	0.5	0.1	0.1
	QoQ growth in %	1.0	0.1	0.4	0.1	0.0	0.0	0.0	0.0
Employees	av. in thous. persons	**4 231**	**4 244**	**4 268**	**4 285**	**4 270**	**4 275**	**4 277**	**4 292**
	growth in %	2.8	2.0	1.9	1.9	0.9	0.7	0.2	0.2
Entrepreneurs and	av. in thous. persons	**855**	**885**	**883**	**872**	**848**	**878**	**880**	**869**
self-employed	growth in %	-1.9	0.2	1.4	0.2	-0.9	-0.7	-0.4	-0.4
Unemployment	av. in thous.persons	**231**	**210**	**213**	**210**	**219**	**204**	**209**	**206**
Unemployment rate	average in %	**4.3**	**3.9**	**4.0**	**3.9**	**4.1**	**3.8**	**3.9**	**3.8**
Long-term unemployment [1]	av. in thous.persons	**106**	**91**	**84**	**.**	**.**	**.**	**.**	**.**
Labour force	av. in thous. persons	**5 318**	**5 338**	**5 365**	**5 367**	**5 337**	**5 357**	**5 367**	**5 367**
	growth in %	0.2	0.6	0.9	1.0	0.4	0.4	0.0	0.0
Population aged 15–64	av. in thous. persons	**6 990**	**6 975**	**6 961**	**6 947**	**6 934**	**6 921**	**6 908**	**6 895**
	growth in %	-0.9	-0.9	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8
Employment/Pop. 15–64	average in %	**72.8**	**73.5**	**74.0**	**74.2**	**73.8**	**74.5**	**74.7**	**74.9**
	increase over a year	2.0	1.9	1.9	1.7	1.0	0.9	0.7	0.6
Employment rate 15–64 [2]	average in %	**71.0**	**71.7**	**72.2**	**72.5**	**72.1**	**72.7**	**72.9**	**73.1**
	increase over a year	1.6	1.6	1.7	1.7	1.1	1.0	0.7	0.6
Labour force/Pop. 15–64	average in %	**76.1**	**76.5**	**77.1**	**77.3**	**77.0**	**77.4**	**77.7**	**77.8**
	increase over a year	0.8	1.1	1.3	1.4	0.9	0.9	0.6	0.6
Participation rate 15–64 [3]	average in %	**74.3**	**74.7**	**75.3**	**75.5**	**75.2**	**75.7**	**75.9**	**76.1**
	increase over a year	0.4	0.9	1.1	1.3	0.9	0.9	0.7	0.6
Registered unemployment									
Unemployment	av. in thous. persons	**458.9**	**407.8**	**387.5**	**369.6**	**393**	**350**	**336**	**337**
Share of unemployed [4]	average in %	**6.3**	**5.6**	**5.3**	**5.0**	**5.4**	**4.8**	**4.6**	**4.6**
Wages and salaries									
Average monthly wage [5]									
Nominal	CZK	26 494	27 280	27 220	29 400	27 700	28 500	28 500	30 800
	growth in %	**4.5**	**3.8**	**4.5**	**4.5**	**4.5**	**4.4**	**4.7**	**4.7**
Real	CZK 2005	21 418	21 947	21 863	23 500	21 900	22 400	22 400	24 200
	growth in %	**4.0**	**3.6**	**3.9**	**3.0**	**2.3**	**2.2**	**2.6**	**3.0**
Median monthly wage	CZK	22 545	23 033	23 527	.	.	.	.	.
	growth in %	**6.6**	**4.4**	**5.1**	**.**	**.**	**.**	**.**	**.**
Wage bill	growth in %	**6.0**	**5.4**	**5.7**	**5.4**	**5.2**	**5.1**	**4.8**	**4.8**

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

Graph 3.3.5: Employment (LFS)

seasonally adjusted data, in thousands of persons, black lines with labels show the average level and growth rate of employment in the given year
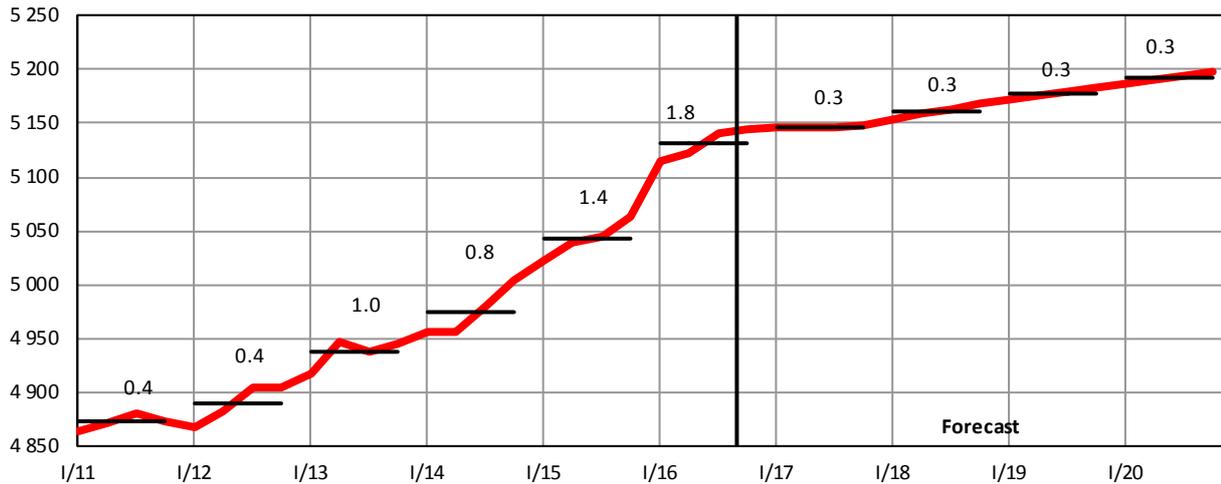
Graph 3.3.6: Ratio of Labour Force and Employment to Population Aged 15–64

in %
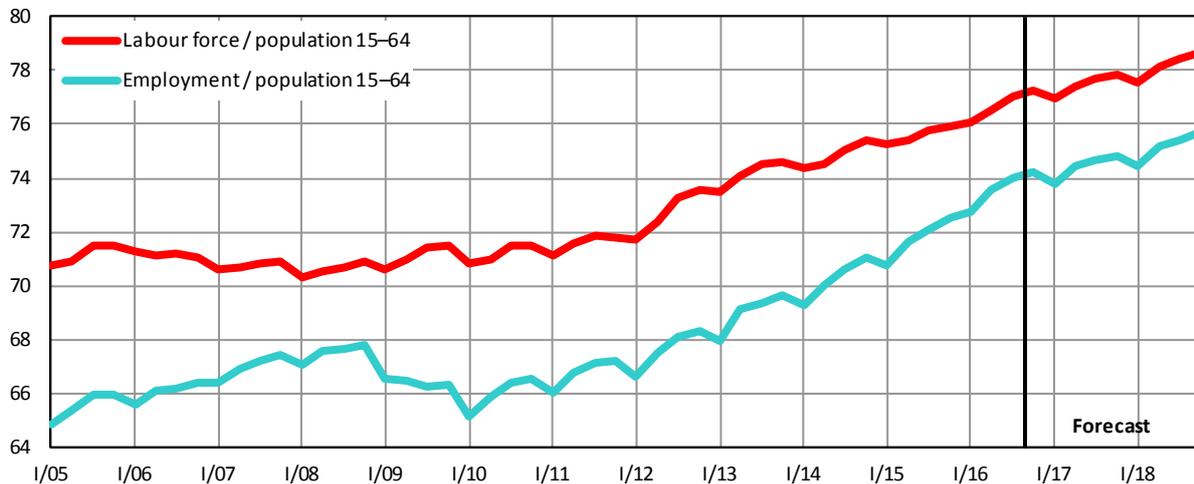
Graph 3.3.7: Unemployment

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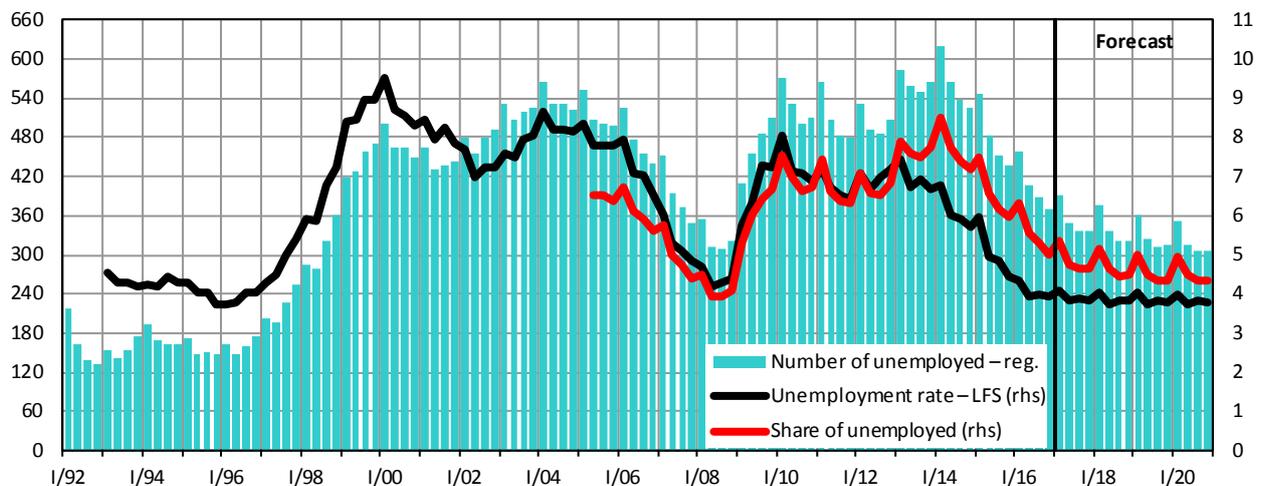
Note: Share of unemployed (Ministry of Labour and Social Affairs) is defined as a share of available job seekers aged 15 to 64 years in the population of the same age.

Graph 3.3.8: Compensation per Employee and Real Productivity of Labour

YoY growth rate, in %
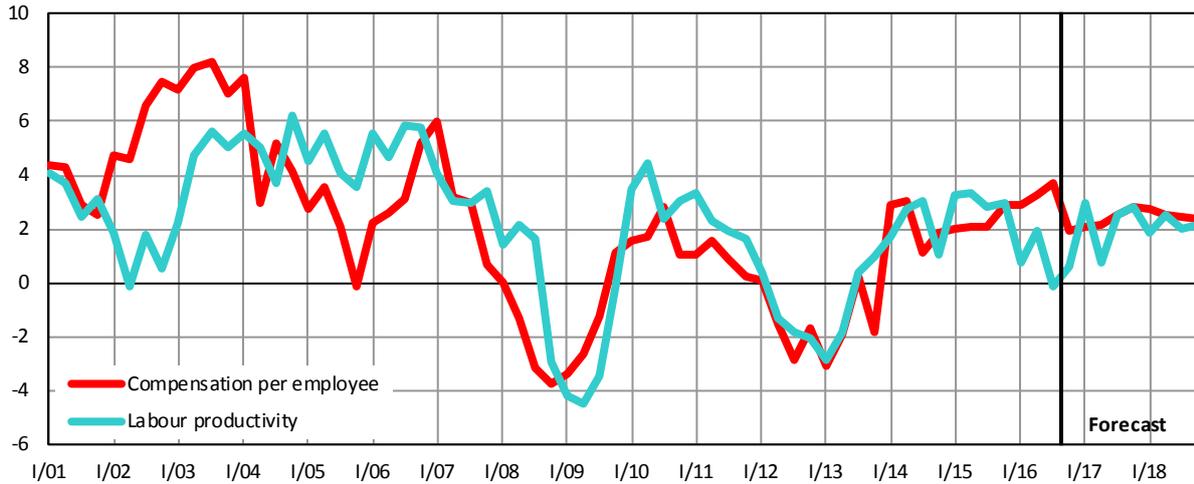
Source: CZSO. Calculations of the MoF.

Graph 3.3.9: Wage Bill – nominal, domestic concept

YoY growth rate, in %

Source: CZSO. Calculations of the MoF.

Graph 3.3.10: Gross Savings Rate of Households

in % of disposable income

Source: CZSO. Calculations of the MoF.

Table 3.3.3: Income and Expenditures of Households – yearly

SNA methodology – national concept

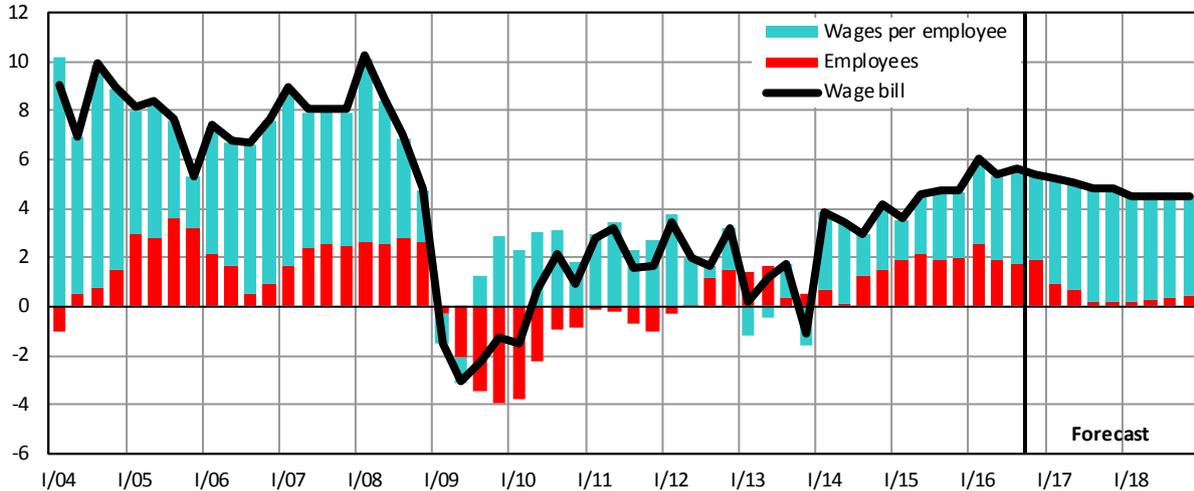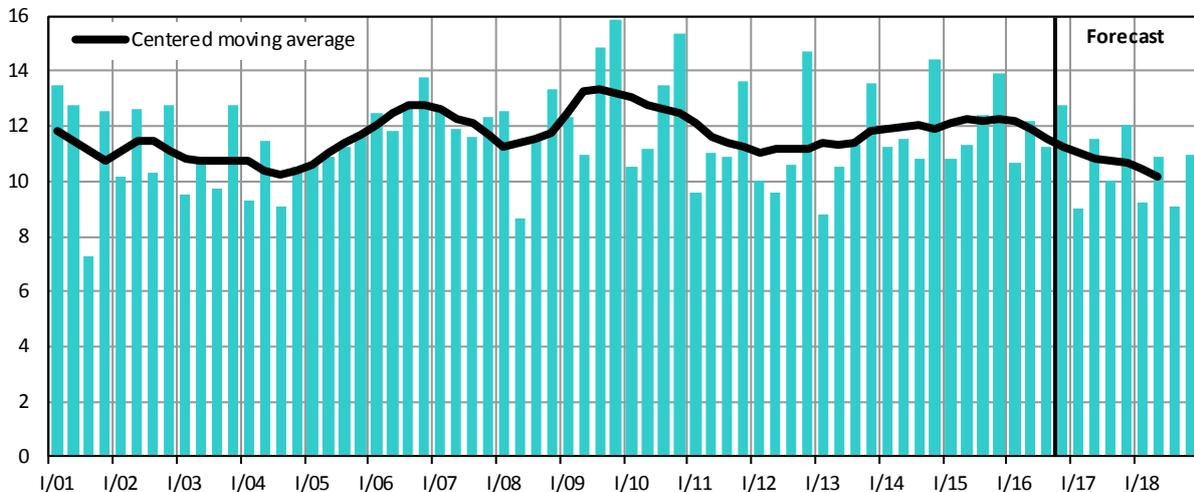|		2009	2010	2011	2012	2013	2014	2015	2016 Estimate	2017 Forecast	2018 Forecast
Current income											
Compensation of employees	*bill.CZK*	**1 553**	**1 585**	**1 627**	**1 669**	**1 692**	**1 760**	**1 847**	**1 956**	**2 053**	**2 144**
	growth in %	-2.5	2.0	2.6	2.6	1.3	4.0	5.0	5.9	5.0	4.4
Gross operating surplus	*bill.CZK*	**686**	**685**	**674**	**654**	**645**	**662**	**684**	**693**	**709**	**723**
and mixed income	*growth in %*	4.5	-0.2	-1.7	-2.9	-1.3	2.6	3.3	1.3	2.3	2.0
Property income received	*bill.CZK*	**158**	**152**	**153**	**147**	**158**	**166**	**162**	**160**	**160**	**160**
	growth in %	-11.0	-3.5	0.5	-4.0	7.8	5.1	-2.4	-1.5	-0.2	0.1
Social benefits not-in-kind	*bill.CZK*	**535**	**542**	**553**	**567**	**563**	**576**	**590**	**605**	**623**	**642**
	growth in %	8.6	1.2	2.1	2.4	-0.6	2.2	2.6	2.5	3.0	3.0
Other current transfers received	*bill.CZK*	**141**	**140**	**139**	**151**	**146**	**160**	**181**	**183**	**189**	**193**
	growth in %	-1.4	-1.0	-0.5	8.6	-3.1	9.2	13.3	1.2	3.0	2.3
Current expenditure											
Property income paid	*bill.CZK*	**19**	**23**	**21**	**15**	**21**	**16**	**18**	**15**	**15**	**15**
	growth in %	-36.7	17.7	-8.5	-27.2	40.5	-24.3	10.8	-14.1	-0.3	-0.1
Curr. taxes on income and property	*bill.CZK*	**140**	**137**	**156**	**158**	**166**	**177**	**183**	**197**	**207**	**216**
	growth in %	-3.0	-2.6	13.8	1.6	4.9	6.9	3.0	7.9	4.9	4.4
Social contributions	*bill.CZK*	**603**	**621**	**640**	**654**	**670**	**696**	**735**	**776**	**822**	**857**
	growth in %	-5.3	2.9	3.0	2.3	2.4	3.8	5.6	5.7	5.8	4.4
Other current transfers paid	*bill.CZK*	**143**	**141**	**145**	**154**	**140**	**150**	**168**	**173**	**174**	**176**
	growth in %	-1.6	-1.6	3.2	6.2	-9.3	6.9	12.0	2.9	0.8	1.2
Gross disposable income	*bill.CZK*	**2 168**	**2 182**	**2 184**	**2 206**	**2 208**	**2 285**	**2 362**	**2 436**	**2 516**	**2 597**
	growth in %	3.0	0.7	0.1	1.0	0.1	3.5	3.4	3.1	3.3	3.2
Final consumption	*bill.CZK*	**1 891**	**1 920**	**1 952**	**1 970**	**1 997**	**2 044**	**2 110**	**2 182**	**2 281**	**2 373**
	growth in %	0.2	1.5	1.7	0.9	1.3	2.4	3.2	3.5	4.5	4.0
Change in share in pension funds	*bill.CZK*	**17**	**15**	**16**	**15**	**35**	**35**	**35**	**33**	**35**	**37**
Gross savings	*bill.CZK*	**295**	**278**	**248**	**250**	**246**	**276**	**288**	**287**	**269**	**261**
Capital transfers											
(income (-) / expenditure (+))	*bill.CZK*	**-25**	**-29**	**-25**	**-21**	**-13**	**-32**	**-13**	**-15**	**-21**	**-24**
Gross capital formation	*bill.CZK*	**212**	**230**	**198**	**183**	**181**	**195**	**218**	**224**	**234**	**244**
	growth in %	-3.1	8.8	-13.9	-7.8	-1.3	8.3	11.4	2.7	4.6	4.2
Change in financial assets and liab.	*bill.CZK*	**106**	**75**	**73**	**87**	**77**	**110**	**81**	**76**	**55**	**39**
Real disposable income	*growth in %*	**2.1**	**0.1**	**-1.3**	**-1.2**	**-0.8**	**2.9**	**3.3**	**2.4**	**1.1**	**1.6**
Gross savings rate	*%*	**13.6**	**12.7**	**11.4**	**11.3**	**11.1**	**12.1**	**12.2**	**11.8**	**10.7**	**10.1**

Source: CZSO. Calculations of the MoF.

3.4 External Relations

The current account balance to GDP[1] ratio reached 1.9% (*versus 2.2%*) in the third quarter of 2016, which was a QoQ improvement of 0.3% of GDP[2] and thus a historic high.

Export market growth, which reached 2.8% in the third quarter of 2016 (*versus 3.8%*), was significantly slower than expected. The reason for the slower growth may be associated with weaker growth in world trade. According to our estimate, the export market growth reached only 3.1% (*versus 3.7%*) in 2016 as a whole. For this year, due to slower GDP growth in countries of our main trading partners and the development of import intensity, we expect a further slowdown in export market growth to 2.7% (*versus 3.8%*). For 2018, we expect acceleration to 3.1%.

Export performance (indicating a change in the market share of Czech goods in foreign markets) can no longer benefit from the depreciation of the CZK/EUR exchange rate and the effect of the weak koruna. After an increase in export performance by 2.0% in the second quarter of 2016, there was a decrease by 0.7% (*versus growth of 1.6%*) in the third quarter. That was probably caused by a one-off drop in exports in July (partly due to company holidays especially in the automotive industry), which was not fully offset in the following months. We estimate that growth of export performance slowed down from 2.2% in 2015 to 1.6% (*versus 2.2%*) in 2016. We expect the same growth also in 2017 (*versus 1.0%*) and a slowdown in growth to 1.0% in 2018. The expected discontinuation of the regime of using the exchange rate as another instrument of monetary policy around mid-2017 will weigh on export performance growth. Increasing unit labour costs lowering the price competitiveness of Czech products may also play a role.

Balance of trade (balance of payments methodology) has been improving since the third quarter of 2015. Balance of goods has been increasing due to factors mainly on the import side (crude oil prices, decrease in the growth rate of total domestic demand associated with the decrease in government investment activity). According to current data, the balance of goods reached a surplus of 5.4% of GDP (*versus 5.6%*) in the third quarter of 2016, which was a YoY improvement of 0.8% of GDP.

A major driver of the increased surplus on the balance of goods has been an improvement of the balance in the machinery and transport equipment group and a reduction in the deficit of mineral fuels.

The dominant factor still influencing terms of trade of Czech trade in goods is the development of prices of mineral fuels. Terms of trade were improving from Sep-

tember 2015 to September 2016 but in the fourth quarter of 2016 there was an expected turn towards their slight deterioration.

The deficit on the fuel balance again slightly decreased and reached 1.8% of GDP in the third quarter of 2016. Following on the crude oil price development scenario (see Chapter 1.1.3), however, we expect that it will gradually deepen in the fourth quarter of 2016 and in 2017. The fuel balance deficit could thus deteriorate from the estimated 1.9% of GDP (*unchanged*) in 2016 to 2.5% of GDP (*versus 2.2%*) in 2017. In 2018, the fuel balance could post a deficit of 2.3% GDP.

With regard to the aforementioned, we have slightly adjusted the forecast for the surplus on the balance of goods in 2016 to 5.5% of GDP (*versus 5.7%*). In connection with the scenario of crude oil price growth we expect a deterioration to 4.6% of GDP (*versus 5.4%*) in 2017, and a slight improvement to 4.8% of GDP in 2018.

Surplus on the balance of services has been increasing since the first quarter of 2015. It reached 1.9% of GDP (*versus 1.8%*) in the third quarter of 2016, having improved by 0.4% of GDP YoY. With regard to the positive economic development, we expect the sales of services abroad to improve in the coming period and the surplus staying at similar levels. In 2016, the balance of services probably reached 1.9% of GDP (*unchanged*). In 2017, we expect a surplus of 2.0% of GDP (*versus 1.9% of GDP*) and its growth to 2.1% of GDP in 2018.

The higher surplus on the current account in the third quarter of 2016 by 1.3% of GDP YoY was due to the aforementioned increase in the surplus on the balance of goods and services. The improvement in the deficit on the balance of primary income by 0.9% of GDP was completely offset by a deterioration in the secondary income balance (from surplus to deficit). The primary income deficit reached 4.9% of GDP (*versus 4.8%*) in the third quarter of 2016. The deficit is due to an outflow of income from foreign direct investment (mainly dividends) to foreign owners, despite a slowdown in corporate profitability; conversely, the surplus of compensation of employees is gradually increasing. Recently, pressures on wage growth and thereby also on the division into net profits of companies and compensation of employees have been strengthening. These pressures will probably persist also in 2017. Therefore, we expect the primary income deficit to remain basically unchanged in the following two years. The deficit could reach 4.7% of GDP (*versus 4.8%*) in 2017 and 4.8% of GDP in 2018.

In this context, we estimate that the current account of the balance of payments posted a surplus of 2.1% GDP in 2016 (*versus 2.3%*). We expect a decrease in the positive balance to 1.2% of GDP (*versus 1.8%*) in 2017. In 2018, the surplus is expected to increase slightly to 1.3% of GDP.

---

[1] All *quarterly* figures relative to GDP are listed in annual moving sums.

[2] The CNB revised the current account balance for the second quarter of 2016 from 1.9% of GDP to 1.6% of GDP.

Table 3.4.1: Balance of Payments – yearly

		2009	2010	2011	2012	2013	2014	2015	2016 Estimate	2017 Forecast	2018 Forecast
Goods and services	bill.CZK	147	119	157	201	237	275	286	350	322	350
	% GDP	**3.7**	**3.0**	**3.9**	**5.0**	**5.8**	**6.4**	**6.3**	**7.4**	**6.6**	**6.9**
Goods	bill.CZK	65	40	75	124	167	220	211	258	222	245
	% GDP	**1.7**	**1.0**	**1.9**	**3.0**	**4.1**	**5.1**	**4.6**	**5.5**	**4.6**	**4.8**
Services	bill.CZK	82	78	81	78	70	56	75	92	100	105
	% GDP	**2.1**	**2.0**	**2.0**	**1.9**	**1.7**	**1.3**	**1.6**	**1.9**	**2.0**	**2.1**
Primary income	bill.CZK	-217	-250	-223	-238	-249	-261	-244	-223	-228	-240
	% GDP	**-5.5**	**-6.3**	**-5.5**	**-5.9**	**-6.1**	**-6.0**	**-5.3**	**-4.7**	**-4.7**	**-4.7**
Secondary income	bill.CZK	-19	-11	-18	-27	-10	-7	-1	-30	-34	-42
	% GDP	**-0.5**	**-0.3**	**-0.5**	**-0.7**	**-0.2**	**-0.2**	**0.0**	**-0.6**	**-0.7**	**-0.8**
Current account	bill.CZK	-89	-142	-85	-63	-22	7	41	97	61	68
	% GDP	**-2.3**	**-3.6**	**-2.1**	**-1.6**	**-0.5**	**0.2**	**0.9**	**2.1**	**1.2**	**1.3**
Capital account	bill.CZK	51	38	13	53	82	32	106	57	65	73
	% GDP	**1.3**	**1.0**	**0.3**	**1.3**	**2.0**	**0.7**	**2.3**	**1.2**	**1.3**	**1.4**
Net lending/borrowing	bill.CZK	-38	-104	-72	-10	61	40	148	154	126	141
	% GDP	**-1.0**	**-2.6**	**-1.8**	**-0.3**	**1.5**	**0.9**	**3.2**	**3.3**	**2.6**	**2.8**
Financial account	bill.CZK	-72	-122	-75	12	68	63	194	.	.	.
Direct investments	bill.CZK	-38	-95	-47	-121	7	-80	27	.	.	.
Portfolio investments	bill.CZK	-159	-150	-6	-55	-93	90	-164	.	.	.
Financial derivatives	bill.CZK	1	5	4	-9	-5	-6	-5	.	.	.
Other investments	bill.CZK	62	77	-9	116	-30	-14	-15	.	.	.
Reserve assets	bill.CZK	61	41	-17	80	188	73	351	.	.	.
International investment position	bill.CZK	-1 726	-1 823	-1 823	-1 864	-1 695	-1 578	-1 396	.	.	.
	% GDP	**-44.0**	**-46.1**	**-45.2**	**-45.9**	**-41.4**	**-36.6**	**-30.7**	.	.	.
Gross external debt	bill.CZK	1 956	2 164	2 312	2 434	2 733	2 946	3 132	.	.	.
	% GDP	**49.9**	**54.7**	**57.3**	**60.0**	**66.7**	**68.3**	**68.8**	.	.	.

Source: CNB, CZSO. Calculations of the MoF.

Table 3.4.2: Balance of Payments – quarterly
moving sums of the latest 4 quarters

		2016				2017			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
					Estimate	Forecast	Forecast	Forecast	Forecast
Goods and services	bill.CZK	299	328	343	350	341	333	324	322
	% GDP	**6.5**	**7.1**	**7.3**	**7.4**	**7.2**	**6.9**	**6.7**	**6.6**
Goods	bill.CZK	220	245	253	258	247	236	226	222
	% GDP	**4.8**	**5.3**	**5.4**	**5.5**	**5.2**	**4.9**	**4.7**	**4.6**
Services	bill.CZK	79	83	89	92	94	97	99	100
	% GDP	**1.7**	**1.8**	**1.9**	**1.9**	**2.0**	**2.0**	**2.0**	**2.0**
Primary income	bill.CZK	-231	-234	-228	-223	-223	-225	-226	-228
	% GDP	**-5.0**	**-5.0**	**-4.9**	**-4.7**	**-4.7**	**-4.7**	**-4.7**	**-4.7**
Secondary income	bill.CZK	-9	-19	-26	-30	-31	-32	-33	-34
	% GDP	**-0.2**	**-0.4**	**-0.6**	**-0.6**	**-0.7**	**-0.7**	**-0.7**	**-0.7**
Current account	bill.CZK	59	76	89	97	87	76	65	61
	% GDP	**1.3**	**1.6**	**1.9**	**2.1**	**1.8**	**1.6**	**1.3**	**1.2**
Capital account	bill.CZK	94	63	67	57	59	61	63	65
	% GDP	**2.0**	**1.4**	**1.4**	**1.2**	**1.2**	**1.3**	**1.3**	**1.3**
Net lending/borrowing	bill.CZK	153	139	156	154	146	137	128	126
	% GDP	**3.3**	**3.0**	**3.3**	**3.3**	**3.1**	**2.9**	**2.7**	**2.6**
Financial account	bill.CZK	197	125	150	.	.	.	.	.
Direct investments	bill.CZK	39	-38	-104	.	.	.	.	.
Portfolio investments	bill.CZK	-241	-337	-211	.	.	.	.	.
Financial derivatives	bill.CZK	-3	-7	-1	.	.	.	.	.
Other investments	bill.CZK	-62	54	17	.	.	.	.	.
Reserve assets	bill.CZK	464	453	448	.	.	.	.	.
International investment position	stock in bill.CZK	-1 294	-1 259	-1 252	.	.	.	.	.
	% GDP	**-28.2**	**-27.1**	**-26.8**	.	.	.	.	.
Gross external debt	stock in bill.CZK	3 220	3 296	3 423	.	.	.	.	.
	% GDP	**70.1**	**70.9**	**73.1**	.	.	.	.	.

Source: CNB, CZSO. Calculations of the MoF.

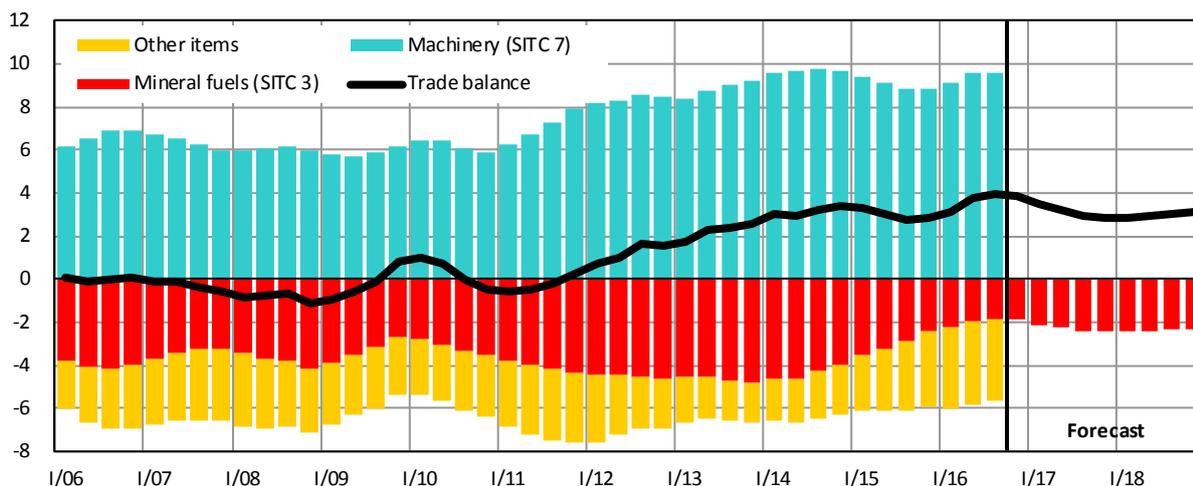## Graph 3.4.1: Current Account
moving sums of the latest 4 quarters, in % of GDP, trade and service balances in BoP definitions
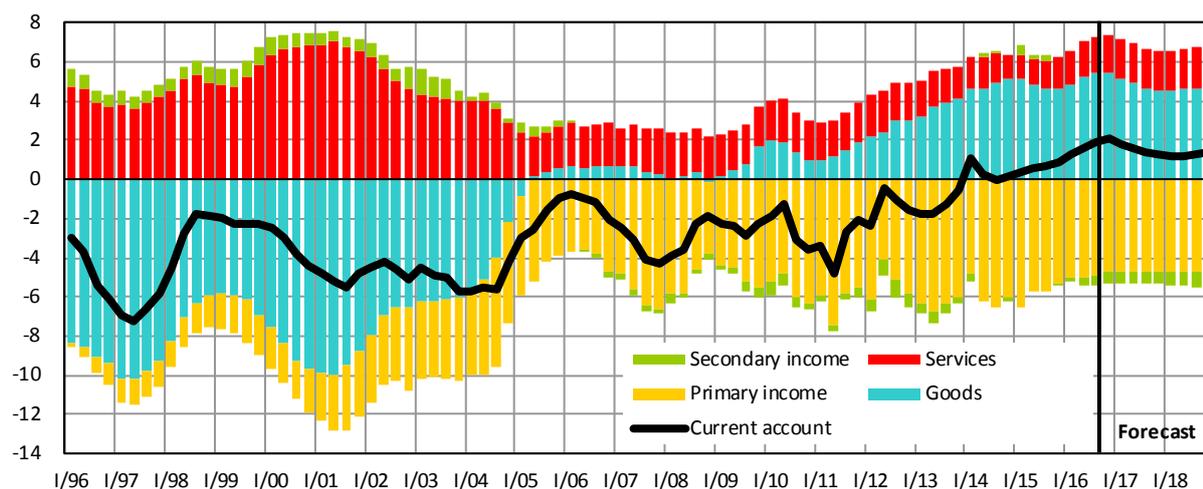
Source: CNB, CZSO. Calculations of the MoF.

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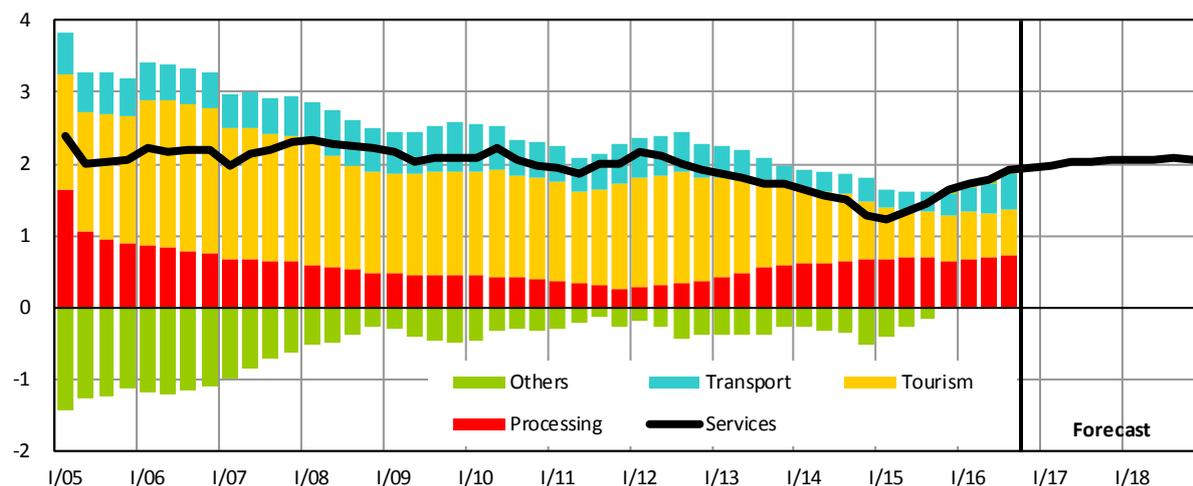*moving sums of the latest 4 quarters, in % of GDP, in cross-border definitions*

Note: The data in the graph show imports in cif methodology. For this reason, the graph is not comparable with Tables 3.4.1 and 3.4.2, where imports are in fob methodology. Trade balance in the national concept (unlike in the BoP methodology in Tables 3.4.1 and 3.4.2) 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. Calculations of the MoF.

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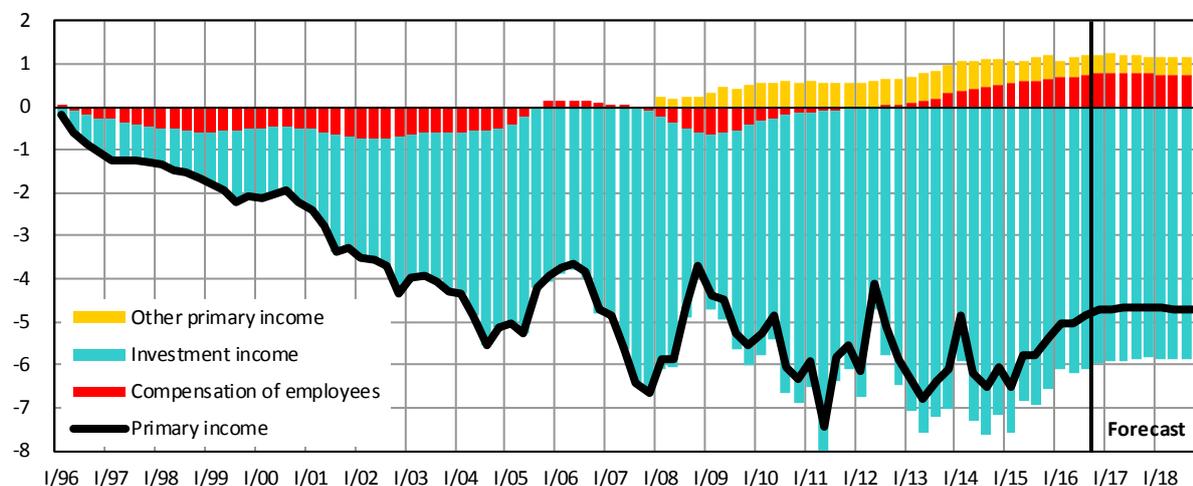*moving sums of the latest 4 quarters, in % of GDP*

Source: CNB, CZSO. Calculations of the MoF.

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

Source: CNB, CZSO. Calculations of the MoF.

Table 3.4.3: Decomposition of Exports of Goods – yearly

seasonally adjusted

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
									Estimate	Forecast	Forecast
GDP [1]	average of 2005=100	96.5	100.0	103.4	104.4	105.3	107.3	109.5	112	114	116
	growth in %	**-4.2**	**3.6**	**3.4**	**1.0**	**0.9**	**1.9**	**2.1**	**2.0**	**1.8**	**2.0**
Import intensity [2]	average of 2005=100	92.0	100.0	104.0	103.1	104.6	107.2	110.6	112	113	114
	growth in %	**-6.7**	**8.7**	**4.0**	**-0.9**	**1.4**	**2.6**	**3.2**	**1.1**	**0.8**	**1.1**
Export markets [3]	average of 2005=100	88.8	100.0	107.5	107.6	110.1	115.0	121.2	125	128	132
	growth in %	**-10.7**	**12.6**	**7.5**	**0.1**	**2.3**	**4.5**	**5.3**	**3.1**	**2.7**	**3.1**
Export performance	average of 2005=100	97.4	100.0	102.5	106.9	105.1	109.9	112.3	114	116	117
	growth in %	**0.6**	**2.7**	**2.5**	**4.3**	**-1.7**	**4.5**	**2.2**	**1.6**	**1.6**	**1.0**
Real exports	average of 2005=100	86.5	100.0	110.2	115.0	115.7	126.4	136.0	142	149	155
	growth in %	**-10.1**	**15.6**	**10.2**	**4.4**	**0.6**	**9.2**	**7.6**	**4.7**	**4.3**	**4.2**
1 / NEER	average of 2005=100	102.2	100.0	97.1	100.6	102.9	108.1	108.2	106	106	103
	growth in %	**3.4**	**-2.2**	**-2.9**	**3.6**	**2.3**	**5.1**	**0.1**	**-2.3**	**0.1**	**-2.3**
Prices on foreign markets	average of 2005=100	99.3	100.0	103.8	103.4	102.7	101.4	99.8	98	98	99
	growth in %	**-3.0**	**0.7**	**3.8**	**-0.4**	**-0.7**	**-1.2**	**-1.6**	**-1.9**	**0.0**	**1.1**
Exports deflator	average of 2005=100	101.5	100.0	100.8	104.0	105.6	109.7	108.0	103	104	102
	growth in %	**0.3**	**-1.4**	**0.8**	**3.2**	**1.6**	**3.8**	**-1.5**	**-4.2**	**0.1**	**-1.2**
Nominal exports	average of 2005=100	87.6	100.0	111.0	119.6	122.3	138.6	146.9	147	154	158
	growth in %	**-10.1**	**14.2**	**11.0**	**7.8**	**2.2**	**13.4**	**6.0**	**0.3**	**4.4**	**2.9**

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

Table 3.4.4: Decomposition of Exports of Goods – quarterly
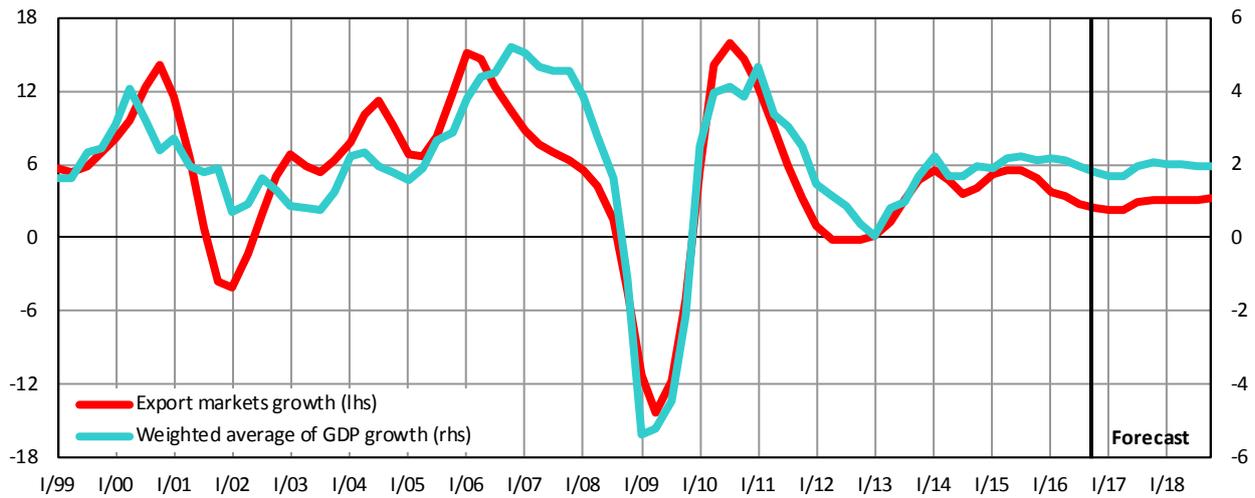
seasonally adjusted

		2016				2017			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
					Estimate	Forecast	Forecast	Forecast	Forecast
GDP [1]	average of 2010=100	111.0	111.6	111.9	112	113	113	114	115
	growth in %	**2.2**	**2.1**	**2.0**	**1.8**	**1.7**	**1.7**	**2.0**	**2.1**
Import intensity [2]	average of 2010=100	111.7	111.9	111.7	112	112	113	113	113
	growth in %	**1.6**	**1.3**	**0.8**	**0.6**	**0.5**	**0.6**	**1.0**	**1.0**
Export markets [3]	average of 2010=100	124.1	124.8	125.0	126	127	128	129	130
	growth in %	**3.8**	**3.4**	**2.8**	**2.4**	**2.2**	**2.4**	**3.0**	**3.1**
Export performance	average of 2010=100	114.2	113.5	111.1	117	117	116	112	118
	growth in %	**2.2**	**2.0**	**-0.7**	**2.7**	**2.1**	**2.5**	**1.0**	**1.0**
Real exports	average of 2010=100	141.7	141.7	139.0	147	148	149	145	154
	growth in %	**6.1**	**5.5**	**2.1**	**5.2**	**4.4**	**4.9**	**4.0**	**4.1**
1 / NEER	average of 2010=100	105.5	105.7	105.6	106	106	106	106	105
	growth in %	**-3.4**	**-3.7**	**-1.3**	**-0.8**	**0.8**	**0.6**	**0.0**	**-1.0**
Prices on foreign markets	average of 2010=100	98.3	97.2	97.8	98	98	97	98	99
	growth in %	**-2.0**	**-2.0**	**-2.5**	**-1.2**	**-0.7**	**0.1**	**0.2**	**0.5**
Exports deflator	average of 2010=100	103.7	102.8	103.3	104	104	103	103	104
	growth in %	**-5.3**	**-5.7**	**-3.8**	**-2.0**	**0.1**	**0.6**	**0.2**	**-0.5**
Nominal exports	average of 2010=100	147.0	145.6	143.6	154	153	154	150	159
	growth in %	**0.5**	**-0.4**	**-1.8**	**3.1**	**4.4**	**5.6**	**4.2**	**3.6**

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

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

YoY growth rate, in %, seasonally adjusted

Export markets growth (lhs)
Weighted average of GDP growth (rhs)

Forecast

Source: Eurostat. Calculations of the MoF.

Graph 3.4.6: Real Exports of Goods

decomposition of YoY growth, in %, seasonally adjusted

Export performance
Export market growth
Real exports of goods

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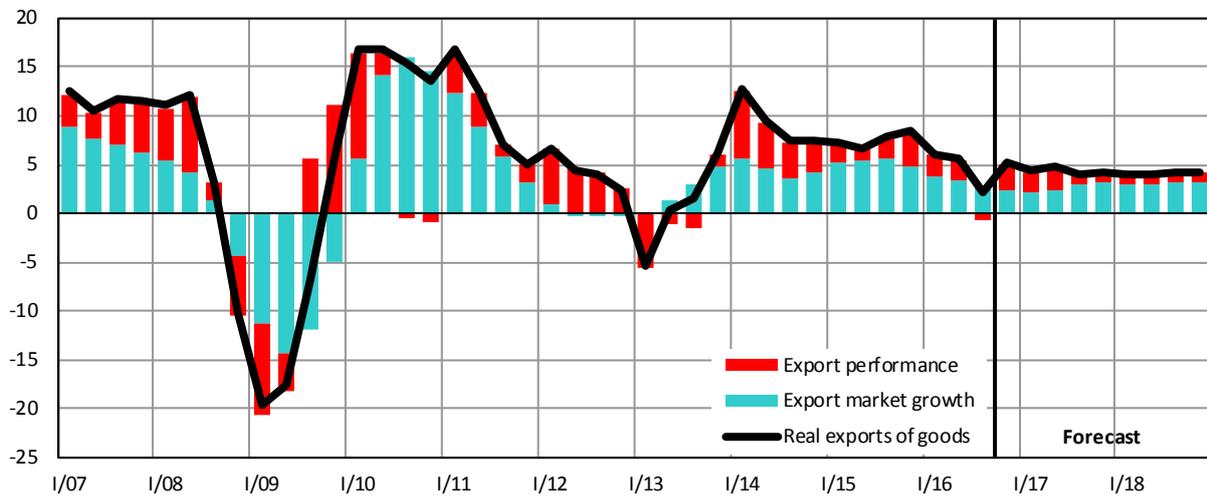
Source: CZSO, Eurostat. Calculations of the MoF.

Graph 3.4.7: Deflator of Exports of Goods

decomposition of YoY growth, in %

Reached prices
Exchange rate
Deflator

Forecast
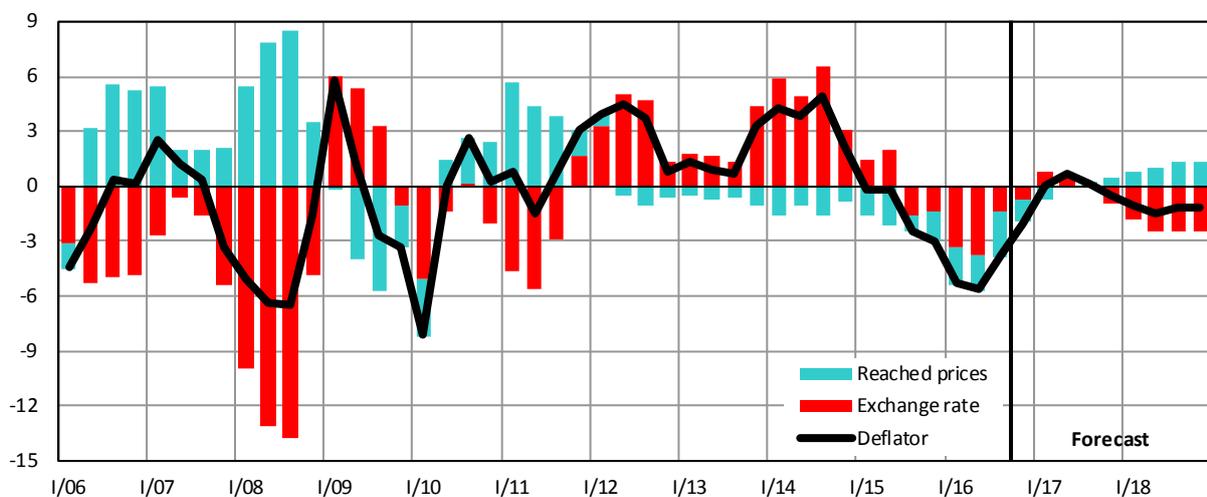
Source: CNB, CZSO. Calculations of the MoF.

3.5 International Comparisons

Comparisons for the period up to and including 2015 are based on Eurostat statistics. Since 2016, our own calculations on the basis of real exchange rates have been used.

In 2015, GDP per capita converted by **current purchasing power parity** increased in all monitored countries. However, there was a slight decrease in relative economic level vis-à-vis the EA19 countries in Greece, Estonia, Croatia and Lithuania. In the CR, the purchasing power parity was 17.15 CZK/PPS compared to the EU28 and 17.06 CZK/EUR compared to the EA19. The economic level was circa 25,200 PPS, corresponding to 82% of the economic level in the EA19. In 2016–2018, the relative economic level of the Czech Republic should increase gradually up to 85% of the average in the EA19 in 2018 thanks to faster economic growth in the Czech Republic than in the euro area.

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 15,800 in 2015, i.e. 51% of the EA19 level. Higher economic growth and the expected appreciation of the koruna after the discontinuation of the exchange rate commitment will result in a gradual increase in the relative level up to 55% of the EA19 average in 2018.

As far as comparison of price levels is concerned, the **comparative price level of GDP** in the Czech Republic increased by 2 pp in 2015, thus reaching 63% of the EA19 average. In the coming years, the comparative price level of GDP should increase gradually up to 65% in 2018, which will continue to help the competitiveness of the Czech economy.

Through the decomposition of GDP per capita into individual components[3] (labour productivity, labour market component and demographic component) it is possible to determine in detail the sources of economic growth. The results of this analysis are summarised in Graphs 3.5.5 and 3.5.6.

Labour productivity in the monitored countries has long been increasing; however, its level is still relatively low compared to the EA19 average. Although the economic crisis slowed down labour productivity growth, its absolute level did not decrease in any of the monitored countries except Greece in 2008–2015. In the given period, however, a decline in the relative level of labour productivity to the EA19 countries was also seen, in addition to Greece, in Slovenia and Portugal, whereas in Poland and Lithuania the increases in relative level exceeded 6 pp. In the Czech Republic, labour productivity started growing again dynamically in 2014 and it reached 66% of the EA19 average in 2015.

In the case of the **labour market component**, which gives the number of hours worked per working-age person, there is the opposite situation. From 2008 to 2015, the absolute level of this indicator decreased in all monitored countries, except for Poland, the Czech Republic, Lithuania and Slovakia. The highest slump (by 16%) was seen in Greece due to a 20% decrease in the number of hours worked. In contrast, the relative level of the labour market component has long been exceeding the EA19 average in all countries, with the exception of Slovakia; in Estonia, Latvia, Poland and the CR by more than 20 pp in 2015.

The share of the working-age population, captured by the **demographic component**, reached its peak in most monitored countries during the first decade of the 21st century and is now decreasing due to population ageing. In 2008–2015, the sharpest decrease of 4.4 pp was recorded in the Czech Republic. Compared to the EA19 average, however, the demographic component is still higher in all monitored countries except Greece; in Slovakia it exceeded the EA19 average by 10 pp in 2015.

---

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

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

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

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

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

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
									Estimate	*Forecast*	*Forecast*
Czech Republic	PPS	20 900	21 000	21 700	21 900	22 400	23 800	25 200	26 000	27 000	28 000
	EA19=100	78	76	77	77	78	81	82	83	84	85
Slovenia	PPS	20 900	21 200	21 700	21 800	21 700	22 800	23 900	24 600	25 500	26 400
	EA19=100	78	77	77	76	76	77	78	78	80	80
Slovakia	PPS	17 400	19 000	19 500	20 100	20 500	21 300	22 300	23 300	24 400	25 600
	EA19=100	66	69	69	71	72	73	73	74	76	78
Lithuania	PPS	13 800	15 400	17 200	18 600	19 600	20 700	21 600	22 500	23 700	25 000
	EA19=100	52	56	61	65	68	70	70	72	74	76
Portugal	PPS	20 100	20 900	20 200	20 000	20 500	21 100	22 200	22 700	23 400	24 200
	EA19=100	76	76	72	70	72	72	72	72	73	73
Estonia	PPS	15 600	16 500	18 500	19 600	20 100	20 900	21 600	22 100	22 900	23 800
	EA19=100	59	60	66	69	70	71	71	70	71	72
Poland	PPS	14 600	15 900	17 000	17 800	17 900	18 600	19 800	20 500	21 300	22 300
	EA19=100	55	58	60	62	63	63	64	65	67	68
Hungary	PPS	15 600	16 400	17 100	17 400	17 900	18 700	19 700	20 400	21 200	22 100
	EA19=100	59	60	61	61	63	64	64	65	66	67
Greece	PPS	23 100	21 500	19 700	19 100	19 200	19 400	19 600	19 800	20 500	21 500
	EA19=100	87	78	70	67	67	66	64	63	64	65
Latvia	PPS	12 800	13 400	14 900	16 000	16 600	17 500	18 600	19 200	20 100	21 100
	EA19=100	48	49	53	56	58	60	60	61	63	64
Croatia	PPS	15 200	15 100	15 600	16 000	15 900	16 100	16 700	17 400	18 100	18 800
	EA19=100	57	55	55	56	56	55	55	55	56	57

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

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

EA19=100
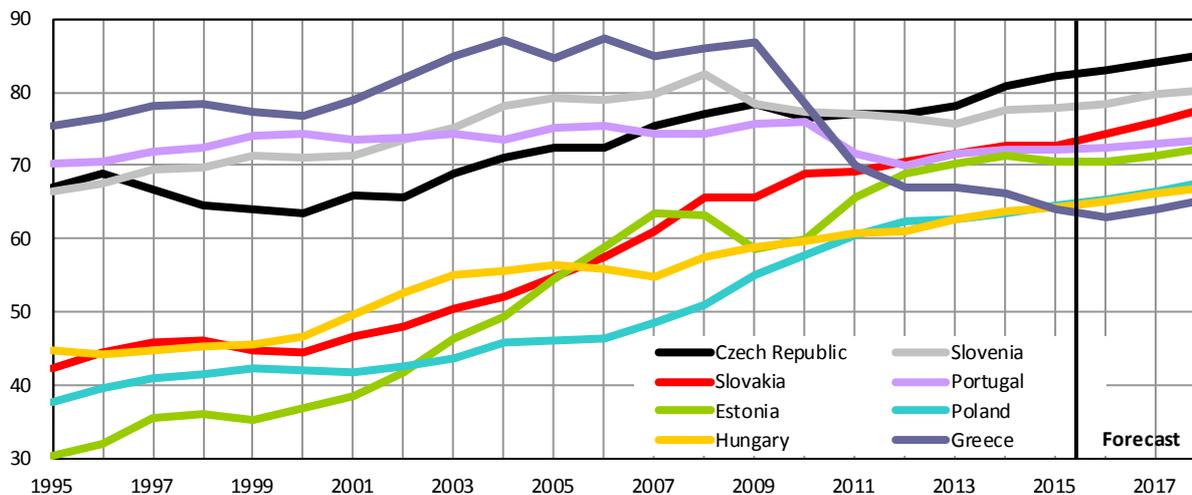
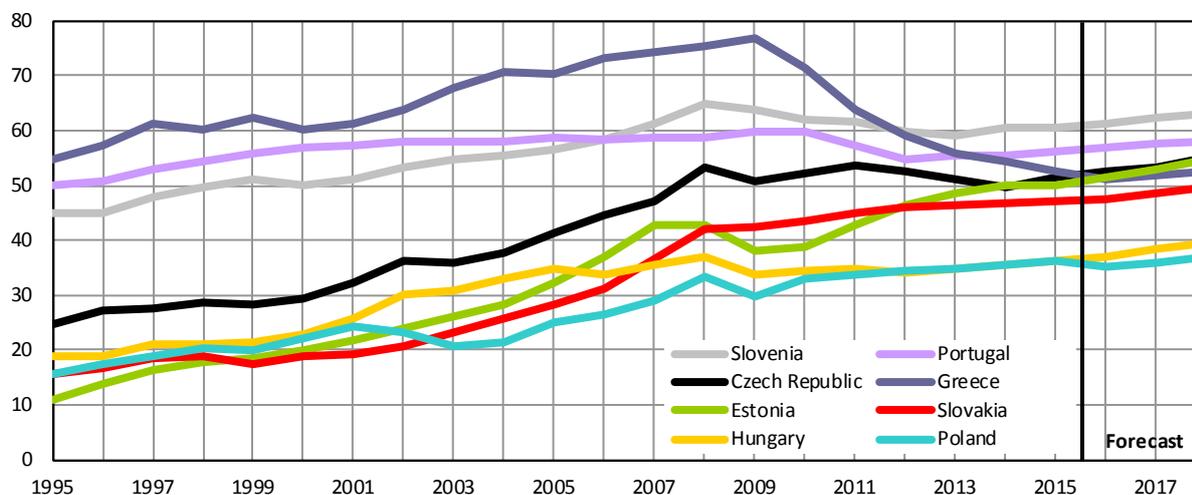*Source: AMECO, CZSO, Eurostat. Calculations of the MoF.*

Table 3.5.2: GDP per Capita – Using Current Exchange Rates

		2009	2010	2011	2012	2013	2014	2015	2016 Estimate	2017 Forecast	2018 Forecast
Slovenia	EUR	17 700	17 700	18 000	17 500	17 400	18 100	18 700	19 400	20 100	20 800
	EA19=100	64	62	62	60	59	60	61	61	62	63
Comparative price level	EA19=100	**81**	**80**	**80**	**78**	**78**	**78**	**78**	**78**	**78**	**78**
Portugal	EUR	16 600	17 000	16 700	16 000	16 300	16 600	17 300	17 900	18 500	19 200
	EA19=100	60	60	57	55	55	55	56	57	57	58
Comparative price level	EA19=100	**79**	**79**	**80**	**78**	**77**	**77**	**78**	**78**	**79**	**79**
Czech Republic	EUR	14 100	14 900	15 600	15 400	15 000	14 900	15 800	16 500	17 200	18 300
	EA19=100	51	52	54	53	51	50	51	52	53	55
Comparative price level	EA19=100	**65**	**68**	**70**	**68**	**65**	**61**	**63**	**63**	**63**	**65**
Estonia	EUR	10 600	11 000	12 500	13 500	14 300	15 000	15 400	16 200	17 000	18 100
	EA19=100	38	39	43	46	49	50	50	51	53	55
Comparative price level	EA19=100	**65**	**65**	**66**	**67**	**69**	**70**	**71**	**73**	**74**	**75**
Greece	EUR	21 400	20 300	18 600	17 300	16 500	16 300	16 200	16 100	16 700	17 400
	EA19=100	77	71	64	59	56	54	52	51	52	53
Comparative price level	EA19=100	**89**	**91**	**91**	**88**	**84**	**82**	**82**	**81**	**81**	**81**
Slovakia	EUR	11 800	12 400	13 100	13 400	13 700	14 000	14 500	15 000	15 600	16 400
	EA19=100	43	44	45	46	47	47	47	48	48	50
Comparative price level	EA19=100	**65**	**63**	**65**	**65**	**65**	**64**	**65**	**64**	**64**	**64**
Lithuania	EUR	8 500	9 000	10 300	11 200	11 800	12 500	12 900	13 400	14 200	15 100
	EA19=100	31	32	35	38	40	42	42	43	44	46
Comparative price level	EA19=100	**59**	**57**	**58**	**58**	**59**	**59**	**59**	**59**	**60**	**60**
Latvia	EUR	8 800	8 500	9 800	10 800	11 300	11 800	12 300	12 700	13 400	14 200
	EA19=100	31	30	34	37	38	39	40	40	42	43
Comparative price level	EA19=100	**65**	**61**	**64**	**66**	**66**	**66**	**66**	**66**	**66**	**67**
Hungary	EUR	9 400	9 800	10 100	10 000	10 300	10 600	11 100	11 600	12 400	13 100
	EA19=100	34	34	35	34	35	35	36	37	39	40
Comparative price level	EA19=100	**57**	**58**	**57**	**56**	**56**	**56**	**56**	**57**	**58**	**59**
Poland	EUR	8 300	9 400	9 900	10 100	10 300	10 700	11 200	11 100	11 600	12 200
	EA19=100	30	33	34	35	35	36	36	35	36	37
Comparative price level	EA19=100	**54**	**57**	**56**	**55**	**56**	**56**	**56**	**54**	**54**	**54**
Croatia	EUR	10 500	10 500	10 400	10 300	10 200	10 200	10 400	10 800	11 300	11 700
	EA19=100	38	37	36	35	35	34	34	34	35	35
Comparative price level	EA19=100	**66**	**67**	**65**	**63**	**62**	**62**	**62**	**62**	**62**	**62**

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

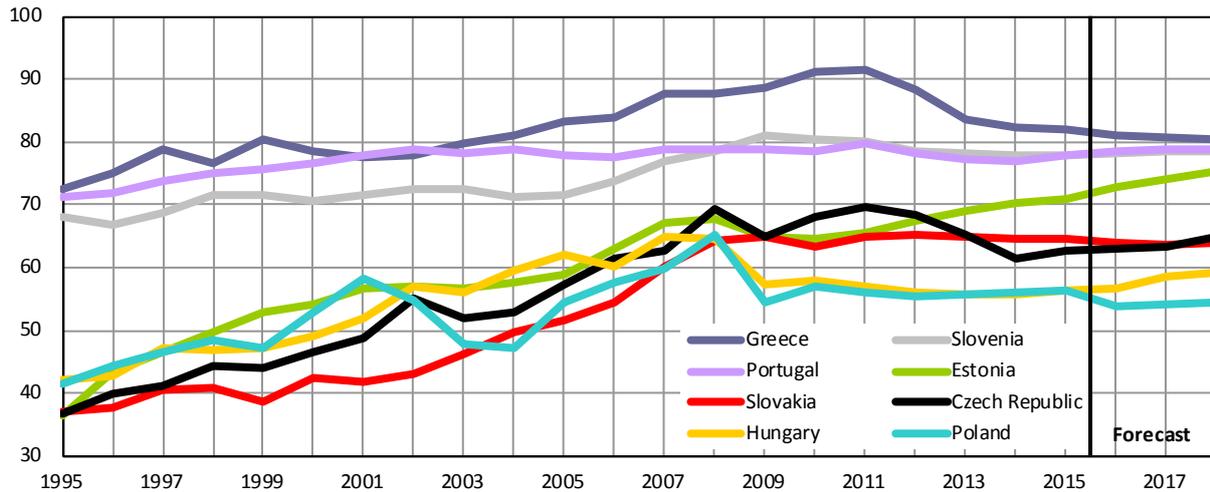**Graph 3.5.2: GDP per Capita – Using Current Exchange Rates**
EA19=100

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

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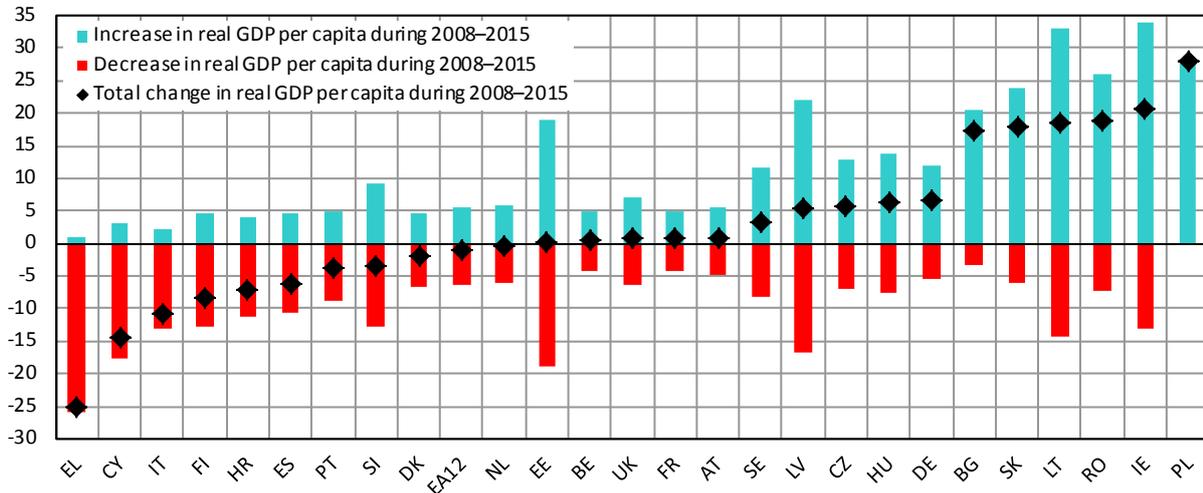
EA19=100

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

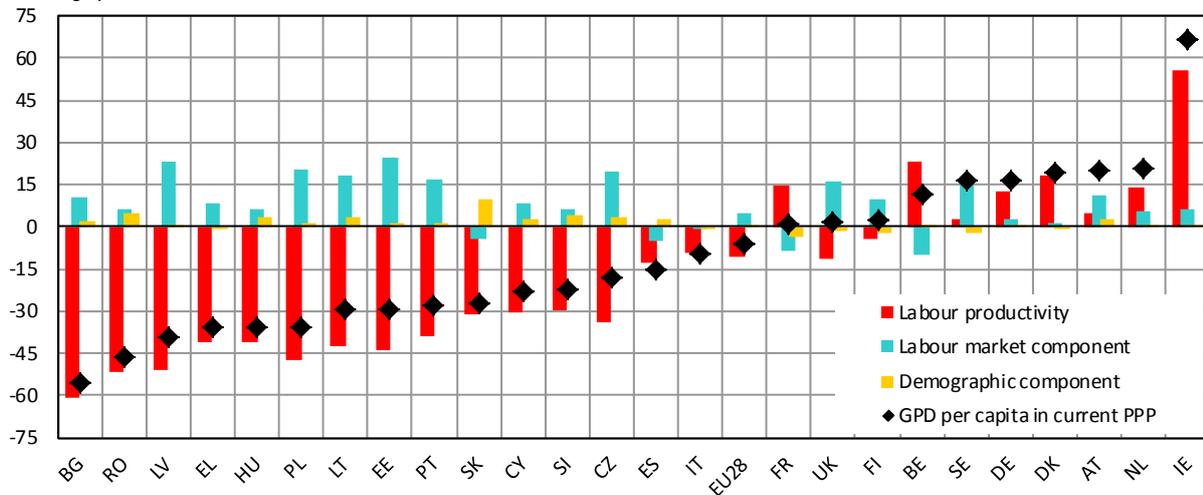**Graph 3.5.4: Change in Real GDP per Capita during 2008–2015**

growth in %

Source: Eurostat. Calculations of the MoF.

Graph 3.5.5: Current PPP Adjusted GDP per Capita Level Relative to the EA19 Average in 2015

in percentage points

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

Graph 3.5.6: Change in Current PPP Adjusted GDP per Capita during 2008–2015

growth in %

Legend:
- Labour productivity
- Residue
- Labour market component
- Demographic component
- ◆ GPD per capita in current PPP
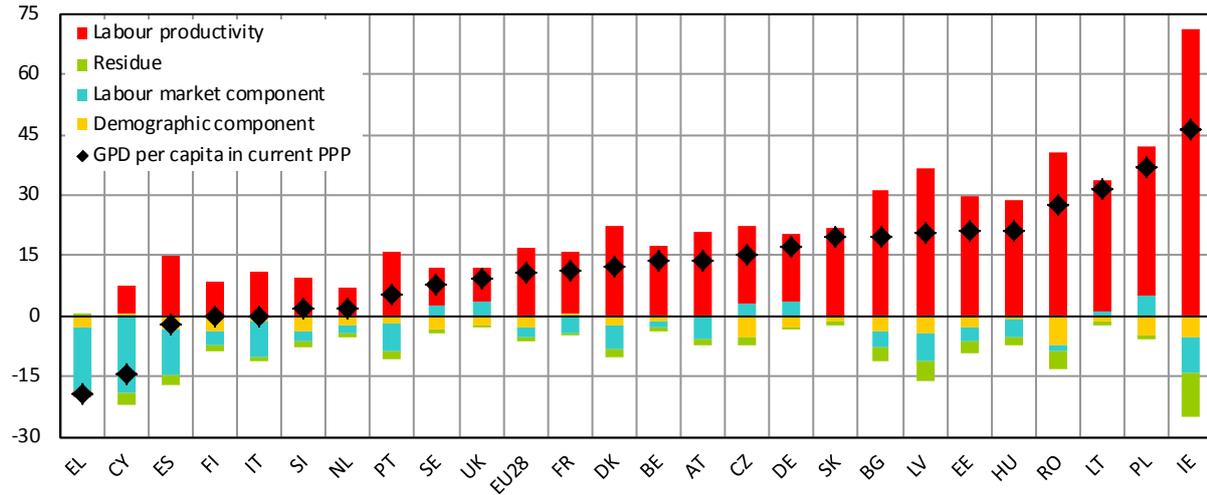
Source: Eurostat. Calculations of the MoF.

4 Monitoring of Other Institutions' Forecasts

The Ministry of Finance of the Czech Republic monitors macroeconomic forecasts of other institutions engaged in forecasting the Czech economy. Publicly available forecasts of 13 institutions are monitored. Out of these, 8 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 4.1.

Table 4.1: Summary of the Monitored Forecasts

|		December 2016			January 2017
		min.	*max.*	*average*	*MoF forecast*
Gross domestic product (2017)	growth in %, const.pr.	2.3	2.9	2.6	2.6
Gross domestic product (2018)	growth in %, const.pr.	2.0	3.2	2.6	2.4
Average inflation rate (2017)	%	1.2	2.2	1.9	2.0
Average inflation rate (2018)	%	1.6	2.2	2.0	1.6
Average monthly wage (2017)	growth in %	4.3	5.0	4.7	4.6
Average monthly wage (2018)	growth in %	4.0	4.9	4.4	4.3
Current account / GDP (2017)	%	1.0	1.9	1.4	1.2
Current account / GDP (2018)	%	0.5	1.8	1.4	1.3

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

On average, the institutions whose forecasts are monitored expect real GDP to grow by 2.6% annually in 2017 and 2018. The average inflation rate should be 2%, and growth of consumer prices should thus correspond to the CNB's inflation target. Growth of the average nominal wage should remain relatively dynamic at around 4.5%. The surplus on the current account of the balance payments should reach 1.4% of GDP in 2017 and 2018.

The January Macroeconomic Forecast differs only slightly from the average of forecasts of the monitored institutions; the only exception is the forecast for inflation rate in 2018. Factors of the expected slowdown in consumer prices growth in the next year are discussed in Chapter 3.2.

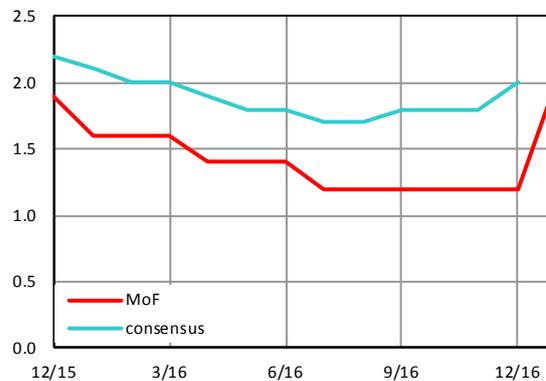**Graph 4.1: Forecast of Real GDP Growth for 2017**
in %; the month, in which the monitoring was conducted on the horizontal axis
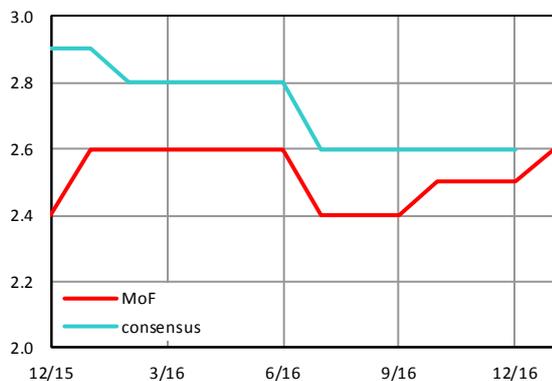
Source: Forecasts of individual institutions. Calculations of the MoF.

Graph 4.2: Forecast of Average Inflation Rate for 2017
in %; the month, in which the monitoring was conducted on the horizontal axis

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