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Economic Policy Department

Macroeconomic **Forecast** of the Czech Republic

July 2017

Macroeconomic Forecast of the Czech Republic July 2017

Ministry of Finance of the Czech Republic Letenska 15, 118 10 Prague 1

Tel.: +420 257 041 111 E-mail: macroeconomic.forecast@mfcr.cz

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The Macroeconomic Forecast is prepared by the Economic Policy Department of the Czech Ministry of Finance. It contains a forecast for the current and the following year (i.e. until 2018) and for certain indicators an outlook for another 2 years (i.e. until 2020). It is published on a quarterly basis (usually in January, April, July and November) and is also available on the website of the Ministry of Finance at:

www.mfcr.cz/macroforecast

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

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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 July 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 (April 2017) 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

After several years of weak growth signs of improvement begin to emerge in the global economy. Both world trade and manufacturing are growing and private sector confidence indicators have strengthened significantly. However, economic-policy uncertainty or imbalances and vulnerability in financial markets have a negative effect.

Under these conditions a slight acceleration in global economic growth is forecasted for this and the next year. This should be helped by a further expansion in world trade, greater investment intensity and improved situation of some commodity exporters. Price pressures in labour and product markets are still low from the global perspective. Under the assumption that commodity prices don't strengthen too much, inflation can be expected to remain subdued.

The Czech economy benefits from favourable internal as well as external conditions. Compared with the previous quarter, economic growth unexpectedly accelerated strongly **to 1.5%** in the first quarter of 2017. In a YoY comparison real GDP **increased by 4.0%**, helped also by a higher number of working days.

With the exception of change in inventories and valuables **all expenditure components** contributed to this result. Private consumption was traditionally robust, having increased by 3.5% YoY. Growth of consumption reflected not only high dynamics of both employment and wages, but also decreasing savings rate due to low interest rates and unusually high level of consumer confidence.

Developments in foreign trade, which is supported by growing foreign demand for products of automotive industry, contributed to economic growth to the same extent (1.6 pp). Having decreased in 2016, investment in fixed capital returned to growth, rising by 2.2% YoY. Private investment continued to grow, while investment of the general government sector also increased, though only in nominal terms. Increase in general government consumption of 2.8% also contributed to the strong economic growth.

Confidence indicators, purchasing managers' indexes, production in industry and construction as well as retail sales all imply that favourable developments will continue in the upcoming part of 2017.

Based on the dynamics of wages that reflect low unemployment rate, high participation rate and still increasing job vacancy rate, growth of consumption of households should accelerate in the forecast horizon to the year 2018. Household consumption will also be supported by a decrease in tax burden on families with children and by an increase in social benefits. Investment should be stimulated not only by money from European Structural and Investment Funds, but also by decreasing relative price of capital to labour amid low interest rates.

Improvement in the state of both the Czech economy and external environment leads to an **increase in the forecast for real GDP growth in 2017** from 2.5% **to 3.1%**, and **in 2018** from 2.5% **to 2.9%**.

There was a strong acceleration in YoY growth of **consumer prices** above the inflation target of the Czech National Bank at the turn of the years 2016 and 2017. Going forward, price increases should slow down, as proinflationary effects of rising wages and positive output gap and anti-inflationary effects resulting from tightening of monetary conditions, especially in the exchange rate component, should offset each other. Moreover, we assume a smaller increase in the price of oil compared with the April forecast.

This leads to a slight decrease in the forecast for the average **inflation rate** in 2017 from 2.4% to 2.2%, and in 2018 from 1.7% to 1.6%.

On the **labour market**, the economic boom causes persistent increases in the demand for labour. High growth of employment, which has been exceeding 1% since the end of 2014, gradually depletes unutilized resources. Seasonally adjusted unemployment rate (in an internationally comparable methodology) reached 3.0% in May 2017, being the lowest in the whole EU since the beginning of 2016. The increase in participation (use of people outside the labour force) supported by demographic factors and rising statutory retirement age has also its limits. Lack of employees is becoming a barrier for further extensive growth of production.

Thanks to the aforementioned factors and a bigger-thanestimated decrease, the forecast for **unemployment rate** in 2017 and 2018 is improved slightly from 3.4% to 3.2% and from 3.2% to 2.9%, respectively. At this level, unemployment has only very limited space to decline further.

The current account of the balance of payments reached a surplus of 0.8% of GDP in the first quarter of 2017. Surpluses on the balance of goods and services are apparently exceeding the deficit of primary income, which is mostly influenced by an outflow of income from foreign direct investment in the form of dividends and reinvested earnings.

Higher foreign demand and the expected smaller increase in the price of oil lead to an upward revision of the forecast for the **surplus on the current account** of the balance of payments. The forecast for 2017 is increased from 0.4% of GDP to 0.7% of GDP, and the forecast for 2018 from 0.5% of GDP to 0.8% of GDP.

For the first time in history of the Czech Republic, **the balance of the general government sector** reached a surplus that amounted to **0.6% of GDP in 2016**. This result was achieved due primarily to a 1.1 pp improvement in the structural balance. Despite growth of compensation of employees and social benefits, the balance of the general government sector was in a moderate surplus of 0.2% of GDP in the first quarter of this year, driven by the dynamics of tax revenues. For the time being the **forecast for the general government sector surplus in 2017** remains un-

changed at **0.4% of GDP**. Available data on cash collection at the level of the state budget as well as of local governments and health insurance companies point to achieving a positive balance this year.

Table: Main Macroeconomic Indicators

		2012	2013	2014	2015	2016	2017	2018	2017	2018
							Current f	orecast	Previous j	forecast
Gross domestic product	bill. CZK	4 060	4 098	4 314	4 596	4 773	4 993	5 234	4 889	5 103
Gross domestic product	real growth in %	-0.8	-0.5	2.7	5.3	2.6	3.1	2.9	2.5	2.5
Consumption of households	real growth in %	-1.2	0.5	1.8	3.7	3.6	2.9	3.1	2.4	2.7
Consumption of government	real growth in %	-2.0	2.5	1.1	1.9	2.0	1.9	1.7	1.7	1.5
Gross fixed capital formation	real growth in %	-3.1	-2.5	3.9	10.2	-2.3	3.8	3.5	3.8	3.0
Net exports	contr. to GDP growth, pp	1.3	0.1	-0.5	-0.2	1.2	0.6	0.2	0.2	0.2
Change in inventories	contr. to GDP growth, pp	-0.2	-0.7	1.1	0.8	0.0	-0.1	0.0	0.0	0.0
GDP deflator	growth in %	1.5	1.4	2.5	1.2	1.2	1.4	1.8	1.1	1.8
Average inflation rate	%	3.3	1.4	0.4	0.3	0.7	2.2	1.6	2.4	1.7
Employment (LFS)	growth in %	0.4	1.0	0.8	1.4	1.9	1.4	0.4	1.1	0.3
Unemployment rate (LFS)	average in %	7.0	7.0	6.1	5.1	4.0	3.2	2.9	3.4	3.3
Wage bill (domestic concept)	growth in %	2.6	0.5	3.6	4.8	5.8	6.1	5.6	5.7	4.8
Current account balance	% of GDP	-1.6	-0.5	0.2	0.2	1.1	0.7	0.8	0.4	0.5
General government balance	% of GDP	-3.9	-1.2	-1.9	-0.6	0.6	0.4		0.4	
Assumptions:										
Exchange rate CZK/EUR		25.1	26.0	27.5	27.3	27.0	26.4	25.6	26.9	26.3
Long-term interest rates	% p.a.	2.8	2.1	1.6	0.6	0.4	0.9	1.5	0.9	1.5
Crude oil Brent	USD/barrel	112	109	99	52	44	49	50	56	57
GDP in Eurozone	real growth in %	-0.9	-0.3	1.2	2.0	1.8	1.8	1.8	1.5	1.6

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

Growth around 3% driven by domestic demand

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



Unemployment should continue to decline further





in % of GDP (yearly moving sums)



Acceleration of inflation above 2% only temporary decomposition of YoY growth of CPI, contributions in pp



Dynamic growth of wages should continue

average gross monthly wage, YoY growth rate, in %



Source: CZSO. Calculations of the MoF.





Risks to the Forecast

The macroeconomic forecast is subject to more or less significant positive and negative risks. The list stated herein is dominated by negative factors, but given the likelihood of their materialization we consider the **risks to the forecast** to be **balanced** in aggregate.

Growth prospects of our major trading partners' economies are improving, which is confirmed not only by the so-called soft indicators but also by "hard" data. If, in the upcoming quarters, the economies of key trading partners grew at a similar pace – or even faster – as at the beginning of this year, the strongly export-oriented Czech economy would considerably benefit from such a situation. In addition to the **stronger growth in foreign demand**, the Czech economy could also be affected through foreign trade, this time unfavourably, in the case that the future **relationships between the UK and the EU** significantly increased barriers to international trade. On the side of domestic demand, some investment projects might be postponed or cancelled due to a lower increase in foreign demand or elevated uncertainties.

Another negative risk is the possibility of an **abrupt slowdown in the growth of the Chinese economy**. However, the expected continuation of a gradual slowdown of the economic growth in China should not be crucial for the Czech Republic, despite the fact that the interconnectedness of the Czech and Chinese economies via global supply chains is higher than suggested by data on their mutual foreign trade.

The Czech economy could be adversely affected by potential escalation of **problems of the Italian banking sector**, as well as by certain geopolitical factors such as the **rise of protectionism** or the **migration crisis**. The medium to long-term economic impact of the migration wave on the individual EU countries cannot be estimated; however, if there is no significant increase in the number of asylum seekers in the Czech Republic, direct impacts on the Czech economy should be negligible.

Since the discontinuation of the CNB's exchange rate commitment at the beginning of April, the koruna ap-

preciated against the euro by almost 3.5% (as of the cut-off date). In the forecast, we assume only a gradual and modest appreciation of the koruna, but a short-term increase in exchange rate volatility cannot be excluded completely, as well as a possible stronger **appreciation of the koruna** that could constitute a problem for certain export-oriented firms over the medium and long term.

The lack of adequately qualified employees is increasingly seen by companies as a barrier to growth in their production. A key factor for the continuation of the economic growth, especially in the medium and longer horizons, will thus be an increase in **labour productivity**, considering the current labour market situation and anticipated demographic developments. However, productivity growth could fall behind expectations (e.g. due to slower growth of investment), which would negatively affect the pace of economic growth. In the short term, imbalances in the labour market create a **strong pressure on wage growth**. This, in turn, results in an increase in unit labour costs; on the other hand, this factor also strongly supports the growth of household consumption.

In the case of **investment**, the recovery of the investment cycle linked to the EU programming period for the years 2014–2020 will be crucial. In the medium and longer term, not only the end of United Kingdom's payments to the EU budget, but also new allocation linked to higher relative development level of the regions of the Czech Republic will have a substantial impact.

The combination of the environment of low (not only monetary-policy) interest rates and economic growth is reflected in the Czech Republic in high dynamics of mortgage loans. 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

During the first quarter the global economic growth has already recovered and has gradually begun to accelerate; however, developments in individual regions have remained diverse. The growth of US economic output has slowed down slightly, while the development in Western Europe is gradually gaining momentum. Significant differences persist between emerging economies. China's economy has continued to grow at a robust pace; however, this has been largely supported by fiscal stimuli. A number of other large emerging economies succeeded in overcoming economic recession and returning to the trajectory of economic growth.

1.1.1 United States of America

In the first quarter of 2017, the growth of the US economy continued to slow down slightly (in recent years, however, growth in the first quarter tends to be weaker than in the rest of the year) when real GDP grew by only 0.4% QoQ (*versus 0.5%*). After three years, the role of the main driver of economic growth has been taken over by investments, as the growth of household consumption slowed down substantially due to mild weather and associated low heating costs. Investments recorded the highest growth rate over the past five years, with solid growth showed by both residential and business investments. Government expenditure on consumption stagnated; the contribution of net exports was zero, while changes in inventories weighed on economic growth.

In response to the economic developments in recent months and the improving labour market situation, the Fed further increased interest rates by 25 basis points to 1.00–1.25% in June. At the same time, the Fed confirmed that it would raise interest rates one more time in 2017 and in line with economic recovery in the years to come. Finally, the Fed presented a balance sheet normalization program. The growth of the price level has slowed down slightly since February, with YoY inflation reaching 1.9% in May. However, the Fed expects the inflation rate to stabilize around 2% in the medium term.

We expect the economic growth to accelerate slightly. The main growth factor should be household consumption, supported mainly by developments in the labour market. The unemployment rate decreased to 4.3% in May, the lowest value since 2001. A shortage of labour force has started emerging in some sectors, and a gradual acceleration in the growth rate of wages can therefore be expected. The economy should also be supported by investments in infrastructure; however, no details on the amount and timing of this fiscal stimulus are known, for the time being. Market expectations from the new US administration are relatively high, as evidenced by developments in financial markets and a number of confidence indicators. We expect the economic growth to reach 2.2% (*versus 2.4%*) in 2017 and 2.4% in the next year (*unchanged*).

1.1.2 China

The dynamics of the Chinese economy has long been slowing down, but it is still high and China thus remains the main driver of global economic growth. The QoQ growth in real GDP, which was 1.3% in the first quarter of 2017, largely reflects fiscal stimuli through which the government is trying to improve the transport infrastructure or increase the household consumption as well as the share of services in the economy. Reflecting the revived foreign demand, the situation in industry has already started to improve, which is also indicated by the Purchasing Managers' Index in manufacturing or by a dynamic increase in producer prices. However, some sectors are still struggling with excess capacities (e.g. coal mining or steel industry). The situation in financial markets is stabilized and the decline in foreign exchange reserves has stopped. However, there are still considerable concerns about the rapid growth of loans despite the tightened regulation and monetary policy, the aim of which is to limit speculative financial activities and reduce macroeconomic imbalances. With respect to the rising debt and the expected slowdown in growth of potential product Moody's downgraded China's credit rating by one notch to A1 in May. From the long-term perspective, demographic development is a major risk.

1.1.3 European Union

Economic growth in the European Union is gradually gaining momentum. The QoQ growth of GDP in the first quarter reached 0.6% in the EU28 (*versus 0.5%*), as well as in the EA19 (*versus 0.4%*). In a YoY comparison, GDP of the EU28 increased by 2.1% (*versus 1.9%*), while GDP of the EA19 grew by 1.9% (*versus 1.6%*). Economic growth has been recorded by all EU28 economies, with considerable differences persisting in the individual countries. In a number of these economies a more significant recovery is still being hampered by structural problems, loss of competitiveness or high indebtedness of the public and private sectors.

The Harmonized Index of Consumer Prices resumed its growth in the second half of 2016; however, since the beginning of 2017 the rate of growth of the price level in the EA19 has slowed down again to reach only 1.4% in May. The ECB has kept the main refinancing rate at 0.00% and the deposit rate at -0.40% since March 2016. It 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 60 billion

should take place until the end of the year, or beyond, if necessary, and in any case until the Governing Council sees a sustained adjustment in the path of inflation consistent with its inflation target). 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%).

The situation in the labour market is also gradually improving in connection with the recovering economic activity; however, there is already a shortage of skilled workers in a number of countries. The unemployment rate in the EU28 has been decreasing since mid-2013, reaching 7.8% in May (YoY decline of 0.9 pp). However, enormous differences still persist among individual economies. The worst situation is still in Greece, where the unemployment rate stood at 21.7% in April. Of the EU28 countries, for which data for May was available as of the cut-off date, the unemployment rate exceeded the 10% level in Spain (17.7%), Italy (11.3%), Cyprus (11.0%) and Croatia (10.7%). The lowest rates were recorded in the Czech Republic (3.0%) and Germany (3.9%).

Graph 1.1.1: Unemployment rate in the EU in May 2017 in %, seasonally adjusted data



Source: Eurostat.

The improving condition of the Euro Area is also confirmed by leading indicators, the development of which has remained very promising. In the Euro Area the Business Climate Indicator or the Purchasing Managers' Indexes in manufacturing and services reach their six-year highs. Consumer confidence in the Euro Area is the highest since 2001.

We expect economic growth to be driven mainly by domestic demand in the coming years. Household consumption will remain the main driver of economic growth, supported by low interest rates in the short term. The improving labour market situation will have more permanent effects. With the resumed growth in the price level, however, the dynamics of household expenditure on consumption will moderate slightly. Investments, which will continue to be supported by the eased monetary policy of the ECB, will be negatively affected by the uncertainty associated with the United Kingdom's decision to withdraw from the EU. The impacts on the EU's economic growth cannot be currently quantified; however, we expect both parties to be interested in making the overall total impact as low as possible. Given the gradual global economic recovery, exports should also increase slightly. On the other hand, persisting problems in the banking sector in the Euro Area or high indebtedness of some economies will be factors weighing on economic growth. We expect the EA19 GDP to grow by 1.8% (*versus 1.5%*) this year, as well as in the next (*versus 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*



The QoQ growth of the **German** economy recorded a mild acceleration to 0.6% (*in line with the estimate*) in the first quarter of 2017. The economic growth has been driven mainly by foreign demand, when the export growth rate exceeded the import growth in the context of the recovering global economy. On the domestic demand side, especially the gross fixed capital formation contributed to economic growth, mainly through investment in construction and machinery and equipment. Positive growth contributions have also been reported by both household and general government consumption expenditures. The change in inventories was the only component that weighed on economic growth.

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.

In the labour market, the German economy is close to full employment. In May, the unemployment rate was only 3.9% and employment reached the highest levels since the German reunification. The number of vacancies has also reached record level, indicating a shortage of skilled workers. Nevertheless, the wage growth remains moderate. Leading indicators continue to develop very favourably. Values of the Ifo indicator continue to grow; in June business confidence reached the historic maximum since 1991. Assessment of the current situation and expectations are improving. Another significant increase was recorded by the Purchasing Managers' Index in manufacturing, whose value is the highest in the last six years. Last but not least, the development of the Consumer Confidence Index (GfK), which reached its highest value since 2001 in June, has been very promising.

We expect that economic growth will be driven by both domestic and foreign demand. In the short-term horizon, the household consumption expenditure will mainly be supported by an increase in pensions and salaries in the general government sector, while the positive labour market situation and the related growth of real wages will have more permanent effects. The increase in general government consumption expenditures will be supported mainly by expenditures related to the migration crisis, while the general government investments will be driven by investments in infrastructure and defence. Exports and corporate investments will be positively influenced by the recovery in global activity. However, the United Kingdom's withdrawal from the EU could be a risk factor, as the country represents an important export market for the German economy (exports to the UK accounted for 8.0% of total exports in 2016 or 3.7% of German GDP). GDP growth will slow down slightly in 2017 due to lower number of working days (by 3 compared to 2016). We therefore expect the economic growth to reach 1.8% in 2017 (versus 1.6%) and 1.7% (versus 1.6%) in the next year.

In the first quarter, the French economy grew at the same pace as in the previous quarter, with QoQ GDP growth reaching 0.5% (in line with the estimate). The economic growth was driven exclusively by domestic demand. The change in inventories was the main driver, other components of domestic demand contributed to the economic output to a significantly smaller extent. In addition to the expansionary monetary policy of the ECB, the growth in corporate investment was supported primarily by the temporarily lower tax burden on investment. Warm weather with above-average temperatures and the resulting lower heating costs explain the sharp slowdown in the growth of household consumption. Foreign demand weighed on growth, with exports declining as a result of the drop in exports of transport equipment and imports increasing simultaneously.

The labour market situation is, unlike in most EU countries, improving only very moderately. The unemployment rate still reaches almost 10%, the long-term unemployment rate stagnates and the wage growth remains relatively weak. In the short term, leading indicators point to some improvement in economic developments, many of them are showing an upward trend. The business confidence indicator has been growing since 2013; the consumer confidence indicator has reached peak values since 2007. Also, the Purchasing Managers' Indexes in manufacturing and services indicate a more dynamic economic growth. A faster recovery, however, will be hampered by long-term problems of the French economy - low competitiveness and the associated declining share in export markets, continuing rigidities in the labour market or high levels of public and private debt. We thus expect the economic growth to remain relatively weak and the French economy to grow by 1.4% both in 2017 and in the next year (versus 1.3% in both years).

The growth of the Polish economy slowed down in the first quarter; nevertheless, the QoQ GDP growth reached 1.1% (versus 0.6%). The economic growth was supported by all components of domestic demand, mostly by consumption expenditures of households that were supported by increasing employment and wages, higher child benefits and improved consumer sentiment. However, investment activity remains rather weak, although the negative effect of end of projects from the previous EU financial perspective has already faded away. The low level of business investment probably relates to the private sector's concerns about increasing government interventions in the economy. Foreign demand constituted the only component that weighed on economic output, as imports grew faster than exports. In the coming two years, the economic growth should continue to be driven mainly by household consumption, which will be supported by increased social benefits in the short term and by the good labour market situation, low interest rates and growing consumer confidence, which reached its historic peak since 2000 in June, in the medium term. Investment growth should gradually resume with the start of programmes of the 2014–2020 financial perspective; however, lower predictability of government policies is a risk. In terms of long-term sustainability of public finances a substantial risk results also from an abrupt decrease of the statutory retirement age. For this year we expect the growth of 3.8% (versus 3.4%), for the next year, considering the effect of fadeout of increased social benefits, the growth will slow down slightly 3.2% (unchanged).

The **Slovak** economy showed a strong performance again in the first quarter, when the QoQ GDP growth was 0.8% (*in line with the estimate*). All domestic demand components contributed to the economic growth, while foreign demand had a slightly dampening effect. The main growth driver was gross fixed capital formation, which was supported mainly by investment in the automotive industry and by the end of negative effects of the termination of projects from the previous EU financial perspective. The growth in household expenditure on consumption is supported by still relatively low inflation and, in particular, by the improving labour market situation. The unemployment rate decreased to 8.1% in May (YoY decline of 1.8 pp), which represents the lowest value in the recorded history since 1998. The January increase in the minimum wage contributed to the 2.6% YoY growth of real wages in the first quarter. However, deep regional differences persist in the Slovak labour market, and the low labour mobility represents another problem. After almost three years, the price level began to increase in December 2016 and the inflation rate reached 1.1% in May. In the coming years, household consumption should show a steady growth, which will be also supported by further employment and wage growth, as some regions already show tensions in the labour market and associated lack of qualified workers, mostly in engineering and technology branches. However, the real wage growth will slow down due to the accelerating growth of the price level. A gradual recovery in investment will also be supported by continued investment in the automotive industry and investment of the government sector in infrastructure. Start of production of the Volkswagen and Jaguar Land Rover car factories should significantly contribute to an acceleration of exports in 2018. The economic growth will also be substantially supported by the reduced corporate income tax or increased lump sum taxable expenses for the sole traders. For this year we expect a growth of 3.3% (unchanged), for the following year a slight acceleration to 3.6% (unchanged).

1.1.4 Commodity Prices

In the second quarter of 2017 the price of Brent crude oil reached USD 49.6/barrel (*versus USD 56/barrel*) on average. The price thus decreased by 7.5% QoQ. As of the cut-off date of the Forecast, Brent crude oil traded below USD 50/barrel.

The price of Brent oil has dropped noticeably on 25 May after the publication of the OPEC agreement to extend the current extraction constraint by 9 months to March 2018. The oil market participants obviously expected further measures, which have not occurred. According to available information, the existing agreement has been implemented almost in full, which provides the agreement with credibility for another 9 months. Libya and Nigeria have been exempt from the OPEC agreement, however, a number of countries outside this organisation (e.g. Russia) have also pledged to extend the output restrictions. On the other hand, the oil market has been influenced by increased production in the United States, as well as in the above mentioned Libya and Nigeria. According to estimates, this and next years' global oil production should roughly correspond to consumption, and downward pressure on prices, which had been driven by rising oil stocks in the last two years, should thus be eliminated.

In accordance with the mildly increasing curve of futures prices we expect only a very moderate growth in the Brent crude oil price. The average price should reach USD 49/barrel in 2017 (*versus USD 56/barrel*), and we expect an average price of USD 50/barrel in 2018 (*versus USD 57/barrel*). The lowered forecast is mostly due to the current lower price compared to the previous forecast.

In koruna terms, the Brent oil price dropped even more compared to the previous forecast, as we expect the koruna/USD rate to be stronger (see Chapter 1.3.3). According to our assumptions the YoY growth in the koruna price should reach slightly negative values in the second half of 2017 (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



Table 1.1.1: Gross Domestic Product – yearly

YoY real growth rate, in %

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
									Forecast	Forecast
World	-0.1	5.4	4.2	3.5	3.4	3.5	3.4	3.1	3.5	3.6
USA	-2.8	2.5	1.6	2.2	1.7	2.4	2.6	1.6	2.2	2.4
China	9.2	10.6	9.5	7.7	7.7	7.3	6.9	6.7	6.5	6.3
EU28	-4.4	2.1	1.7	-0.5	0.2	1.7	2.2	1.9	2.1	2.0
EA19	-4.5	2.1	1.5	-0.9	-0.3	1.2	2.0	1.8	1.8	1.8
Germany	-5.6	4.1	3.7	0.5	0.5	1.6	1.7	1.9	1.8	1.7
France	-2.9	2.0	2.1	0.2	0.6	0.9	1.1	1.2	1.4	1.4
United Kingdom	-4.3	1.9	1.5	1.3	1.9	3.1	2.2	1.8	1.5	1.2
Austria	-3.8	1.9	2.8	0.7	0.1	0.6	1.0	1.5	2.0	1.7
Hungary	-6.6	0.7	1.7	-1.6	2.1	4.0	3.1	2.0	3.3	2.9
Poland	2.6	3.7	5.0	1.6	1.4	3.3	3.9	2.6	3.8	3.2
Slovakia	-5.4	5.0	2.8	1.7	1.5	2.6	3.8	3.3	3.3	3.6
Czech Republic	-4.8	2.3	1.8	-0.8	-0.5	2.7	5.3	2.6	3.1	2.9

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

Graph 1.1.5: Gross Domestic Product

YoY real growth rate, in %



1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 Note: Emerging market and developing economies comprising 154 countries (according to the IMF's classification) Source: Eurostat, IMF. Calculations of the MoF.



12 Czech Republic 10 Germany Austria 8 Poland Slovakia 6 4 2 0 -2 Forecast -4 -6 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018

1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 Source: Eurostat. Calculations of the MoF.

Table 1.1.2: Gross Domestic Product – quarterly

real growth rate, in %, seasonally adjusted data

		201	.6		2017				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
						Estimate	Forecast	Forecast	
USA QoQ	0.2	0.4	0.9	0.5	0.4	0.6	0.7	0.5	
ΥοΥ	1.6	1.3	1.7	2.0	2.1	2.4	2.2	2.2	
China QoQ	1.3	1.9	1.8	1.7	1.3	1.6	1.6	1.5	
ΥοΥ	6.4	6.7	6.7	6.9	6.9	6.6	6.3	6.1	
EU28 QoQ	0.5	0.4	0.5	0.6	0.6	0.6	0.4	0.5	
YoY	1.8	1.8	1.9	2.0	2.1	2.2	2.2	2.1	
EA19 <i>QoQ</i>	0.5	0.3	0.4	0.5	0.6	0.5	0.3	0.3	
YoY	1.7	1.6	1.8	1.8	1.9	2.1	1.9	1.7	
Germany QoQ	0.7	0.5	0.2	0.4	0.6	0.6	0.5	0.4	
ΥοΥ	1.8	1.8	1.7	1.8	1.7	1.8	2.1	2.1	
France QoQ	0.6	-0.1	0.2	0.5	0.5	0.4	0.3	0.4	
ΥοΥ	1.2	1.2	0.9	1.2	1.1	1.6	1.7	1.6	
United Kingdom QoQ	0.2	0.6	0.5	0.7	0.2	0.3	0.3	0.2	
ΥοΥ	1.6	1.7	2.0	1.9	2.0	1.7	1.5	1.0	
Austria QoQ	0.6	0.1	0.6	0.6	0.6	0.5	0.3	0.3	
ΥοΥ	1.4	1.3	1.7	1.9	1.9	2.3	2.0	1.7	
Hungary QoQ	-0.6	1.2	0.5	0.7	1.3	1.0	0.5	0.5	
ΥοΥ	1.2	2.2	2.1	1.9	3.8	3.6	3.6	3.4	
Poland QoQ	-0.1	1.0	0.4	1.7	1.1	0.8	0.7	0.7	
ΥοΥ	2.5	3.0	2.2	2.9	4.2	4.0	4.3	3.3	
Slovakia QoQ	0.6	0.8	0.6	0.8	0.8	0.9	0.9	0.8	
YoY	3.7	3.5	3.1	2.9	3.1	3.1	3.4	3.4	
Czech Republic QoQ	0.3	0.8	0.2	0.4	1.5	0.9	0.5	0.6	
YoY	3.5	2.8	1.8	1.8	3.0	3.1	3.4	3.6	

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

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

2010=100, seasonally adjusted data, constant prices



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

in % of GDP, derived using the Hodrick-Prescott filter



Table 1.1.3: Prices of Selected Commodities – yearly

spot prices 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 Forecast Forecast **Crude oil Brent** USD/barrel 61.5 79.6 111.3 111.6 108.6 99.0 52.4 43.6 49 50 -36.5 0.3 growth in % 29.3 39.9 -2.6 -8.8 -47.1 -16.8 12.9 2.2 Crude oil Brent index (in CZK) 2010=100 76.1 100.0 129.5 143.8 139.9 134.6 84.9 70.1 78 77 growth in % -17.4 -28.6 31.4 29.5 -2.7 -3.8 -36.9 11.7 -1.8 11.0 Natural gas USD/MMBtu 8.9 8.2 10.6 12.0 11.2 10.5 7.3 4.4 . growth in % -32.6 -7.1 28.9 -40.4 13.1 -6.6 -6.5 -30.2 Natural gas index (in CZK) 2010=100 110.2 100.0 139.4 119.7 149.4 138.2 114.4 67.8 growth in % -23.3 -9.3 19.7 -6.7 -0.9 -40.7 24.8 -17.2

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

Table 1.1.4: Prices of Selected Commodities – quarterly

spot prices

			201	.6		2017					
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
								Forecast	Forecast		
Crude oil Brent	USD/barrel	33.8	45.6	45.8	49.1	53.6	49.6	46	48		
	growth in %	-37.3	-26.1	-9.2	12.8	58.4	8.8	-0.4	-2.1		
Crude oil Brent index (in CZK)	2010=100	54.7	71.8	73.0	81.1	89.6	78.5	71	74		
	growth in %	-37.3	-28.6	-9.8	14.4	63.8	9.3	-2.8	-8.1		
Natural gas	USD/MMBtu	4.7	4.0	4.2	4.6	5.8	5.0	•	•		
	growth in %	-50.2	-45.4	-36.9	-22.5	24.0	25.2				
Natural gas index (in CZK)	2010=100	72.8	61.2	64.3	72.9	93.3	77.1				
	growth in %	-50.3	-47.3	-37.3	-21.4	28.2	25.9				

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

Graph 1.1.9: Dollar Prices of Oil



Graph 1.1.10: Koruna Indices of Prices of Selected Commodities *index 2010=100*



1.2 Fiscal Policy

In 2016 the balance of the general government sector improved by 1.2 pp YoY to a surplus of 0.6% of GDP, achieving the best result so far in modern history. Structural balance improved by 1.1 pp, thus indicating a positive effect of government's active measures. These measures were reflected mainly on the revenue side, with more thorough collection of taxes and measures to fight tax evasion (electronic VAT reporting and, since December 2016, also electronic registration of sales) being among the most efficient ones.

The expenditure side was positively influenced by another decrease in interest costs, this time by almost 9%, resulting primarily from favourable conditions on financial markets and also from a decrease in state debt. Sharp fall in investment expenditure in comparison with high base of the year 2015, by the end of which remaining money from the 2007–2013 financial perspective had to be allocated and used, represents budget savings corresponding to the unspent Czech part of financing of EU projects.

We still expect the balance of the general government sector to reach 0.4% of GDP **in 2017**, the expected size of the surplus remaining unchanged from the April Forecast. Structural balance should be approximately zero, with the resulting stance of fiscal policy being moderately expansionary. To a certain extent, this is due to an expected rise in investment expenditure following the slump in the last year, with the forecast scenario assuming a gradual start of projects from the 2014–2020 financial perspective, as well as an increase in investment financed exclusively from national resources.

On the basis of new information, the update of the forecast led to partial changes in the structure of revenues and expenditures. As for the latter, the updated scenario assumes higher growth of consumption of the general government sector resulting primarily from high contributions of compensation of employees and intermediate consumption. In the case of the general government sector, results of quarterly national accounts show an increase in final consumption expenditure of 5.4% in the first quarter of 2017, which is significantly above the April scenario. This led to an upward revision of this aggregate by approximately 0.4 pp. In nominal terms, investment of the general government sector increased slightly YoY in the first quarter. We still assume that growth of investment expenditure accelerates in the third and the fourth quarter.

Quarterly data show a positive trend on the revenue side, where tax revenues increase even faster than it was estimated in April. This should offset the aforementioned increase in consumption of the general government sector. Tax revenues are influenced by both dynamics of the economy and measures against tax evasion aimed primarily at the value added tax and personal income tax.

Results of cash collection are another factor contributing to the expected surplus of the general government sector. Even though the surplus of the state budget in the first half of the year is by approximately 90% smaller than it was a year ago, the adjustment of revenues and expenditure for transfers received and expenditure related to EU funds shrinks the negative balance by more than a half, compared to the previous year. From the perspective of such adjusted cash collection of the state budget, which is closer to the accrual ESA2010 methodology than the balance influenced by financial flows related to EU projects, this year's development of the state budget balance can be viewed as more favourable than in 2016. Moreover, budgetary results of local governments in the first five months of the year, as well as surplus of health insurance companies, are in line with the forecasted size of the surplus of the general government sector.

As for debt dynamics, our expectations remain positive, too. Similarly to the previous year we assume relatively good situation on financial markets and investors' favourable evaluation of government bonds. On the basis of our estimates, interest costs should decrease further (by almost 6%). Restructuring of the debt portfolio has a non-negligible effect here – older bonds with higher yield are being replaced by bonds with significantly lower financial costs to the issuer – and so has the dynamics of debt. Having fallen by 3.2 pp YoY to 36.8% of GDP in 2016 the relative debt of the general government sector is forecasted to decrease again to 35.2% of GDP at the end of 2017.

Graph 1.2.1: Decomposition of the Government Balance in % of GDP



Table 1.2.1. Net Lending/Borrowing and Debt

Graph 1.2.2: General Government Debt





Source: CZSO. Calculations of the MoF.

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
											Forecast
General government balance	% GDP	-2.1	-5.5	-4.4	-2.7	-3.9	-1.2	-1.9	-0.6	0.6	0.4
	bill. CZK	-85	-216	-175	-110	-160	-51	-83	-29	28	20
Cyclical balance	% GDP	1.3	-1.4	-0.7	-0.3	-0.9	-1.5	-0.8	0.2	0.2	0.4
Cyclically adjusted balance	% GDP	-3.4	-4.1	-3.7	-2.5	-3.0	0.3	-1.2	-0.8	0.4	0.0
One-off measures ¹⁾	% GDP	-0.1	0.0	0.0	-0.1	-2.0	0.0	-0.3	-0.2	-0.1	0.0
Structural balance	% GDP	-3.3	-4.2	-3.7	-2.3	-1.1	0.3	-0.9	-0.6	0.5	-0.1
Fiscal effort ²⁾	рр	-1.6	-0.9	0.5	1.4	1.3	1.3	-1.2	0.3	1.1	-0.5
Interest expenditure	% GDP	1.0	1.2	1.3	1.3	1.4	1.3	1.3	1.1	0.9	0.8
Primary balance	% GDP	-1.1	-4.3	-3.1	-1.4	-2.5	0.1	-0.6	0.4	1.5	1.2
Cyclically adjusted primary balance	% GDP	-2.4	-2.9	-2.4	-1.1	-1.6	1.6	0.1	0.3	1.3	0.8
General government debt	% GDP	28.6	34.0	38.1	39.8	44.5	44.9	42.2	40.0	36.8	35.2
	bill. CZK	1 1 5 1	1336	1 509	1 606	1 805	1840	1819	1836	1 755	1760
Change in debt-to-GDP ratio	рр	0.8	5.4	4.1	1.8	4.6	0.4	-2.7	-2.2	-3.2	-1.5

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

Change in structural balance.

Source: CZSO. Calculations of the MoF.

1.3 Monetary Policy, Financial Sector and Exchange Rates

1.3.1 Monetary Policy

Since November 2013 until the beginning of April this year, the CNB used the exchange rate as an additional monetary policy tool. Through foreign exchange market interventions, the total volume of which reached almost EUR 76 billion over the duration of the exchange rate commitment (which increased the volume of foreign exchange reserves from roughly 22% of GDP at the beginning of November 2013 to more than 70% of GDP in April 2017), the CNB prevented the koruna from appreciating below 27 CZK/EUR.

By exiting from the exchange rate commitment, the CNB returned to a standard monetary policy regime, in which interest rates are the main instrument (the two-week repo rate has been set at 0.05% already since November 2012). Although the koruna's exchange rate may now fluctuate freely in both directions, depending on the development of demand and supply in the foreign exchange market, the CNB said it was prepared to respond to potential excessive exchange rate fluctuations. Monetary conditions should, according to our assumptions, gradually tighten, both in the exchange rate and interest rate components.

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



1.3.2 Financial Sector and Interest Rates

In the second quarter of 2017, the **3M** (3-month) **PRIBOR** interbank market rate reached 0.3% (*in line with the forecast*). Given the projected monetary policy rates and expectations of financial markets, the 3M PRIBOR could start to rise slightly from the third quarter of 2017. It should thus average 0.4% (*versus 0.3%*) in 2017, increasing further to 0.7% (*versus 0.4%*) in 2018.

Due to mounting inflation pressures, long-term interest rates have recently been increasing from their historic lows. The **yield to maturity on 10-year government bonds** for convergence purposes was 0.8% (*versus 0.9%*) in the second quarter of 2017. With regard to the assumed monetary policy stance of the ECB and the Fed

we expect a minor increase to 0.9% in 2017 (*unchanged*) and a more significant rise to 1.5% in 2018 (*unchanged*).

Graph 1.3.2: Interest Rates



The growth of loans to households slightly accelerated in the first quarter of 2017. Their growth has long been driven by housing loans, which are the principal part of loans to households (accounting for nearly 75% of the total volume). Growth of loans for consumption also accelerated, which may be associated with high confidence of consumers and a relatively dynamic growth of household consumption. Other loans, which include e.g. loans to the self-employed, increased by 3.6% YoY in the first quarter of 2017, i.e. at a similar pace as in the previous quarter. The accelerating pace of household indebtedness, especially in the area of housing loans, may pose a certain macroeconomic risk (if the economic conditions got worse in future, some households may not be able to repay the loans), in connection with the dynamics of real estate prices.

Graph 1.3.3: Loans to Households

YoY growth rate in %, contributions in pp



Total loans to non-financial corporations increased by 5.8% YoY in the first quarter of 2017, growing at the slowest pace since the second quarter of 2015. The dynamics of koruna loans decreased further (drop of 1.7%) at the beginning of this year, while the growth of foreign

currency loans accelerated again and has already exceeded 30%. Trends from previous quarters have thus continued. This development may reflect increased uncertainty about the further development of the koruna exchange rate, or speculations on its appreciation.





The share of non-performing loans in total loans in the first quarter of 2017 was at 3.1% for households (0.9 pp less YoY) and 5.1% for non-financial corporations (0.3 pp less YoY). The low and continuously decreasing share of non-performing loans reflects the positive economic development and indicates that no pressure leading to limitation of availability of bank loans should arise in near future.



ratio of non-performing to total loans, in %



1/07 1/08 1/09 1/10 1/11 1/12 1/13 1/14 1/15 1/16 1/17 Source: CNB. Calculations of the MoF.

The growth in household deposits continues to increase, in connection with households' favourable economic situation (8.7% in the first quarter of 2017, the highest value since 2009), the growth in deposits of non-financial enterprises slightly accelerated to 4.4%. 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 1.3.6: Deposits



//07 //08 //09 //10 //11 //12 //13 //14 //15 //16 //17 Source: CNB. Calculations of the MoF.

1.3.3 Exchange Rates

The CZK/EUR exchange rate has appreciated since the discontinuation of the exchange rate commitment to reach 26.5 CZK/EUR on average in the second quarter of 2017 (*versus 27.0*). As of the cut-off date of the Forecast the exchange rate hovered at 26.1 CZK/EUR. We expect the exchange rate to average 26.0 CZK/EUR (*versus 26.9*) and 25.9 CZK/EUR (*versus 25.7*) in the third and the fourth quarter of this year, respectively. We expect that, subsequently, the koruna will again start appreciating slightly against the euro, approximately by 0.5% QoQ.

The estimated development of the CZK/USD exchange rate is implied by the USD/EUR exchange rate for which we have made a technical assumption of stability at the level of 1.10 USD/EUR (*versus 1.05*).

Table 1.3.1: Interest Rates – yearly

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
										Forecast	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	0.05		
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	0.29	0.4	0.7
YTM of 10Y government bonds	in % p.a.	4.84	3.88	3.71	2.78	2.11	1.58	0.61	0.43	0.9	1.5
Client interest rates											
Loans to households	in % p.a.	7.00	7.01	6.83	6.46	6.03	5.57	5.14	4.63		
Loans to non-financial corporations	in % p.a.	4.58	4.10	3.93	3.69	3.19	3.00	2.77	2.58		
Deposits of households	in % p.a.	1.38	1.25	1.20	1.18	1.01	0.84	0.65	0.47		
Deposits of non-financial corporations	in % p.a.	0.87	0.56	0.52	0.56	0.41	0.29	0.19	0.10		

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

Table 1.3.2: Interest Rates – quarterly

			201	5		2017				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
								Forecast	Forecast	
Repo 2W rate CNB (end of period)	in % p.a.	0.05	0.05	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	0.00	0.00	•		
Federal funds rate (end of period)	in % p.a.	0.50	0.50	0.50	0.75	1.00	1.25	•	•	
PRIBOR 3M	in % p.a.	0.29	0.29	0.29	0.29	0.28	0.30	0.4	0.5	
YTM of 10Y government bonds	in % p.a.	0.48	0.45	0.30	0.48	0.66	0.82	1.0	1.2	
Client interest rates										
Loans to households	in % p.a.	4.85	4.70	4.54	4.42	4.29				
Loans to non-financial corporations	in % p.a.	2.63	2.60	2.58	2.52	2.57		•		
Deposits of households	in % p.a.	0.55	0.48	0.43	0.40	0.38				
Deposits of non-financial corporations	in % p.a.	0.13	0.11	0.09	0.07	0.06	•	•		

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

Table 1.3.3: Loans and Deposits – yearly

		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Households – MFI											
Loans	growth in %	31.6	29.3	16.5	8.8	6.6	4.9	4.0	3.4	4.7	7.2
For consumption	growth in %	26.2	25.7	16.4	7.3	4.2	-1.0	-0.1	-0.9	3.4	6.0
For house purchase	growth in %	33.8	30.8	15.5	8.9	6.5	6.4	5.5	4.5	5.6	8.1
Other lending	growth in %	27.5	24.9	23.9	11.6	11.1	6.0	1.2	2.9	1.0	3.0
CZK denominated	growth in %	31.6	29.3	16.5	8.8	6.6	4.9	4.0	3.4	4.7	7.2
FX denominated	growth in %	3.3	-8.9	0.1	31.0	2.4	30.8	-1.3	0.0	12.7	8.5
Deposits	growth in %	10.8	10.0	10.2	5.1	5.0	4.5	3.3	2.9	4.8	7.0
CZK denominated	growth in %	11.7	10.7	10.1	5.6	5.4	4.7	3.3	2.7	4.1	6.9
FX denominated	growth in %	-4.3	-3.4	13.1	-6.8	-4.0	-2.1	2.3	8.5	22.5	7.3
Non-performing loans (banking statistics)	share, in %	3.2	3.0	3.6	4.8	5.3	5.2	5.2	4.9	4.5	3.6
Loans to deposits ratio	in %	48	56	59	61	62	63	63	63	63	63
Non-financial corporations – N	IFI										
Loans	growth in %	19.3	15.9	1.9	-5.2	4.7	3.5	1.3	1.9	6.5	6.6
CZK denominated	growth in %	18.5	18.7	0.5	-5.2	4.9	2.6	0.3	-1.0	5.9	2.8
FX denominated	growth in %	22.8	3.4	9.1	-5.4	3.7	7.8	5.7	13.7	9.0	20.5
Deposits	growth in %	10.3	5.1	-2.2	5.5	0.4	8.9	4.9	7.6	10.3	4.6
CZK denominated	growth in %	9.6	6.4	-3.2	6.9	2.0	8.2	4.2	5.6	6.7	4.5
FX denominated	growth in %	12.8	0.5	1.6	0.2	-6.1	11.8	8.0	15.2	23.2	4.8
Non-performing loans (banking statistics)	share, in %	3.8	3.5	6.0	8.6	8.5	7.8	7.4	7.0	6.0	5.2
Loans to deposits ratio	in %	117	129	135	121	126	120	116	110	106	108

Source: CNB, ECB. Calculations of the MoF.

Table 1.3.4: Loans and Deposits – quarterly

			2015			201	L6		2017
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Households – MFI									
Loans	growth in %	3.5	5.6	7.0	7.5	7.5	6.6	7.2	7.6
For consumption	growth in %	-0.3	7.6	8.7	9.7	8.7	2.3	3.7	4.2
For house purchase	growth in %	4.9	5.8	7.3	7.7	8.0	8.0	8.5	8.9
Otherlending	growth in %	0.2	1.2	2.7	2.7	2.6	3.0	3.5	3.6
CZK denominated	growth in %	3.5	5.5	7.0	7.5	7.5	6.6	7.2	7.6
FX denominated	growth in %	9.9	19.0	9.3	13.1	18.3	6.1	-2.0	12.0
Deposits	growth in %	4.6	4.5	5.5	5.9	6.4	7.6	7.9	8.7
CZK denominated	growth in %	3.9	3.7	4.9	5.7	6.3	7.6	8.1	9.4
FX denominated	growth in %	23.5	26.8	19.5	11.5	8.6	6.6	3.0	-5.6
Non-performing loans (banking statistics)	share, in %	4.5	4.5	4.3	4.0	3.7	3.5	3.3	3.1
Loans to deposits ratio	in %	62	64	64	63	63	63	64	62
Non-financial corporations – M	IFI								
Loans	growth in %	5.1	9.3	9.1	6.3	7.8	6.1	6.4	5.8
CZK denominated	growth in %	4.4	9.0	8.5	5.4	3.8	1.5	0.5	-1.7
FX denominated	growth in %	7.7	10.5	11.2	9.7	22.0	22.7	27.1	31.1
Deposits	growth in %	8.5	12.3	13.2	8.6	5.6	3.2	1.4	4.4
CZK denominated	growth in %	5.2	8.1	10.0	8.0	4.5	3.2	2.5	8.6
FX denominated	growth in %	20.4	28.0	24.3	10.3	8.9	3.0	-2.2	-8.8
Non-performing loans (banking statistics)	share, in %	6.1	5.8	5.6	5.4	5.1	5.1	5.0	5.1
Loans to deposits ratio	in %	106	107	104	104	108	110	109	105

Source: CNB, ECB. Calculations of the MoF.

Graph 1.3.7: Ratio of Bank Loans to Households to GDP

yearly moving sums, in %



Table 1.3.5: Exchange Rates – yearly

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
								Forecast	Forecast	Outlook	Outlook
Nominal exchange rates											
CZK / EUR	average	24.59	25.14	25.97	27.53	27.28	27.03	26.4	25.6	25.1	24.6
	appreciation in %	2.9	-2.2	-3.2	-5.7	0.9	0.9	2.6	3.1	1.9	1.9
CZK / USD	average	17.69	19.58	19.56	20.75	24.60	24.43	24.2	23.2	22.8	22.4
	appreciation in %	8.0	-9.7	0.1	-5.7	-15.7	0.7	1.2	3.9	1.9	1.9
NEER	average of 2015=100	112.8	108.9	106.4	100.8	100.0	102.4	104	106	108	111
	appreciation in %	3.1	-3.5	-2.3	-5.2	-0.8	2.4	1.5	2.4	1.9	1.9
Real exchange rate to EA19 ¹⁾	average of 2010=100	101.8	99.7	96.7	92.7	93.5	94.4	97	101	103	106
	appreciation in %	1.8	-2.0	-3.0	-4.2	0.8	1.0	2.8	3.7	2.6	2.7
REER	average of 2010=100	102.1	99.2	96.9	91.8	91.2	93.5		•	•	
(Eurostat, CPI deflated, 42 countries)	appreciation in %	2.1	-2.8	-2.3	-5.2	-0.6	2.5				

¹⁾ Deflated by GDP deflators.

Source: CNB, Eurostat. Calculations of the MoF.

Table 1.3.6: Exchange Rates – quarterly

			201	6		2017					
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
							Estimate	Forecast	Forecast		
Nominal exchange	e rates										
CZK / EUR	average	27.04	27.04	27.03	27.03	27.02	26.53	26.0	25.9		
	appreciation in %	2.2	1.3	0.2	0.1	0.1	1.9	4.0	4.4		
CZK / USD	average	24.54	23.94	24.20	25.07	25.38	24.07	23.6	23.5		
	appreciation in %	0.0	3.6	0.6	-1.4	-3.3	-0.54	2.4	6.6		
NEER	average of 2015=100	102.4	102.4	102.5	102.4	101.9	104.0	105	105		
	appreciation in %	3.3	5.5	1.5	1.2	-0.5	1.5	2.1	2.7		
Real exchange rate to EA19 ¹⁾	average of 2010=100	94.4	94.2	94.3	94.6	93.9	96	99	99		
	appreciation in %	2.7	1.1	0.3	0.0	-0.6	2.3	4.5	5.1		
REER	average of 2010=100	94.1	93.4	93.4	93.0	•					
(Eurostat, CPI deflated, 42 countries)	appreciation in %	3.7	4.1	1.1	1.1						

¹⁾ Deflated by GDP deflators.

Source: CNB, Eurostat. Calculations of the MoF.

Graph 1.3.8: Nominal Exchange Rates

quarterly averages, average 2015=100 (rhs)



Source: CNB. Calculations of the MoF.

Graph 1.3.9: Real Exchange Rate to EA19

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



Source: CNB, Eurostat. Calculations of the MoF.



Graph 1.3.10: Real Exchange Rate to EA19

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

1/97 1/98 1/99 1/00 1/01 1/02 1/03 1/04 1/05 1/06 1/07 1/08 1/09 1/10 1/11 1/12 1/13 1/14 1/15 1/16 1/17 1/18 Source: CNB, Eurostat. Calculations of the MoF.

1.4 Structural Policies

1.4.1 Business Environment

An amendment to the Insolvency Act, which came into effect on 1 July 2017, will 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 introduce stronger protection against the abuse of insolvency petitions.

1.4.2 Taxes

On 28 April 2017, the President of the Czech Republic signed the **Act amending some acts on taxation**. In order to strengthen the fight against tax evasion, the Act introduces an institute of unreliable person, i.e. a natural or legal person in a gross breach of the duties related to VAT administration. Further, the Act 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 reduces the limit for lump-sum expenses of self-employed persons to CZK 1 million. The Act came into effect on 1 April 2017.

1.4.3 Financial Markets

The amendment to the Capital Market Undertakings Act, signed by the President of the Czech Republic on 21 June 2017, transposes the EU Directives and Regulations into the Czech law, which will contribute to greater efficiency and transparency of the financial market business. In response to technical progress in this area, a new trading platform is being introduced in the form of an organised trading system, and high-frequency trading is also subject to regulation. Investor protection is enhanced through an adjustment of information obligations imposed on regulated entities and of the rules for dealing with customers. Last but not least, the new measures harmonise and tighten administrative punishments. The amendment will come into effect on 3 January 2018.

1.4.4 Social and Health Care Systems

On 21 June 2017, the President of the Czech Republic signed an **amendment to the Act on State Social Sup-**

port, which will enable parents to decide on the amount and time of drawing down the parental allowance in a more flexible way and, at the same time, it will ease conditions for placing children in pre-school facilities at the time of receiving the parental allowance. The amendment also extends the range of families entitled to the child allowance, increases the parental allowance in the case of multiple birth and the tax credit for the first child by CZK 150 per month. The amendment will come into effect on 1 January 2018.

The **amendment to the Act on Social Security Contributions**, approved by the Chamber of Deputies on 17 May 2017, introduces electronic sick leave certificates and increases sickness benefits for long-term patients by 6 pp to 66% of the reduced daily assessment base from the 31st day of the sickness leave and by 12 pp to 72% of the reduced daily assessment base from the 61st day of the sickness leave. The amendment should become effective on the first day of the sixth calendar month after its publication.

1.4.5 Labour Market

On 21 June 2017, the President of the Czech Republic signed the **amendment to the Act on Pension Insurance**, which introduces a ceiling for retirement age at 65 years. This limit will be revised by the Government every 5 years based on Reports on the state pension system including the current demographic forecast; the first report should be submitted in 2019.

On 23 June 2017, the President of the Czech Republic signed the **amendment to the Employment Act**, which obliges employment agencies to make a deposit of CZK 500 thousand to ensure their financial capacity and their contributory obligations to the state. The amendment also extends the maximum period for a subsidy on a socially purposeful job from one to two years; the aim is to extend the time job seekers remain in the labour market. The amendment also envisages abolition of the possibility of job seekers to perform a non-colliding employment under contracts for work. The amendment will come into effect 15 days after its publication in the Collection of Laws.

1.5 Demographic Trends

The population of the Czech Republic has been rising moderately in the long run. As of 31 March 2017, 10.579 million people lived in the Czech Republic. During the first quarter, the increase by foreign migration was compensated by the natural population decrease.

The **positive net migration** amounted to 5.3 thousand, similarly to the same quarter of 2016. While 10.9 thousand persons moved from abroad (by 1.5 thousand more than in 2016), 5.7 thousand left the Czech Republic. The highest net migration balance was recorded by citizens of Ukraine (1.3 thousand) and Slovakia (1.1 thousand).

The **natural decrease** in the Czech population reached 5.0 thousand persons. A total of 26.8 thousand children were born alive, only slightly less than in the preceding year. On the other hand, 31.8 thousand people died, i.e. by 3.6 thousand more than a year ago.

Graph 1.5.1: Age Groups



Source: CZSO. Calculations of the MoF.

At the beginning of 2017, the CZSO published an estimate of the age structure of the population. In the last six years (since the Population and Housing Census in 2011), the population of the Czech Republic has increased by 92 thousand persons. The population ageing was reflected in the growth of the senior category of 65 years and over by 352 thousand people. The high number of women born in the late 1970s and 80s and the increasing natality led to an increase in the number of children under the age of 14 by 125 thousand. On the other hand, the number of **persons aged 15–64** has decreased considerably, by 385 thousand.

With respect to the past fluctuations in the birth-rate, however, the development in this category is far from homogeneous. The decrease was concentrated in the age group of 15–37, which decreased by 521 thousand persons, while the population aged 53-64 years dropped by 181 thousand persons. In contrast, a considerable increase in the number of people in the age group 38–52 years was recorded, by 317 thousand. This age group shows the highest employment and participation rates, which fully eliminates, thus far, the impact of population ageing on the supply side of the economy.





Since 2014, the growth of the number of **pensioners** resumed, being roughly in line with demographic development and the increasing statutory retirement age. In total, 2,391 million old-age pensioners were clients of the pension system as of 31 March 2017. The YoY increase was 14 thousand persons, i.e. 0.6%. Virtually 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



Table 1.5.1: Demographics

in thousands of persons (unless stated otherwise)

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
								Forecast	Forecast	Outlook	Outlook
Population (as of 1 January)		10 487	10 505	10 516	10 512	10 538	10 554	10 579	10 593	10 606	10 618
gro	wth in %	-0.2	0.2	0.1	0.0	0.2	0.1	0.2	0.1	0.1	0.1
0–14 years		1 522	1 5 4 1	1 560	1 577	1601	1624	1 647	1653	1658	1658
gro	wth in %	1.8	1.3	1.2	1.1	1.5	1.4	1.5	0.4	0.3	0.0
15–64 years		7 328	7 263	7 188	7 109	7 057	6 998	6 943	6 895	6 848	6 807
gro	wth in %	-1.2	-0.9	-1.0	-1.1	-0.7	-0.8	-0.8	-0.7	-0.7	-0.6
65 and more years		1 637	1 701	1768	1 826	1 880	1 932	1 989	2 044	2 099	2 153
gro	wth in %	2.4	3.9	3.9	3.3	3.0	2.8	2.9	2.8	2.7	2.5
Old-age pensioners (as of 1 January) ¹⁾		2 260	2 340	2 341	2 340	2 355	2 377	2 395	2 406	2 4 2 1	2 435
gro	wth in %		3.5	0.0	0.0	0.6	0.9	0.8	0.4	0.6	0.6
Old-age dependency ratios (as of 1 January, ir	1 %)										
Demographic ²⁾		22.3	23.4	24.6	25.7	26.6	27.6	28.6	29.6	30.7	31.6
Under current legislation ³⁾		37.4	37.8	38.3	38.8	39.3	39.8	40.1	40.4	40.7	41.0
Effective 4)		45.9	47.9	47.6	47.2	46.9	46.8	46.2	46.0	46.2	46.2
Fertility rate		1.427	1.452	1.456	1.528	1.570	1.630	1.46	1.47	1.47	1.48
Population increase		19	11	-4	26	16	25	14	13	12	10
Natural increase		2	0	-2	4	0	5	-5	-6	-8	-9
Live births		109	109	107	110	111	113	99	98	96	95
Deaths		107	108	109	106	111	108	105	104	104	104
Net migration		17	10	-1	22	16	20	19	19	20	20
Immigration		23	30	30	42	35	38				
Emigration		6	20	31	20	19	17				

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



Graph 1.5.5: Old-Age Pensioners

absolute increase over a year in thousands of persons





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**. In the second half of 2016, the QoQ growth in gross value added slowed down below the growth rate of potential product and the positive output gap closed. On the other hand, in the first quarter of 2017 the acceleration of the QoQ growth in gross value added to 1.5% was reflected by reopening of the positive output gap to 1.1% of the potential product (see Graph 2.1.1). Given the forecast of economic growth and assumed developments of potential product, the output gap should extend to the range of 1.5–2.0% in the coming period.

This is confirmed by the situation in the labour market, which shows signs of overheating (see Chapter 3.3). Unemployment rate (LFS) has been under its long-term average since the beginning of 2014 and continues to decline. The number of vacancies (data by the Ministry of Labour and Social Affairs) continues to grow, already exceeding the peak values from 2008. In some professions and regions, mismatches between the supply of and demand for labour are increasingly evident and the lack of employees is becoming a barrier to economic growth.

The YoY growth of **potential product** has been accelerating since 2014, reaching 2.5% in the first quarter of 2017^{1} . This is a result corresponding to the growth possibilities of the Czech economy, which we approximate by long-term average of growth in gross value added (and potential product) of 2.5%.

The main driver of potential growth is **total factor productivity**. The contribution of its trend component, derived by the Hodrick-Prescott filter, has reached 1.7 pp since the second quarter of 2016.

Labour supply is being affected by a long-lasting decrease in the working-age population (15–64 years), caused by the process of population ageing (see Chapter 1.5). In the first quarter of 2017, **demographic development** slowed potential product growth by 0.4 pp.

However, the negative impact of population ageing on labour supply is fully eliminated by **rising participation rate**. Its increase by 6.1 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 (see Chapter 1.5) and an increase in the statutory and effective retirement age – are predominating here. In the first quarter of 2017, the contribution of the participation rate to potential product growth reached 0.8 pp.

The 2015 investment wave, supported by efforts for maximum possible utilization of allocation 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. In 2016 and in the first quarter of 2017 there was a correction and the contribution of the capital stock reached 0.5 pp.

From a long-run perspective, the regular **average working time** is shortening in the Czech Republic, which brings it closer to developed economies. However, the intensity of this factor's effect is decreasing with the high demand for labour. In the first quarter of 2017, 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.

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
											Q1
Output gap	%	3.7	-3.7	-2.0	-0.8	-2.4	-4.0	-2.1	0.5	0.5	1.1
Potential product ¹⁾	growth in %	3.3	2.0	0.8	0.7	1.0	1.2	1.3	2.1	2.4	2.5
Contributions											
Trend TFP	рр	1.9	1.1	0.6	0.4	0.4	0.7	1.2	1.5	1.7	1.7
Fixed assets	рр	1.2	0.8	0.6	0.6	0.5	0.4	0.4	0.5	0.6	0.5
Demography ²⁾	рр	0.3	0.1	-0.2	-0.4	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4
Participation rate	рр	0.0	0.3	0.1	0.3	0.8	1.0	0.5	0.5	0.7	0.8
Usually worked hours	рр	-0.1	-0.3	-0.3	-0.2	-0.3	-0.3	-0.2	-0.1	-0.1	-0.1

Table 2.1.1: Output Gap and Potential Product

¹⁾ Based on gross value added. ²⁾ Contribution of growth of working-age population (15–64 years).

Source: CZSO. Calculations of the MoF.

¹ The acceleration in potential product growth compared to the April Macroeconomic Forecast (2.1%) was largely due to the upward revision of national accounts data on the economic performance dynamics in 2015 and 2016 (for more information see Box 3.1).

Graph 2.1.1: Output Gap



Source: CZSO. Calculations of the MoF.

Graph 2.1.3: Potential Product and GVA YoY growth rate, in %



1/99 1/01 1/03 1/05 1/07 1/09 1/11 1/13 1/15 1/17 Note: Long-run average growth of potential GVA. Source: CZSO. Calculations of the MoF.

Graph 2.1.5: Capacity Utilisation in Industry

smoothed by Hodrick-Prescott filter, in %



Graph 2.1.2: Potential Product

YoY growth rate in %, contributions in percentage points



Source: CZSO. Calculations of the MoF.

Graph 2.1.4: Levels of Potential Product and GVA in bill. CZK of 2010



1/07 1/08 1/09 1/10 1/11 1/12 1/13 1/14 1/15 1/16 1/17 Source: CZSO. Calculations of the MoF.

Graph 2.1.6: Total Factor Productivity





Source: CZSO. Calculations of the MoF.

2.2 Business Cycle Indicators

The industrial confidence indicator continued to grow in the second quarter of 2017, which points to a likely increase in YoY dynamics of gross value added in industry.

In construction, the confidence indicator rose again in the second quarter of 2017. This indicates that the YoY decline of GVA in the sector, which has been strongly influenced by a lower volume of investment from EU funds, should stop 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.

Confidence in trade and services grew slightly in the second quarter of 2017, which points to a resumption of the high YoY growth rate of GVA in this sector.

The consumer confidence indicator dropped in the second quarter of 2017 compared to the preceding quarter;



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







however, its value still indicates a high growth momentum of household consumption in the second quarter of 2017. This conclusion results from the fact that the development of the consumer confidence indicator leads household consumption by 1–2 quarters.

The resulting composite confidence indicator fell slightly, though it remains at a relatively high level. This signals that YoY growth rate of GVA has been sustained in the second quarter of 2017.

At the beginning of 2017, the composite leading indicator precisely reflected the growth of the relative cyclical component of GVA, which should reach its peak in the second quarter of 2017. The positive output gap is clearly indicated to be closing in the third quarter of 2017.

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



Graph 2.2.4: Consumer Confidence and Consumption 2005=100 (*Ihs*), YoY growth in % (*rhs*)







Graph 2.2.6: Composite Leading Indicator 2005=100 (Ihs), 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 First Quarter of 2017

Economic performance measured by real GDP rose by 4.0% YoY (*versus 3.3%*) in the first quarter of 2017, while the seasonally adjusted GDP increased by 1.5% QoQ (*versus 0.8%*). The growth of the gross value added by 1.5% QoQ was driven by a majority of sectors, mostly by industry and trade, transportation, accommodation and food services. Within the release of annual national accounts the Czech Statistical Office also revised the data on GDP and its components for the years 2015 and 2016. For a more detailed description see Box 3.1.

The YoY increase in GDP in the first quarter of 2017 reflected the growing foreign and domestic demand. The main growth driver was final consumption expenditure of households. A positive contribution of the gross fixed capital formation to the GDP growth was mitigated by a drop in inventories. The growth rate of exports and imports accelerated and the resulting balance of foreign trade in goods and services thus significantly supported growth dynamics of GDP.

The increase in household consumption was due to rising disposable income and high consumer confidence. Final consumption expenditure of households was also supported by a significant YoY decrease in the savings rate. Expenditure on semi-durable and durable goods was the most dynamically growing components of household consumption, which implies that households are optimistic about the future developments of the economy. Expenditure on services and in particular on non-durables, which are less sensitive to economic fluctuations, also contributed to the growth of total household consumption. Household consumption increased by 3.5% (*in line with the estimate*) in real terms. Consumption of the general government sector rose by 2.8% (*versus 1.5%*).

After the decline in the last year, the gross fixed capital formation increased by 2.2% (*versus 0.2%*). This increase was supported mainly by purchases of transport equipment, investments in ICT, other machinery and equipment and also housing. On the other hand, investments in other buildings and structures have decreased. This clearly reflects the decline in the increased investment activity of the general government sector co-financed by EU funds from the previous financial perspective. Overall, the general government investments have basically stagnated, while private investment continued to grow (see Graph 3.1.8). Considering the negative YoY contribution of change in inventories, the gross capital for-

mation increased less than investment in fixed capital, only by 0.6% (*versus 4.8%*).

Amid an acceleration of exports of both components, the YoY growth of exports of goods and services increased by 4.3 pp to 6.5% (*versus 4.1%*) compared to the previous quarter, due to a faster growth of export markets and smaller decrease in export performance. Imports of goods and services increased by 5.1% (*versus 4.3%*), their stronger dynamics reflecting mainly a significant acceleration of exports and a resumption of the import-intensive investment demand.

A higher increase in import prices compared to export prices resulted in a deterioration of the terms of trade by 2.0% (*versus 1.7%*). The trading loss resulting from foreign trade brought about a situation where real gross domestic income, which unlike GDP includes this factor, increased by 2.2% YoY (*versus 1.9%*).

The gross operating surplus grew by 3.4% (*versus 2.9%*), compensation of employees increased by 6.4% (*versus 5.9%*) and net taxes on production were higher by 2.8% YoY (*versus the drop by 0.9%*). As a result, nominal GDP recorded growth of 4.6% (*versus 3.8%*).

3.1.2 Estimate for the Second Quarter of 2017

We estimate that real GDP increased by 1.8% YoY (*versus* 1.1%) and by 0.9% QoQ (*unchanged*) in the second quarter of 2017. The projected slowdown in the YoY growth of GDP compared to the first quarter of 2017 reflects changes in the number of working days – while the first quarter of 2017 had 3 more working days YoY, the second quarter of 2017 was by 4 working days shorter than the same quarter of 2016 (after adjustment for calendar and seasonal effects, the YoY growth of GDP in the second quarter). That high QoQ dynamics of GDP should be sustained reflects data on the development of the economy in the second quarter available as of the cut-off date of the Forecast (industrial and construction production, sales in retail and in services, confidence indicators).

We believe that GDP growth was mainly driven by the growth in domestic demand. As a result of rising disposable income and high consumer confidence, the final consumption expenditure of households could have increased by 2.3% (*versus 2.0%*) while consumption of the general government sector could have risen by 2.0% (*versus 2.1%*). Gross capital formation increased, according to our estimates, by 0.7% (*versus the drop by 0.7%*) due to positive contribution of the change in inventories and growth of investment in fixed capital.

Foreign trade may have had a positive impact on GDP dynamics, mainly thanks to a robust growth of export markets. We estimate that both exports and imports of goods and services increased by 3.3% (*versus 0.6%*).

3.1.3 Forecast for the Years 2017 and 2018

In the forecast years, we expect economic activity to grow strongly, underpinned by excellent labour market performance, low commodity prices and economic recovery abroad. In 2017, the economic growth should be driven mainly by strong domestic demand led by final consumption expenditure of households and restored investment activity of firms and the general government sector. The GDP growth should also be strengthened by the general government consumption and foreign trade. We expect real GDP to increase by 3.1% (*versus 2.5%*) in 2017 and by 2.9% (*versus 2.5%*) in 2018.

Household consumption will be supported by an increase in real disposable income, which will, however, be slower compared to 2016, and a decrease in the savings rate. This year, 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 2.9% (*versus 2.4%*) in 2017. With regard to the expected dynamics of the wage bill, adopted or pending legislative changes that will increase disposable income of households and the forecast for inflation, we expect growth of household consumption to accelerate to 3.1% (*versus 2.7%*) in 2018.

We expect the general government consumption to increase by 1.9% (*versus 1.7%*) in 2017 and by 1.7% (*versus 1.5%*) in 2018. The main driver of growth of the general government sector consumption in 2017 will be an increase in 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 military). The growth will also be supported by increasing expenditure on purchases of goods and services. In 2017, private investment activity as well as investment of the general government sector will have a positive impact on the growth of gross fixed capital formation. Private investments will be supported by the growth in gross operating surplus, eased monetary conditions that are reflected in the growth of loans to non-financial corporations (see Chapter 1.3) and a slightly above-average utilization of production capacities in manufacturing, which corresponds to the position of the economy within the economic cycle (see Chapter 2.1). Also, the increasing lack of employees could motivate businesses to invest in order to increase labour productivity. Conversely, materialization of certain external risks could hamper private investments. In the case of the government sector investment, we expect stable growth in investment expenditure financed from national resources in both these years. In 2017 and 2018 investments should be supported by the start of projects co-funded by EU funds from the 2014–2020 financial perspective.

The gross fixed capital formation could thus increase by 3.8% in 2017 (*unchanged*) and by 3.5% in 2018 (*versus 3.0%*) with a positive contribution of government and especially private investment.

The contribution of a change in inventories to GDP growth should be almost zero both in 2017 and in 2018. In 2017 we thus expect an increase in the total gross capital formation by 3.1% (*versus 3.5%*); its growth should reach 3.3% (*versus 2.7%*) in 2018.

We expect that exports of goods and services will grow by 5.5% (*versus 3.0%*) in 2017 and by 5.2% (*versus 4.1%*) in 2018. Higher growth dynamics compared to 2016 reflect the expected acceleration of export market growth without a significant slowdown of export performance (see Chapter 3.4). On the side of imports of goods and services, we expect an influence of faster increases of exports and gross domestic expenditure, and in that context mainly the import-intensive investment demand. Hence, imports will probably grow by 5.3% (*versus 3.1%*) in 2017 and by 5.4% (*versus 4.1%*) in 2018.

Box 3.1: Revision of National Accounts

On 30 June 2017, the CZSO published time series of sectoral national accounts supplemented by a significant revision of annual national accounts. The revision influenced not only levels, but also growth rates of GDP and its components in previous years. The level of nominal GDP was increased by CZK 41 billion for 2015 and by CZK 58 billion for 2016. Real GDP growth was also increased; according to current information, economic growth reached 5.3% (an increase of 0.8 pp) in 2015 and 2.6% (an increase of 0.2 pp) in 2016. The higher GDP growth in both years was based mainly on strong increases in dynamics of household consumption and gross fixed capital formation. The table and graphs below provide a more detailed view of the revisions made.

Table 1: Revision of Gross Domestic Product and Expenditure Components

YoY real growth rates in %, difference in percentage points

	Before the revision			After	the revisio	on	Difference			
	2015	2016	Q1 17	2015	2016	Q1 17	2015	2016	Q1 17	
Gross domestic product	4.5	2.4	3.9	5.3	2.6	4.0	0.8	0.2	0.1	
Consumption of households	3.0	2.9	3.4	3.7	3.6	3.5	0.6	0.7	0.1	
General government consumption	2.0	1.2	2.3	1.9	2.0	2.8	0.0	0.8	0.5	
Gross capital formation	10.0	-0.9	-0.1	13.0	-2.3	0.6	3.0	-1.4	0.7	
Gross fixed capital formation	9.0	-3.7	1.9	10.2	-2.3	2.2	1.2	1.4	0.3	
Export of goods	7.4	4.4	7.7	5.2	4.6	6.0	-2.2	0.2	-1.7	
Export of services	9.7	3.7	9.3	10.8	4.0	9.7	1.1	0.4	0.4	
Export of goods and services	7.7	4.3	7.9	6.0	4.5	6.5	-1.7	0.3	-1.4	
Import of goods	8.9	3.7	6.2	7.2	3.7	4.3	-1.7	0.0	-1.9	
Import of services	4.1	0.0	7.7	4.2	1.2	10.0	0.0	1.2	2.3	
Import of goods and services	8.2	3.2	6.4	6.8	3.4	5.1	-1.4	0.1	-1.3	

Source: CZSO.

Graph 1: Gross Domestic Product

YoY real growth rates in %, difference in percentage points



Graph 2: Consumption of Households

YoY real growth rates in %, difference in percentage points



Source: CZSO.

Graph 4: Gross Fixed Capital Formation

YoY real growth rates in %, difference in percentage points









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
								Forecast	Forecast	Outlook	Outlook
Gross domestic product	bill. CZK 2010	4 0 3 3	4 0 0 1	3 981	4 0 8 9	4 307	4 4 1 8	4 556	4 689	4811	4 924
	growth in %	1.8	-0.8	-0.5	2.7	5.3	2.6	3.1	2.9	2.6	2.4
Private consumption expenditure ¹⁾	bill. CZK 2010	1945	1921	1931	1966	2 038	2 112	2 174	2 2 4 2	2 296	2 346
	growth in %	0.3	-1.2	0.5	1.8	3.7	3.6	2.9	3.1	2.4	2.2
Government consumption exp.	bill. CZK 2010	799	783	803	812	827	844	860	874	887	900
	growth in %	-3.2	-2.0	2.5	1.1	1.9	2.0	1.9	1.7	1.4	1.4
Gross capital formation	bill. CZK 2010	1094	1051	997	1083	1 2 2 3	1 195	1 2 3 2	1 273	1 3 1 4	1 352
	growth in %	1.8	-3.9	-5.1	8.6	13.0	-2.3	3.1	3.3	3.2	2.9
Gross fixed capital formation	bill. CZK 2010	1075	1042	1016	1056	1 164	1 1 3 7	1 180	1 2 2 2	1263	1 301
	growth in %	0.9	-3.1	-2.5	3.9	10.2	-2.3	3.8	3.5	3.4	3.0
Change in stocks and valuables	bill. CZK 2010	18	9	-19	26	59	58	52	51	51	51
Exports of goods and services	bill. CZK 2010	2 856	2 978	2 984	3 2 4 2	3 4 3 7	3 593	3 791	3 989	4 191	4 389
	growth in %	9.2	4.3	0.2	8.7	6.0	4.5	5.5	5.2	5.0	4.7
Imports of goods and services	bill. CZK 2010	2 661	2 7 3 2	2 7 3 4	3 008	3 2 1 2	3 320	3 496	3 686	3 873	4 0 6 0
	growth in %	6.7	2.7	0.1	10.1	6.8	3.4	5.3	5.4	5.1	4.8
Gross domestic expenditure	bill. CZK 2010	3 838	3 756	3 733	3 860	4 087	4 150	4 264	4 388	4 4 9 4	4 594
	growth in %	-0.1	-2.1	-0.6	3.4	5.9	1.5	2.8	2.9	2.4	2.2
Methodological discrepancy ²⁾	bill. CZK 2010	0	-1	-1	-4	-7	-5	-4	-4	-3	-2
Real gross domestic income	bill. CZK 2010	3 990	3 942	3 956	4 1 1 2	4 3 4 4	4 493	4 618	4 764	4 901	5 028
	growth in %	0.7	-1.2	0.4	3.9	5.6	3.4	2.8	3.2	2.9	2.6
Contributions to GDP grow	th ³⁾										
Gross domestic expenditure	рр	-0.1	-2.1	-0.6	3.2	5.5	1.4	2.6	2.7	2.2	2.1
Consumption	рр	-0.5	-1.0	0.8	1.1	2.2	2.1	1.7	1.8	1.4	1.3
Household expenditure	рр	0.1	-0.6	0.3	0.9	1.8	1.7	1.4	1.5	1.1	1.0
Government expenditure	рр	-0.7	-0.4	0.5	0.2	0.4	0.4	0.4	0.3	0.3	0.3
Gross capital formation	рр	0.5	-1.1	-1.3	2.1	3.4	-0.6	0.8	0.9	0.8	0.8
Gross fixed capital formation	рр	0.2	-0.8	-0.6	1.0	2.6	-0.6	0.9	0.9	0.9	0.8
Change in stocks	рр	0.3	-0.2	-0.7	1.1	0.8	0.0	-0.1	0.0	0.0	0.0
Foreign balance	рр	1.8	1.3	0.1	-0.5	-0.2	1.2	0.6	0.2	0.3	0.3
External balance of goods	рр	2.0	1.4	0.1	-0.1	-1.1	0.8	0.4	0.2	0.2	0.2
External balance of services	рр	-0.2	-0.1	0.0	-0.4	0.9	0.4	0.2	0.1	0.1	0.1
Gross value added	bill. CZK 2010	3 6 5 5	3 6 2 4	3 606	3 729	3 905	4 004				
	growth in %	2.0	-0.8	-0.5	3.4	4.7	2.5				
Not taxos and subsidios on products	hill C7K 2010	270	276	275	262	402	/1E				

 Net taxes and subsidies on products
 bill. CZK 2010
 378
 376
 375
 363
 402
 415

 1)
 The consumption of non-profit institutions serving households (NPISH) is included in the private consumption.
 10

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

			201	.6		2017				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
						Prelim.	Estimate	Forecast	Forecast	
Gross domestic product	bill. CZK 2010	1032	1127	1 1 1 9	1 140	1074	1 1 4 7	1 154	1 181	
	growth in %	3.2	4.0	1.6	1.7	4.0	1.8	3.1	3.6	
	growth in % $^{1)}$	3.5	2.8	1.8	1.8	3.0	3.1	3.4	3.6	
	QoQ in % $^{1)}$	0.3	0.8	0.2	0.4	1.5	0.9	0.5	0.6	
Private consumption expenditure ²⁾	bill. CZK 2010	501	527	534	549	518	540	549	566	
	growth in %	3.8	4.1	3.5	3.0	3.5	2.3	2.8	3.2	
Government consumption exp.	bill. CZK 2010	195	207	206	236	201	211	209	239	
	growth in %	2.2	2.8	1.9	1.2	2.8	2.0	1.4	1.5	
Gross capital formation	bill. CZK 2010	253	311	328	303	254	313	341	324	
	growth in %	2.5	-3.1	-4.1	-3.2	0.6	0.7	3.8	6.9	
Gross fixed capital formation	bill. CZK 2010	255	274	291	318	260	275	305	340	
	growth in %	0.4	-2.5	-3.5	-3.1	2.2	0.4	4.8	7.1	
Change in stocks and valuables	bill. CZK 2010	-2	38	37	-15	-6	39	36	-17	
Exports of goods and services	bill. CZK 2010	889	933	854	917	947	964	906	974	
	growth in %	6.0	8.3	1.8	2.2	6.5	3.3	6.2	6.2	
Imports of goods and services	bill. CZK 2010	806	850	800	863	847	879	849	922	
	growth in %	6.0	5.7	0.8	1.1	5.1	3.3	6.0	6.8	
Gross domestic expenditure	bill. CZK 2010	949	1045	1068	1 088	974	1063	1 098	1 1 3 0	
	growth in %	3.1	1.7	0.8	0.8	2.6	1.7	2.8	3.8	
Methodological discrepancy ³⁾	bill. CZK 2010	0	-1	-2	-2	0	-1	-2	0	
Real gross domestic income	bill. CZK 2010	1 055	1 1 4 9	1 1 3 9	1 150	1 079	1 167	1 1 7 6	1 196	
	growth in %	4.4	5.3	2.5	1.6	2.2	1.6	3.3	3.9	
Gross value added	bill. CZK 2010	941	1023	1012	1 029	979				
	growth in %	3.1	4.1	1.4	1.7	4.0				
	growth in % $^{1)}$	3.4	2.8	1.8	1.8	2.9				
	QoQ in % $^{1)}$	0.4	0.7	0.2	0.5	1.5				
Net taxes and subsidies on products	bill. CZK 2010	92	104	108	111	95				

⁴⁾ 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
								Forecast	Forecast	Outlook	Outlook
Gross domestic product	bill. CZK	4 0 3 4	4 060	4 098	4 3 1 4	4 5 9 6	4 773	4 993	5 234	5 472	5 711
	growth in %	1.8	0.6	0.9	5.3	6.5	3.9	4.6	4.8	4.5	4.4
Private consumption expenditure ¹⁾	bill. CZK	1 979	1 998	2 0 2 5	2 074	2 152	2 2 4 2	2 356	2 467	2 573	2 678
	growth in %	2.0	1.0	1.4	2.4	3.8	4.2	5.1	4.7	4.3	4.1
Government consumption exp.	bill. CZK	813	804	826	849	883	917	958	998	1027	1058
	growth in %	-1.5	-1.1	2.7	2.8	4.0	3.9	4.4	4.2	3.0	3.0
Gross capital formation	bill. CZK	1 087	1063	1011	1 1 1 6	1 285	1 257	1 313	1 382	1 453	1 524
	growth in %	1.2	-2.2	-4.9	10.4	15.1	-2.1	4.4	5.2	5.2	4.9
Gross fixed capital formation	bill. CZK	1 067	1 0 5 2	1 0 2 7	1 0 8 4	1216	1 192	1 259	1 328	1 400	1 472
	growth in %	0.1	-1.4	-2.4	5.5	12.2	-2.0	5.7	5.5	5.4	5.1
Change in stocks and valuables	bill. CZK	20	11	-16	32	68	66	54	53	53	53
External balance	bill. CZK	154	195	236	275	276	357	367	387	419	451
Exports of goods and services	bill. CZK	2 876	3 092	3 150	3 561	3 7 2 5	3 797	3 980	4 141	4 348	4 582
	growth in %	9.9	7.5	1.9	13.0	4.6	1.9	4.8	4.0	5.0	5.4
Imports of goods and services	bill. CZK	2 7 2 2	2 897	2 914	3 286	3 4 4 9	3 4 3 9	3 614	3 754	3 929	4 131
	growth in %	9.1	6.5	0.6	12.8	5.0	-0.3	5.1	3.9	4.7	5.1
Gross national income	bill. CZK	3 728	3 808	3 854	4 0 2 2	4 285	4 468	4 728	4 956	5 182	5 412
	growth in %	1.6	2.1	1.2	4.4	6.5	4.3	5.8	4.8	4.6	4.4
Primary income balance	bill. CZK	-305	-252	-245	-292	-310	-305	-266	-278	-290	-300

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

			201	.6			20:	17	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
						Prelim.	Estimate	Forecast	Forecast
Gross domestic product	bill. CZK	1 109	1 2 1 4	1 2 1 0	1 241	1 160	1 256	1 269	1 309
	growth in %	4.8	5.1	2.9	2.8	4.6	3.5	4.9	5.5
Private consumption expenditure ¹	bill. CZK	528	558	569	587	559	584	597	616
	growth in %	3.9	4.1	4.3	4.4	6.0	4.5	5.0	5.0
Government consumption exp.	bill. CZK	205	222	222	268	217	233	230	278
	growth in %	4.4	4.3	3.2	3.7	5.4	5.2	3.5	3.8
Gross capital formation	bill. CZK	267	326	344	320	272	332	362	347
	growth in %	3.3	-3.6	-4.1	-2.7	2.0	1.8	5.0	8.5
Gross fixed capital formation	bill. CZK	267	286	305	334	277	292	325	364
	growth in %	0.9	-2.7	-3.2	-2.6	3.9	2.2	6.7	9.1
Change in stocks and valuables	bill. CZK	0	40	39	-13	-5	40	36	-17
External balance	bill. CZK	109	108	74	66	112	107	80	68
Exports of goods and services	bill. CZK	938	983	902	973	1017	1 002	945	1017
	growth in %	2.1	4.4	-0.2	1.4	8.4	1.9	4.7	4.5
Imports of goods and services	bill. CZK	829	875	828	908	905	895	865	950
	growth in %	0.7	0.2	-2.5	0.5	9.1	2.3	4.5	4.6

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



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

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

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 1 250

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

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

Graph 3.1.9: Nominal Gross Domestic Product

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

Table 3.1.5: GDP by Type of Income – yearly

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
								Forecast	Forecast	Outlook	Outlook
GDP	bill. CZK	4 034	4 060	4 098	4 3 1 4	4 596	4 773	4 993	5 234	5 472	5 711
	growth in %	1.8	0.6	0.9	5.3	6.5	3.9	4.6	4.8	4.5	4.4
Balance of taxes and subsidies	bill. CZK	369	385	402	381	434	455	460	480	496	509
	% of GDP	9.1	9.5	9.8	8.8	9.4	9.5	9.2	9.2	9.1	8.9
	growth in %	5.3	4.4	4.2	-5.1	13.8	4.7	1.2	4.4	3.2	2.8
Taxes on production and imports	bill. CZK	488	508	528	518	571	601				
	growth in %	9.0	4.1	3.9	-1.8	10.1	5.4				
Subsidies on production	bill. CZK	119	123	126	137	137	147				
	growth in %	22.2	3.0	2.7	8.5	-0.1	7.5				
Compensation of employees	bill. CZK	1 626	1665	1676	1 735	1821	1 929	2 045	2 159	2 260	2 361
(domestic concept)	% of GDP	40.3	41.0	40.9	40.2	39.6	40.4	41.0	41.3	41.3	41.3
	growth in %	2.2	2.4	0.7	3.5	5.0	5.9	6.0	5.6	4.7	4.4
Wages and salaries	bill. CZK	1 237	1 269	1 275	1 321	1 384	1 464	1 554	1 640	1 717	1 793
	growth in %	2.1	2.6	0.5	3.6	4.8	5.8	6.1	5.6	4.7	4.4
Social security contributions	bill. CZK	390	396	402	414	437	464	492	519	543	568
	growth in %	2.5	1.6	1.4	3.1	5.5	6.3	5.9	5.6	4.7	4.4
Gross operating surplus	bill. CZK	2 038	2 0 1 0	2 0 2 0	2 198	2 341	2 390	2 488	2 594	2 7 1 6	2 841
	% of GDP	50.5	49.5	49.3	50.9	50.9	50.1	49.8	49.6	49.6	49.7
	growth in %	0.9	-1.4	0.5	8.8	6.5	2.1	4.1	4.3	4.7	4.6
Consumption of capital	bill. CZK	864	880	906	939	969	995	1 040	1 095	1 152	1 205
	growth in %	1.7	1.8	3.0	3.6	3.2	2.7	4.5	5.3	5.2	4.6
Net operating surplus	bill. CZK	1 174	1 1 3 0	1 1 1 4	1 259	1 372	1 395	1 4 4 8	1 499	1 564	1 6 3 6
	growth in %	0.3	-3.8	-1.4	13.0	9.0	1.7	3.8	3.5	4.3	4.6

Source: CZSO. Calculations of the MoF.

Table 3.1.6: GDP by Type of Income – quarterly

			201	6			20:	17	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
						Prelim.	Estimate	Forecast	Forecast
GDP	bill. CZK	1 109	1 2 1 4	1 2 1 0	1 241	1 160	1 256	1 269	1 309
	growth in %	4.8	5.1	2.9	2.8	4.6	3.5	4.9	5.5
Balance of taxes and subsidies	bill. CZK	101	113	126	115	103	112	128	116
	growth in %	11.1	-1.1	6.1	4.1	2.8	-0.3	1.4	1.0
Compensation of employees	bill. CZK	462	476	477	514	491	506	504	543
(domestic concept)	growth in %	5.9	5.5	6.2	5.9	6.4	6.3	5.7	5.8
Wages and salaries	bill. CZK	349	361	363	392	372	384	384	414
	growth in %	6.0	5.6	5.8	5.7	6.6	6.3	5.7	5.8
Social security contributions	bill. CZK	113	115	114	122	119	123	121	129
	growth in %	5.6	5.5	7.7	6.6	5.8	6.3	5.7	5.8
Gross operating surplus	bill. CZK	547	625	606	612	566	637	636	649
	growth in %	2.8	5.9	-0.2	0.2	3.4	2.0	4.9	6.1

Source: CZSO. Calculations of the MoF.

3.2 Prices

3.2.1 Consumer Prices

In the first half of 2017 the Czech economy belonged, in the context of the EU countries, to countries with higher inflation. Compared to other states, the price growth in the Czech Republic was higher especially in the sections of food and non-alcoholic beverages, health and restaurants and hotels. The higher inflation allowed the CNB to discontinue the regime of using the exchange rate as an additional monetary policy instrument.

Growth in consumer prices was 2.3% YoY (*versus 2.7%*) in June 2017. The contribution of administrative measures, resulting from the change in indirect taxes, was –0.1 pp. In terms of individual divisions of the consumer basket, the YoY inflation showed, in particular, a clear contribution of the food and non-alcoholic beverages division (0.9 pp). The contribution of the transport division decreased, following the oil price development (see Chapter 1.1.4), reaching only 0.2 pp.

The deviation of the April Macroeconomic Forecast from the outturn is one of the reasons for reducing the forecast for inflation. The current inflation rate forecast is also based on the prediction of lower oil prices both in dollar terms and even more in koruna terms (see Chapter 1.1.4). In addition, the forecast expects stronger koruna vis-à-vis the euro (see Chapter 1.3.3). However, we believe that these factors only slightly outweigh the ever-more tight labour market situation, which is reflected in the growth of wages and unit labour costs. Therefore, the reduction in the inflation forecast is not very noticeable.

In 2017, the average inflation rate should be only slightly higher than the CNB's target. Administrative measures should only play a negligible role in this year's inflation. In the remaining months of the year, we do not expect any impacts of changes in indirect taxes on consumer prices or major changes in regulated prices. 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 above the 2.0% target in the third quarter of 2017, slowing down in the fourth quarter, mainly due to the base effect. The main factors of price development will probably have pro-inflationary effect in 2017 because notwithstanding the mentioned decrease, we expect, in comparison to the preceding year, higher crude oil prices, continued growth in unit labour costs as well as domestic demand and a positive output gap. The koruna's exchange rate should have anti-inflationary effects.

In 2017, the **average inflation rate** should reach 2.2% (*versus 2.4%*), with a YoY increase in consumer prices of 1.7% (*versus 2.0%*) in December.

In 2018, inflation should decrease after dissipation of one-off factors from the fourth quarter of 2016 and the first quarter of 2017 (food prices, introduction of electronic registration of sales). The structure of year-on-year inflation should thus show a reduction in the contributions of food and non-alcoholic beverages and restaurants and hotels. The decline in inflation should be supported by the appreciation of koruna. The almost 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% (*versus 1.7%*), with a YoY increase in consumer prices of 1.8% (*versus 1.7%*) in December.

3.2.2 Deflators

In the first quarter of 2017, the GDP deflator increased by 0.5% (*in line with the estimate*), with the gross domestic expenditure deflator rising by 2.1% (*versus 2.0%*) and terms of trade deteriorating by 2.0% (*versus 1.7%*). While the growth rate of the household consumption deflator slightly lagged behind the estimate from the last forecast, the dynamics of the government sector consumption deflator was estimated accurately. On the other hand, the increase in export and import prices was substantially stronger, as well as the growth of the gross fixed capital formation deflator.

We expect the GDP deflator to increase by 1.4% (*versus* 1.1%) in 2017, while in 2018 its growth might accelerate to 1.8% (*unchanged*). With a slight slowdown in gross domestic expenditure deflator growth in 2018, such acceleration will result from the developments in foreign trade prices. The terms of trade could decrease by 0.4% (*versus* 0.9%) in 2017 amid a *de* facto stagnation of export prices and a slight increase in import prices resulting from developments in commodity markets. However, the terms of trade could improve by 0.3% (*versus* 0.4%) in 2018 with decreasing export and import prices (effect of nominal exchange rate appreciation). The situation is clearly shown in Graph 3.2.6.

The growth of gross domestic expenditure deflator could accelerate from 0.7% in 2016 to 1.9% (*unchanged*) in 2017. This change in dynamics will be mainly due to developments of deflators of household consumption and gross capital formation (see Graph 3.2.4). Due to the slowdown in growth of consumer prices (see above), the growth of gross domestic expenditure deflator could decelerate slightly to 1.8% (*versus 1.7%*) in 2018.

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
								Forecast	Forecast	Outlook	Outlook
Consumer Price Ind	lex										
Average of a year	average 2005=100	117.1	121.0	122.7	123.2	123.6	124.4	127.0	129.0	131.4	133.4
	growth in %	1.9	3.3	1.4	0.4	0.3	0.7	2.2	1.6	1.8	1.8
December	average 2005=100	118.3	121.1	122.8	122.9	123.0	125.4	127.5	129.8	132.2	134.6
	growth in %	2.4	2.4	1.4	0.1	0.1	2.0	1.7	1.8	1.8	1.8
Of which the contribution of:											
Administrative measures 1)	percentage points	1.2	2.2	1.0	-0.2	0.1	0.0	0.1	0.3	0.2	0.2
Market increase	percentage points	1.2	0.1	0.4	0.3	0.0	2.0	1.6	1.6	1.7	1.7
Harmonized index of consumer	average 2005=100	116.2	120.3	121.9	122.4	122.8	123.6	126.3	128.4	130.8	133.1
prices	growth in %	2.1	3.5	1.4	0.4	0.3	0.6	2.2	1.6	1.9	1.8
Offering prices of fla	ats										
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	106.7	108.0	109.6	111.6	113.7	116.0
	growth in %	0.0	1.5	1.4	2.5	1.2	1.2	1.4	1.8	1.9	2.0
Domestic final use	average 2010=100	101.1	102.9	103.5	104.6	105.7	106.4	108.5	110.5	112.4	114.5
	growth in %	1.1	1.8	0.5	1.1	1.0	0.7	1.9	1.8	1.8	1.8
Consumption of households	average 2010=100	101.7	104.0	104.9	105.5	105.6	106.1	108.4	110.1	112.1	114.1
	growth in %	1.7	2.2	0.8	0.6	0.1	0.5	2.1	1.6	1.8	1.8
Consumption of government	average 2010=100	101.8	102.7	102.8	104.6	106.7	108.7	111.4	114.1	115.8	117.6
	growth in %	1.8	0.9	0.2	1.7	2.0	1.8	2.5	2.4	1.5	1.6
Fixed capital formation	average 2010=100	99.2	100.9	101.1	102.7	104.5	104.8	106.7	108.7	110.9	113.1
	growth in %	-0.8	1.7	0.1	1.6	1.8	0.3	1.8	1.9	2.0	2.1
Exports of goods and services	average 2010=100	100.7	103.8	105.6	109.8	108.4	105.7	105.0	103.8	103.7	104.4
	growth in %	0.7	3.1	1.7	4.0	-1.3	-2.5	-0.6	-1.1	-0.1	0.6
Imports of goods and services	average 2010=100	102.3	106.1	106.6	109.2	107.4	103.6	103.4	101.9	101.4	101.7
	growth in %	2.3	3.7	0.5	2.5	-1.7	-3.5	-0.2	-1.5	-0.4	0.3
Terms of trade	average 2010=100	98.5	97.9	99.0	100.5	100.9	102.0	101.6	101.9	102.3	102.6
	growth in %	-1.5	-0.6	1.2	1.5	0.4	1.1	-0.4	0.3	0.4	0.3

Table 3.2.1: Prices – yearly

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

			201	16			20:	17	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
							Estimate	Forecast	Forecast
Consumer Price Index	average 2005=100	123.7	124.3	124.5	125.0	126.7	127.1	127.2	127.2
	growth in %	0.5	0.2	0.5	1.4	2.4	2.2	2.1	1.8
Of which the contribution of:									
Administrative measures 1)	percentage points	0.2	0.2	0.1	0.1	-0.2	-0.2	-0.1	-0.1
Market increase	percentage points	0.3	0.0	0.4	1.3	2.6	2.4	2.3	1.8
Harmonized index of consumer	average 2005=100	122.9	123.5	123.7	124.2	125.9	126.4	126.5	126.5
prices	growth in %	0.5	0.2	0.6	1.5	2.5	2.3	2.3	1.8
Offering prices of fla	ats	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~							
Czech Republic	average 2010=100	113.4	116.5	118.8	121.9	124.2	127.6		
	growth in %	10.2	10.3	9.9	9.9	9.5	9.5		
Czech Republic excluding Prague	average 2010=100	103.5	106.1	108.4	110.2	108.3	109.9		
	growth in %	10.1	9.9	10.1	8.5	4.6	3.6		
Prague	average 2010=100	123.2	126.8	129.2	133.7	140.0	145.3		
	growth in %	10.2	10.5	9.8	11.3	13.6	14.6		
Deflators									
GDP	average 2010=100	107.4	107.7	108.1	108.8	108.0	109.5	109.9	110.8
	growth in %	1.5	1.0	1.3	1.1	0.5	1.6	1.7	1.8
Domestic final use	average 2010=100	105.4	105.8	106.3	108.0	107.6	108.0	108.3	109.9
	growth in %	0.7	0.1	0.6	1.3	2.1	2.1	1.8	1.8
Consumption of households	average 2010=100	105.3	105.8	106.5	106.9	107.8	108.1	108.7	108.7
	growth in %	0.1	0.0	0.7	1.3	2.4	2.2	2.1	1.8
Consumption of government	average 2010=100	105.2	107.3	107.9	113.4	107.9	110.7	110.1	116.1
	growth in %	2.1	1.4	1.3	2.5	2.5	3.2	2.0	2.3
Fixed capital formation	average 2010=100	104.8	104.6	104.8	105.0	106.6	106.5	106.7	106.9
	growth in %	0.4	-0.2	0.3	0.5	1.7	1.8	1.8	1.8
Exports of goods and services	average 2010=100	105.5	105.4	105.7	106.1	107.4	104.0	104.2	104.4
	growth in %	-3.6	-3.6	-2.0	-0.7	1.8	-1.3	-1.4	-1.6
Imports of goods and services	average 2010=100	102.9	102.9	103.4	105.1	106.9	101.8	101.9	103.0
	growth in %	-5.1	-5.2	-3.2	-0.7	3.9	-1.0	-1.5	-2.0
Terms of trade	average 2010=100	102.6	102.4	102.1	101.0	100.5	102.1	102.3	101.4
	growth in %	1.5	1.7	1.3	-0.1	-2.0	-0.3	0.1	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 %

1/99 1/00 1/01 1/02 1/03 1/04 1/05 1/06 1/07 1/08 1/09 1/10 1/11 1/12 1/13 1/14 1/15 1/16 1/17 1/18 1/19 1/20 Note: For the years 2002–2005 the highlighted area represents target band for headline inflation, whereas from 2006 on it is the tolerance band of the CNB's point target for headline inflation. Source: CNB, CZSO. Calculations of the MoF.

Graph 3.2.2: Consumer Prices in Main Divisions

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

YoY growth rate, in %

Source: CZSO, Eurostat. Calculations of the MoF.

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

1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 Source: CZSO. Calculations of the MoF.

Graph 3.2.5: Terms of Trade

Graph 3.2.6: GDP deflator

1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 Source: CZSO. Calculations of the MoF.

3.3 Labour Market

The Czech economy is increasingly affected by the shortage of employees; the labour market can be characterized as tense. A YoY growth in employment driven by the number of employees and, particularly, of entrepreneurs continued in the first quarter of 2017. The unemployment rate (LFS) dropped to 3.4%, reaching the lowest level in the history of the independent Czech Republic, while the YoY decline in registered unemployment accelerated. The number of vacancies exceeded 180 thousand at the end of the second guarter, significantly surpassing previous highs from 2008. This development was fully consistent with strong growth in the wage bill.

3.3.1 Employment

Employment (LFS) grew by 1.6% YoY (versus 1.3%) in the first quarter of 2017. The number of employees rose by 1.1% (versus 1.9%); the number of entrepreneurs was up by 4.4% (versus decrease of 0.1%). The number of entrepreneurs without employees continued to increase (by 5.6%), but there was also a resumption of growth in the number of entrepreneurs with employees (by 2.4%).

From the sectoral perspective, employment growth (in business statistics) was mostly driven by manufacturing, but there has also been strong growth in the number of employees in the sectors of energy industry, information and communication; professional, scientific and technical activities. In contrast, a strong decrease was recorded in mining and quarrying (by more than 6.6%) and in construction (1.1%) and agriculture.

Graph 3.3.1: Employees in Different Statistics

The unprecedented shortage of workers is recorded in almost all sectors and has become a barrier to extensive economic growth. In the short term, businesses can mitigate this problem for example by hiring foreign workers; however, this approach is complicated by legislative barriers. In the medium and long term this factor might support investments increasing labour productivity.

Due to the stronger than expected employment growth at the beginning of 2017, we are increasing the forecast for 2017 to 1.4% (versus 1.1%), for 2018, we expect the

employment growth to slow down to 0.4% (versus 0.3%). Here we take into account that with respect to demographic factors (with the exception of raising the retirement age there are very limited sources of additional increase in the number of employees) and an extremely low unemployment rate, there is only very little space for further strong growth in employment.

3.3.2 Unemployment

The continued economic growth and a general shortage of employees lead to a further reduction in the number of registered unemployed persons (by 85-90 thousand YoY in the last months) as well as the unemployed according to the LFS statistics (by 47 thousand YoY in the first quarter of 2017).

We expect the registered unemployment to decrease to 4.4% in 2017 (versus 4.5%) due to lower than expected levels in the first half of the year and further to 3.7% in 2018 (versus 4.2%). Legislative changes (the registered unemployed will no longer be able to work under a contract for work during their non-colliding employment, see also Chapter 1.4) may also have an effect.

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.

In the first quarter of 2017 the **unemployment rate** (LFS) decreased to 3.4% (versus 3.6%). Having considered this development, we reduce the forecast for unemployment rate in 2017 to 3.2% (versus 3.4%), then we expect a further drop to 2.9% (versus 3.3%) in 2018. These are extremely low values both in the domestic and European contexts.

3.3.3 Economic Activity Rate

The economic activity rate of the 15-64 year-olds grew by 1.0 pp YoY to 75.3% in the first quarter of 2017 (in line with the estimate). We suppose there is still some room for a further growth in the participation rate, with demographic aspects in the form of an increasing weight of cohorts with a naturally high economic activity rate (especially of those aged 40–49 years) and gradual increases in the statutory as well as actual retirement age playing a crucial role.

3.3.4 Wages

The **wage bill** growth accelerated sharply and reached 6.6% in the first quarter (*versus 5.9%*). Traditionally, the highest increase in wages was recorded by the ICT sector (9.8%), salaries in public administration, defence, education and health also rose (7.3%) more than the average. The important manufacturing industry is just above the average level (6.7%). After the previous slight decline, wages in construction also increased (by 2.8%).

This year's wage developments continue to reflect, in addition to labour shortages, higher levels of minimum and guaranteed wages and increases in pay scales from the second half of 2016. These factors are evident in the dynamic increase in the cash collection of social security contributions. Growth of the wage bill could reach 6.3% (*versus 5.9%*) in the second quarter of 2017.

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

YoY growth rate, in %

1/07 1/08 1/09 1/10 1/11 1/12 1/13 1/14 1/15 1/16 1/17 Note: Time series of the collection of social security contributions is influenced, among other factors, by a legislative change in 2009 and a pay-out of exceptional bonuses at the end of 2012. Source: CZSO, Ministry of Finance.

In this and the next year, the development of earnings will continue to be affected by the persisting shortage of workers with required qualifications and by the high competition among employers in the process of recruitment. In the second half of the year, the growth of salaries of a part of the general government sector workers will be slightly reduced by a higher base. In addition to the already approved salary increases (e.g. in the education and health sectors), it is not possible to exclude continuing increases in other groups of public and private sector staff in the light of the ongoing collective bargaining processes.

The wage bill could rise by 6.1% this year (*versus 5.7%*). The moderate increase of employment and continuing frictions in the labour market will be manifested in continued earnings dynamics. Growth of the wage bill could reach 5.6% in 2018 (*versus 4.8%*).

The **average wage** (business statistics, full-time equivalent) increased by 5.3% in nominal terms (*versus 4.5%*) in the first quarter of 2017. Median wages recorded a 5.2% increase based on the wage dynamics in middle-income professions. In the second quarter the economy-wide average nominal wage could increase by 4.9% (*versus* 4.4%). The rate of its growth could reach 4.9% (*versus* 4.6%) this year and 5.2% (*versus 4.5%*) in 2018.

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
								Forecast	Forecast	Outlook	Outlook
Labour Force Su	rvey										
Employment	av. in thous.persons	4 872	4 890	4 937	4 974	5 042	5 139	5 209	5 229	5 247	5 265
	growth in %	0.4	0.4	1.0	0.8	1.4	1.9	1.4	0.4	0.3	0.3
Employees	av. in thous.persons	3 993	3 990	4 055	4 079	4 168	4 257	4 3 1 1	4 329	4 345	4 361
	growth in %	0.0	-0.1	1.6	0.6	2.2	2.1	1.3	0.4	0.4	0.4
Entrepreneurs and	av. in thous.persons	880	901	882	895	874	882	898	900	902	904
self-employed	growth in %	2.0	2.4	-2.1	1.5	-2.3	0.9	1.8	0.3	0.2	0.3
Unemployment	av. in thous.persons	351	367	369	324	268	211	170	156	150	145
Unemployment rate	average in %	6.7	7.0	7.0	6.1	5.1	4.0	3.2	2.9	2.8	2.7
Long-term unemployment 1)	av. in thous.persons	144	161	163	141	127	117	•	•	•	•
Labour force	av. in thous.persons	5 223	5 2 5 7	5 306	5 298	5 310	5 350	5 379	5 385	5 397	5 4 1 0
	growth in %	-0.2	0.7	0.9	-0.2	0.2	0.7	0.5	0.1	0.2	0.2
Population aged 15–64	av. in thous.persons	7 296	7 229	7 154	7 081	7 026	6 968	6 918	6 871	6 827	6 769
	growth in %	-0.7	-0.9	-1.0	-1.0	-0.8	-0.8	-0.7	-0.7	-0.6	-0.9
Employment/Pop. 15–64	average in %	66.8	67.6	69.0	70.2	71.8	73.7	75.3	76.1	76.9	77.8
Employment rate 15–64 ²⁾	average in %	65.7	66.5	67.7	69.0	70.2	72.0	73.5	74.2	74.9	75.8
Labour force/Pop. 15–64	average in %	71.6	72.7	74.2	74.8	75.6	76.8	77.8	78.4	79.0	79.9
Participation rate 15–64 ³⁾	average in %	70.5	71.6	72.9	73.5	74.0	75.0	75.9	76.5	77.1	78.0
Registered unemplo	oyment										
Unemployment	av. in thous.persons	508	504	564	561	479	406	322	269	244	231
Share of unemployed 4)	average in %	6.7	6.8	7.7	7.7	6.6	5.6	4.4	3.7	3.4	3.3
Wages and salar	ies										
Average monthly wage 5)											
Nominal	СΖК	24 455	25 067	25 035	25 768	26 591	27 575	28 900	30 400	31 700	33 000
	growth in %	2.5	2.5	-0.1	2.9	3.2	3.7	4.9	5.2	4.3	4.1
Real	СZК 2005	20 884	20717	20 403	20916	21514	22 166	22 800	23 600	24 200	24 800
	growth in %	0.6	-0.8	-1.5	2.5	2.9	3.0	2.6	3.6	2.5	2.5
Median monthly wage	СΖК	20 743	20 828	21 1 10	21786	22 414	23 531				
	growth in %	2.2	0.4	1.4	3.2	2.9	5.0				
Wage bill	growth in %	2.1	2.6	0.5	3.6	4.8	5.8	6.1	5.6	4.7	4.4
Labour productivity	growth in %	2.1	-1.2	-0.8	2.2	3.8	1.3	1.8	2.5	2.2	2.0
Unit labour costs ⁶⁾	growth in %	0.7	3.0	0.5	0.4	-0.8	3.3	2.9	2.5	2.0	2.0
Compens. of employees / GDP	%	40.3	41.0	40.9	40.2	39.6	40.4	41.0	41.3	41.3	41.3

Table 3.3.1: Labour Market – yearly

 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 employees in the entire economy.

 6)
 Ratio of nominal compensation per employee to real productivity of labour.

 Source CTSO
 Ministry of Labour and Social Affairs

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

Table 3.3.2: Labour Market – quarterly

			201	.6			201	7	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
							Estimate	Forecast	Forecast
Labour Force St	urvey								
Employment	av. in thous. persons	5 087	5 128	5 152	5 187	5 169	5 211	5 2 2 4	5 2 3 1
	YoY growth in %	2.0	1.7	1.8	2.2	1.6	1.6	1.4	0.8
	QoQ growth in %	1.0	0.1	0.4	0.7	0.3	0.2	0.2	0.1
Employees	av. in thous. persons	4 2 3 1	4 2 4 4	4 268	4 283	4 2 7 6	4 3 17	4 329	4 3 2 3
	growth in %	2.8	2.0	1.9	1.8	1.1	1.7	1.4	0.9
Entrepreneurs and	av. in thous. persons	855	885	883	905	893	895	895	908
self-employed	growth in %	-1.9	0.2	1.4	3.9	4.4	1.1	1.3	0.4
Unemployment	av. in thous.persons	231	210	213	192	185	167	168	160
Unemployment rate	average in %	4.3	3.9	4.0	3.6	3.4	3.1	3.1	3.0
Long-term unemployment 1)	av. in thous.persons	106	91	84	75	68	•	•	•
Labour force	av. in thous. persons	5 318	5 338	5 365	5 379	5 354	5 378	5 393	5 391
	growth in %	0.2	0.6	0.9	1.2	0.7	0.7	0.5	0.2
Population aged 15–64	av. in thous. persons	6 990	6 975	6 961	6 948	6 936	6 924	6 912	6 900
	growth in %	-0.9	-0.9	-0.8	-0.8	-0.8	-0.7	-0.7	-0.7
Employment/Pop. 15–64	average in %	72.8	73.5	74.0	74.7	74.5	75.3	75.6	75.8
	increase over a year	2.0	1.9	1.9	2.2	1.8	1.7	1.6	1.1
Employment rate 15–64 ²⁾	average in %	71.0	71.7	72.2	72.9	72.8	73.4	73.7	73.9
	increase over a year	1.7	1.6	1.7	2.1	1.8	1.7	1.5	1.0
Labour force/Pop. 15–64	average in %	76.1	76.5	77.1	77.4	77.2	77.7	78.0	78.1
	increase over a year	0.8	1.1	1.3	1.5	1.1	1.1	1.0	0.7
Participation rate 15–64 ³⁾	average in %	74.3	74.7	75.3	75.7	75.5	75.8	76.1	76.2
	increase over a year	0.5	0.9	1.1	1.5	1.1	1.1	0.9	0.6
Registered unemp	loyment								
Unemployment	av. in thous. persons	458.9	407.8	387.5	369.6	379.5	320.8	301	287
Share of unemployed 4)	average in %	6.3	5.6	5.3	5.0	5.1	4.3	4.1	4.0
Wages and sala	aries								
Average monthly wage 5)									
Nominal	СΖК	26 475	27 272	27 210	29 309	27 889	28 600	28 500	30 700
	growth in %	3.8	3.3	4.0	3.7	5.3	4.9	4.6	4.7
Real	СZК 2005	21 403	21940	21855	23 447	22 012	22 500	22 400	24 100
	growth in %	3.4	3.0	3.4	2.2	2.8	2.6	2.3	2.9
Median monthly wage	СΖК	22 528	23 026	23 518	25 052	23 704			
	growth in %	5.8	3.9	4.6	5.6	5.2			
Wage bill	growth in %	6.0	5.6	5.8	5.7	6.6	6.3	5.7	5.8

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 3.3.7: Unemployment

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

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

Graph 3.3.8: Compensation per Employee and Real Productivity of Labour

YoY growth rate, in %

Graph 3.3.10: Gross Savings Rate of Households

Table 3.3.3: Income and Expenditures of Households – yearly SNA methodology – national concept

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
										Forecast	Forecast
Current income											
Compensation of employees	bill.CZK	1 553	1 587	1 627	1669	1 692	1 760	1852	1966	2 085	2 199
	growth in %	-2.5	2.2	2.5	2.6	1.3	4.0	5.3	6.1	6.1	5.5
Gross operating surplus	bill.CZK	686	685	674	654	645	662	691	712	737	757
and mixed income	growth in %	4.5	-0.2	-1.7	-2.9	-1.3	2.6	4.3	3.0	3.5	2.7
Property income received	bill.CZK	158	154	153	147	158	166	166	158	162	162
	growth in %	-10.8	-2.5	-0.6	-4.0	7.8	5.1	-0.4	-4.6	2.3	0.1
Social benefits not-in-kind	bill.CZK	535	542	553	567	563	576	591	606	623	657
	growth in %	8.6	1.1	2.1	2.4	-0.6	2.2	2.6	2.7	2.6	5.5
Other current transfers received	bill.CZK	141	140	139	151	146	160	181	187	193	198
	growth in %	-1.4	-1.0	-0.5	8.6	-3.1	9.2	13.3	3.3	3.3	2.3
Current expenditure											
Property income paid	bill.CZK	19	23	21	15	21	16	14	16	16	16
	growth in %	-36.7	17.7	-8.5	-27.2	40.5	-24.3	-10.7	8.0	5.2	-0.1
Curr. taxes on income and property	bill.CZK	148	144	156	158	166	177	183	200	222	239
	growth in %	-2.8	-2.5	8.1	1.6	4.9	6.9	3.2	9.2	11.4	7.4
Social contributions	bill.CZK	603	621	640	654	670	696	732	775	820	867
	growth in %	-5.3	2.9	3.1	2.3	2.4	3.8	5.3	5.8	5.8	5.7
Other current transfers paid	bill.CZK	143	141	145	154	140	150	168	175	178	180
	growth in %	-1.6	-1.6	3.2	6.2	-9.3	6.9	11.9	4.6	1.8	1.2
Gross disposable income	bill.CZK	2 161	2 179	2 184	2 206	2 208	2 285	2 383	2 464	2 562	2 670
	growth in %	3.0	0.8	0.2	1.0	0.1	3.5	4.3	3.4	4.0	4.2
Final consumption	bill.CZK	1 884	1913	1 952	1970	1 997	2 044	2 125	2 2 1 4	2 327	2 437
	growth in %	0.2	1.5	2.0	0.9	1.3	2.4	3.9	4.2	5.1	4.7
Change in share in pension funds	bill.CZK	17	15	16	15	35	35	33	31	36	38
Gross savings	bill.CZK	294	282	248	250	246	276	291	280	272	271
Capital transfers											
(income (-) / expenditure (+))	bill.CZK	-25	-29	-25	-21	-13	-32	-12	-13	-21	-24
Gross capital formation	bill.CZK	212	230	198	183	181	195	208	225	233	243
	growth in %	-3.1	8.8	-13.9	-7.8	-1.3	8.3	6.6	7.7	3.7	4.2
Change in financial assets and liab.	bill.CZK	105	79	73	87	77	110	93	68	58	51
Real disposable income	growth in %	2.1	0.4	-1.5	-1.2	-0.8	2.9	4.2	2.8	1.9	2.6
Gross savings rate	%	13.5	12.8	11.3	11.3	11.0	11.9	12.1	11.2	10.5	10.0

Source: CZSO. Calculations of the MoF.

3.4 External Relations

The current account balance to GDP ratio² was 0.8% in the first quarter of 2017 (*in line with the estimate*), deteriorating by 0.3% of GDP QoQ.

In the first quarter of 2017 the **growth of export markets**³ was significantly faster than estimated (4.8% *versus 3.2%*). The dynamics of imports of the Czech Republic's main trading partners has been accelerating since the third quarter of 2016 already. In view of the change in the forecast of GDP growth of our main trading partners and the estimate of import intensity, we expect the export market growth to accelerate 5.2% (*versus* 3.2%) this year and to slow down moderately to 4.8% (*versus* 3.1%) in 2018.

Export performance, which increased by 0.6% in 2016 with very uneven developments in individual quarters, can no longer benefit from the effect of weak koruna. In the first quarter of 2017, it dropped by 1.7% YoY (*versus 1.5%*), declining for the third quarter in a row. However, the decline in performance was lower than in the previous quarter, partly due to faster growth in the foreign industrial production. We expect the export performance to increase only marginally in 2017, by 0.4% (*unchanged*), and to grow at the same rate also in 2018 (*versus 1.0%*). Increasing labour unit costs, appreciation of the CZK/EUR exchange rate, shortage of adequate labour force and the utilization of production capacities will all drag on the growth of export performance.

In the first quarter of 2017, nominal growth rates of exports and imports (balance of payments methodology) were the highest since the second half of 2014, with more activity seen on the import side, which grew faster than exports for the first time since the fourth quarter of 2015. In the fourth quarter of 2016 the foreign trade surplus reached an all-time high of 5.3% of GDP. In the first quarter of 2017, surplus on the **balance of goods** dropped slightly to 5.2% of GDP (*versus 5.0%*), but increased by 1.0% of GDP YoY.

The rising surplus on the balance of goods has been due to an improving balance in the machinery and transport equipment group.

Prices of mineral fuels remain the dominant factor affecting terms of trade in foreign trade in goods. The terms of trade were improving from September 2015 to September 2016 but in the fourth quarter of 2016 there was an expected turn towards their slight deterioration. This development continued also in the first quarter of 2017 and was associated with an increase in the import prices of crude oil (see Graph 1.1.9). The deficit of the

fuel part of the balance reached 2.3% of GDP in the first quarter of 2017 GDP and this value will probably be attained also in 2017 as a whole (*versus 2.4%*). In 2018, the fuel balance could show a deficit of 2.0% GDP, due to the smaller expected increase in the oil price (*versus 2.3%*).

Given the above, we expect a minor deterioration in the surplus on the balance of goods to 5.0% of GDP (*versus 4.5%*) in 2017, and the same value in 2018 (*versus 4.6%*).

The expected higher surplus on the goods balance compared to the previous forecast results from the growing foreign demand (especially for cars), stagnation of the price of oil and improving economic situation in the EU.

The surplus on the **balance of services** has been increasing since the first quarter of 2015, reaching 2.2% of GDP in the first quarter of 2017 (*in line with the estimate*), thus improving by 0.4% of GDP YoY. In particular, the balance of transportation, tourism, telecommunication services and IT services has improved. With regard to the continued economic growth we expect improved sales of services abroad in the coming period and the surplus to be maintained at similar levels. For both this and the next year we expect a positive balance of 2.3% GDP (*versus 2.2%*).

The YoY increase in the surplus on the current account in the first quarter of 2017 amounting to 0.2% of GDP was due to the aforementioned 1.4% of GDP increase in the surplus on the balance of goods and services. This has been offset by a YoY deterioration of the primary and secondary income balance by 0.3% of GDP and 0.8% of GDP, respectively. The deficit of primary income reached 5.6% of GDP (versus 5.7%) in the first quarter of 2017. The deterioration was due to higher outflow of income from foreign direct investments (mainly dividends), based on the increased profitability of foreign-owned companies. The primary income shows a high volatility over time related to the cyclical development of the economy. Due to an increasing pressure on the wage growth, the distribution of GDP between net profits of companies and compensation of employees changes to the benefit of employees, and we may also expect a reduction in profitability also in the case of companies under foreign control. Therefore, we expect a slight decrease in the primary income deficit in 2017 and 2018 to 5.4% of GDP (versus 5.7%).

In this context, we estimate the **current account of the balance of payments** to remain in surplus, which could reach 0.7% of GDP in 2017 (*versus 0.4%*). For 2018, we expect a slight increase in the surplus to 0.8% of GDP (*versus 0.5%*).

² All the *quarterly* figures relative to GDP are listed in annual moving totals.

³ In 2016, the most important trading partners included Germany with a 32.2% share in Czech exports, Slovakia with 9.7%, Poland with 6.2%, the United Kingdom and France with 5.0% each and Austria with 4.2%.

Table 3.4.1: Balance of Payments – yearly

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
										Forecast	Forecast
Goods and services bill.	сzк	147	119	157	201	237	276	266	352	361	381
%0	iDΡ	3.7	3.0	3.9	5.0	5.8	6.4	5.8	7.4	7.2	7.3
Goods bill.	сzк	65	40	75	124	167	220	188	251	248	262
%0	īDΡ	1.7	1.0	1.9	3.0	4.1	5.1	4.1	5.3	5.0	5.0
Services bill.	сzк	82	78	81	78	70	56	78	101	113	120
%C	īDΡ	2.1	2.0	2.0	1.9	1.7	1.3	1.7	2.1	2.3	2.3
Primary income bill.	сzк	-217	-250	-223	-238	-249	-261	-255	-272	-272	-284
%0	īDΡ	-5.5	-6.3	-5.5	-5.9	-6.1	-6.0	-5.5	-5.7	-5.4	-5.4
Secondary income bill.	сzк	-19	-11	-18	-27	-10	-7	0	-27	-55	-55
%0	īDΡ	-0.5	-0.3	-0.5	-0.7	-0.2	-0.2	0.0	-0.6	-1.1	-1.0
Current account bill.	сzк	-89	-142	-85	-63	-22	8	11	53	34	43
%0	īDΡ	-2.3	-3.6	-2.1	-1.6	-0.5	0.2	0.2	1.1	0.7	0.8
Capital account bill.	сzк	51	38	13	53	82	32	102	54	42	50
% (īDΡ	1.3	0.9	0.3	1.3	2.0	0.7	2.2	1.1	0.8	1.0
Net lending/borrowing bill.	сzк	-38	-104	-72	-10	61	40	113	106	76	93
% (īDΡ	-1.0	-2.6	-1.8	-0.3	1.5	0.9	2.5	2.2	1.5	1.8
Financial account bill.	сzк	-72	-122	-75	12	68	59	176	118	•	•
Direct investments bill.	сzк	-38	-95	-47	-121	7	-80	50	-141		
Portfolio investments bill.	сzк	-159	-150	-6	-55	-93	90	-164	-170		
Financial derivatives bill.	сzк	1	5	4	-9	-5	-6	-5	11		
Other investments bill.	сzк	62	77	-9	116	-30	-18	-56	-147		
Reserve assets bill.	сzк	61	41	-17	80	188	73	351	564		
International investment position bill.	сzк -	1726	-1 823	-1 823	-1 864	-1 695	-1 577	-1 512	-1 176	•	•
% (īDΡ	-43.9	-46.0	-45.2	-45.9	-41.4	-36.6	-32.9	-24.6		
Gross external debt bill.	сzк	1956	2 164	2 312	2 4 3 4	2 733	3 0 2 4	3 196	3 528		
%0	DΡ	49.8	54.6	57.3	60.0	66.7	70.1	69.5	73.9		

Source: CNB, CZSO. Calculations of the MoF.

Table 3.4.2: Balance of Payments – quarterly

moving sums of the latest 4 quarters

			201	16		2017				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
							Estimate	Forecast	Forecast	
Goods and services	bill.CZK	281	322	341	352	355	354	360	361	
	% GDP	6.0	6.8	7.2	7.4	7.4	7.3	7.3	7.2	
Goods	bill.CZK	197	233	245	251	251	247	249	248	
	% GDP	4.2	5.0	5.2	5.3	5.2	5.1	5.1	5.0	
Services	bill.CZK	83	89	96	101	105	108	111	113	
	% GDP	1.8	1.9	2.0	2.1	2.2	2.2	2.3	2.3	
Primary income	bill.CZK	-245	-241	-228	-272	-269	-270	-271	-272	
	% GDP	-5.3	-5.1	-4.8	-5.7	-5.6	-5.5	-5.5	-5.4	
Secondary income	bill.CZK	-8	-16	-23	-27	-49	-51	-53	-55	
	% GDP	-0.2	-0.3	-0.5	-0.6	-1.0	-1.1	-1.1	-1.1	
Current account	bill.CZK	28	65	90	53	37	33	36	34	
	% GDP	0.6	1.4	1.9	1.1	0.8	0.7	0.7	0.7	
Capital account	bill.CZK	90	59	63	54	36	38	40	42	
	% GDP	1.9	1.2	1.3	1.1	0.7	0.8	0.8	0.8	
Net lending/borrowing	bill.CZK	118	123	153	106	73	71	76	76	
	% GDP	2.5	2.6	3.2	2.2	1.5	1.5	1.5	1.5	
Financial account	bill.CZK	189	134	147	118	26	•	•	•	
Direct investments	bill.CZK	56	-27	-99	-141	-205				
Portfolio investments	bill.CZK	-223	-317	-186	-170	-570				
Financial derivatives	bill.CZK	-3	-7	-1	11	11				
Other investments	bill.CZK	-106	31	-16	-147	-742				
Reserve assets	bill.CZK	464	453	448	564	1532				
International investment position	stock in bill.CZK	-1 365	-1 329	-1 252	-1 176	-1 217	•	•	•	
	% GDP	-29.4	-28.3	-26.4	-24.6	-25.2				
Gross external debt	stock in bill.CZK	3 2 3 1	3 320	3 386	3 528	4 656				
	% GDP	69.5	70.6	71.5	73.9	96.5				

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

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

I/96 I/97 I/98 I/99 I/00 I/01 I/02 I/03 I/04 I/05 I/06 I/07 I/08 I/09 I/10 I/11 I/12 I/13 I/14 I/15 I/16 I/17 I/18 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
										Forecast	Forecast
GDP 1)	average of 2005=100	96.5	100.0	103.4	104.4	105.3	107.3	109.5	111.8	114	117
	growth in %	-4.2	3.6	3.4	1.0	0.9	1.9	2.1	2.0	2.3	2.1
Import intensity ²⁾	average of 2005=100	92.0	100.0	104.0	103.1	104.6	107.3	110.5	112.3	116	119
	growth in %	-6.7	8.7	4.0	-0.9	1.4	2.6	3.0	1.6	2.9	2.7
Export markets ³⁾	average of 2005=100	88.8	100.0	107.5	107.6	110.1	115.1	121.0	125.5	132	138
	growth in %	-10.7	12.6	7.5	0.1	2.3	4.6	5.1	3.7	5.2	4.8
Export performance	average of 2005=100	97.5	100.0	102.5	106.9	105.1	109.8	110.1	110.8	111	112
	growth in %	0.6	2.5	2.5	4.3	-1.7	4.5	0.3	0.6	0.4	0.4
Real exports	average of 2005=100	86.6	100.0	110.2	115.0	115.7	126.4	133.3	139.1	147	155
	growth in %	-10.1	15.4	10.2	4.4	0.6	9.2	5.4	4.3	5.6	5.2
1 / NEER	average of 2005=100	102.2	100.0	97.0	101.2	103.0	108.6	109.9	106.9	105	103
	growth in %	3.4	-2.2	-3.0	4.4	1.7	5.5	1.2	-2.8	-1.6	-2.4
Prices on foreign markets	average of 2005=100	99.0	100.0	103.9	102.8	102.6	101.0	98.4	98.2	99	100
	growth in %	-3.1	1.0	3.9	-1.1	-0.1	-1.6	-2.6	-0.1	0.6	0.8
Exports deflator	average of 2005=100	101.2	100.0	100.8	104.0	105.7	109.7	108.2	105.0	104	102
	growth in %	0.2	-1.2	0.8	3.2	1.5	3.8	-1.4	-2.9	-1.0	-1.6
Nominal exports	average of 2005=100	87.6	100.0	111.0	119.6	122.3	138.6	144.1	146.0	153	158
	growth in %	-10.1	14.2	11.0	7.8	2.2	13.4	4.0	1.3	4.5	3.6

²¹ Weighted average of GDP of the seven most important partners – Germany, Slovakia, Austria, the United Kingdom, Poland, France and Italy. ²¹ Index of ratio of real imports of goods to real GDP. ³³ 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

			201	6		2017					
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
							Estimate	Forecast	Forecast		
GDP ¹⁾	average of 2010=100	111.0	111.6	111.9	112.6	113.3	114	115	115		
	growth in %	2.1	2.1	1.9	2.0	2.1	2.2	2.4	2.3		
Import intensity ²⁾	average of 2010=100	111.5	111.7	112.4	113.6	114.4	115	116	117		
	growth in %	1.4	1.2	1.6	2.2	2.6	3.0	3.1	2.8		
Export markets ³⁾	average of 2010=100	123.8	124.6	125.8	127.9	129.6	131	133	134		
	growth in %	3.6	3.3	3.6	4.3	4.8	5.2	5.7	5.2		
Export performance	average of 2010=100	112.7	111.8	109.6	109.3	110.8	113	111	110		
	growth in %	3.2	2.5	-0.6	-2.3	-1.7	1.0	1.1	1.0		
Real exports	average of 2010=100	139.4	139.2	137.8	139.8	143.6	148	147	149		
	growth in %	6.9	5.9	2.9	1.8	3.0	6.3	6.8	6.2		
1 / NEER	average of 2010=100	106.9	106.9	106.8	106.9	107.4	105	104	104		
	growth in %	-3.2	-5.2	-1.5	-1.2	0.5	-1.7	-2.2	-2.8		
Prices on foreign markets	average of 2010=100	98.4	97.8	98.2	98.5	99.8	98	99	99		
	growth in %	-0.8	1.1	-1.1	0.2	1.5	-0.1	0.4	0.7		
Exports deflator	average of 2010=100	105.2	104.6	104.9	105.4	107.2	103	103	103		
	growth in %	-3.9	-4.2	-2.6	-0.9	1.9	-1.8	-1.8	-2.1		
Nominal exports	average of 2010=100	146.6	145.6	144.5	147.3	154.0	152	151	153		
	growth in %	2.7	1.4	0.3	0.9	5.0	4.4	4.9	4.0		

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

3.5 International Comparisons

Comparisons for the period up to and including 2016 are based on Eurostat statistics. Since 2017, our own calculations on the basis of real exchange rates have been used.

In 2016, GDP per capita in **current purchasing power parity** increased in most of the monitored countries, though a slight decrease in both absolute and relative terms compared to the EA19 was recorded in Hungary, Greece and Estonia. The main reason for the decline in GDP per capita in Hungary and Estonia was a 4% increase in PPS. In the Czech Republic, the purchasing power parity was 17.58 CZK/PPS compared to the EU28 and 17.14 CZK/EUR compared to the EA19. GDP per capita reached circa 25,700 PPS, corresponding to 83% of the EA19 economic level. Thanks to a fairly strong economic growth, the relative economic level of the Czech Republic should increase to 86% of the EA19 average in the next year.

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 16,700 in 2016, i.e. 53% of the EA19 level. Higher economic growth and the exchange rate appreciation will result in a gradual increase in the relative level to up to 58% of the EA19 average in 2018.

When comparing price levels, the **comparative price level of GDP** in the Czech Republic stagnated in 2016, reaching 63% of the EA19 average, similarly as in the preceding year. In the coming years, the comparative price level of GDP should gradually increase to up to 68% in 2018, but still continuing to help the competitiveness of the Czech economy.

Through the decomposition⁴ of GDP per capita into individual components (labour productivity, labour market component and demographic component) it is possible to determine in detail the sources of economic growth. The results of the analysis are summarised in Graphs 3.5.5 and 3.5.6.

Labour productivity measured as a ratio of GDP to the number of hours worked has long been increasing in the monitored countries; 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 2008-2016, in any of the monitored countries except Greece. In the given period, however, a decrease in the relative level of labour productivity compared to the EA19 countries was also seen, in addition to Greece, in Slovenia, while in Poland and Latvia the growth of the relative level exceeded 8 pp. Given the higher growth of hours worked compared to the growth rate of GDP in current purchasing power parity, the labour productivity in the Czech Republic decreased by 1.3% in 2016 to reach 66% of the EA19 average.

In the case of the **labour market component**, which gives the number of hours worked per working-age person, there is the opposite situation. In 2016, the relative level of the labour market component exceeded the average of the EA19 countries in all states except Slovakia; in Estonia, Lithuania, Latvia, the Czech Republic and Poland the difference was more than 20 pp. In 2008–2016, the absolute level of the labour market component dropped in Greece, Portugal, Latvia, Estonia and Hungary, with Greece recording a 14% fall in these years as a result of a 19% drop in the number of hours worked.

The share of the working-age population, captured by the **demographic component**, reached its peak in most monitored countries during the first decade of the 21st century and is now decreasing due to population ageing. In 2008–2016, the sharpest decrease of 5.1 pp was recorded in the Czech Republic. Compared to the EA19 average, however, the demographic component is still higher in all monitored countries except Latvia and Poland; in Slovakia it exceeded the EA19 average by 9 pp in 2016.

 $GDP \ per \ capita = \frac{GDP}{1}$

number of inhabit.

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

⁴ GDP per capita can be written as follows:

no. of hours worked population aged 15–64 no. of inhabit. = labour productivity*labour market component*demographic component

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
									Forecast	Forecast
Czech Republic PPS	20 900	21 100	21 700	21 900	22 400	23 800	25 400	25 700	26 700	27 800
EA19=100	79	77	77	77	78	81	83	83	85	86
Slovenia PPS	20 900	21 200	21 700	21 800	21 700	22 800	23 900	24 100	25 100	26 200
EA19=100	78	77	77	76	76	77	78	78	80	81
Slovakia PPS	17 400	19 000	19 500	20 100	20 500	21 300	22 300	22 400	23 400	24 600
EA19=100	66	69	69	71	72	72	73	73	74	76
Portugal PPS	20 100	20 900	20 200	20 000	20 500	21 200	22 200	22 400	23 100	23 800
EA19=100	76	76	72	70	72	72	72	73	73	73
Lithuania PPS	13 800	15 400	17 200	18 600	19 600	20 700	21 600	21 900	23 100	24 500
EA19=100	52	56	61	65	68	70	70	71	73	75
Estonia PPS	15 600	16 500	18 500	19 600	20 100	20 900	21 600	21 500	22 200	23 200
EA19=100	59	60	66	69	70	71	70	70	70	71
Poland PPS	14 600	15 900	17 000	17 800	17 900	18 600	19 800	20 100	21 100	22 100
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	19 500	20 400	21 300
EA19=100	59	60	61	61	63	64	64	63	65	66
Greece PPS	23 100	21 500	19 700	19 100	19 200	19 400	19 700	19 500	20 200	20 900
EA19=100	87	78	70	67	67	66	64	63	64	64
Latvia PPS	12 800	13 400	14 900	16 100	16 700	17 500	18 600	19 000	19 900	21 000
EA19=100	48	49	53	56	58	60	60	62	63	65
Croatia PPS	15 200	15 100	15 600	16 000	15 900	16 100	16 900	17 300	18 100	19 000
EA19=100	57	55	55	56	56	55	55	56	57	58

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

			2009	2010	2011	2012	2013	2014	2015	2016
Slovenia		EUR	17 700	17 700	18 000	17 500	17 400	18 100	18 700	19 300
		EA19=100	64	62	62	60	59	60	61	61
	Comparative price level	EA19=100	81	80	80	78	78	78	78	78
Portugal		EUR	16 600	17 000	16 700	16 000	16 300	16 600	17 300	17 900
		EA19=100	60	60	57	55	55	55	56	57
	Comparative price level	EA19=100	79	79	80	78	77	77	78	78
Czech Republic		EUR	14 200	14 900	15 600	15 400	15 000	14 900	16 000	16 700
		EA19=100	51	52	54	53	51	50	52	53
	Comparative price level	EA19=100	65	68	70	68	65	61	63	63
Greece		EUR	21 400	20 300	18 600	17 300	16 500	16 300	16 200	16 300
		EA19=100	77	71	64	59	56	54	53	52
	Comparative price level	EA19=100	89	91	91	88	84	82	82	81
Estonia		EUR	10 600	11 000	12 500	13 500	14 300	15 000	15 400	15 900
		EA19=100	38	39	43	46	49	50	50	50
	Comparative price level	EA19=100	65	65	66	67	69	70	71	72
Slovakia		EUR	11 800	12 400	13 100	13 400	13 700	14 000	14 500	14 900
		EA19=100	43	44	45	46	47	47	47	47
	Comparative price level	EA19=100	65	63	65	65	65	64	65	65
Lithuania		EUR	8 500	9 000	10 300	11 200	11 800	12 500	12 900	13 500
		EA19=100	31	32	35	38	40	42	42	43
	Comparative price level	EA19=100	59	57	58	58	59	59	59	60

EUR

EUR

EUR

EUR

EA19=100

EA19=100

EA19=100

EA19=100

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Forecast

12 300

14 600

12 900

16 300

19 300

Forecast

20 200 21 100

18 500 19 100

11 700

11 900 12 600

13 700

12 200

12 800

11 500

11 000

11 000

11 100

11 200

10 500

14 500 15 600

15 500

16 800 17 500

16 800 17 900

17 900

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

Comparative price level

Comparative price level

Comparative price level

Comparative price level

Latvia

Hungary

Poland

Croatia

Graph 3.5.2: GDP per Capita – Using Current Exchange Rates

Graph 3.5.3: Comparative Price Level of GDP per Capita

Graph 3.5.4: Change in Real GDP per Capita during 2008–2016 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 2016 *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 2008–2016 growth in %

Source: Eurostat. Calculations of the MoF.

4 Monitoring of Other Institutions' Forecasts

The Ministry of Finance of the Czech Republic monitors macroeconomic forecasts of other institutions engaged in forecasting the Czech economy. Publicly available forecasts of 12 institutions are monitored. Out of these, 7 institutions are domestic (CNB, Ministry of Labour and Social Affairs, domestic banks and investment companies) and the 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 t	the	Monitored	Forecasts
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			July 2017		July 2017
		min.	max.	average	MoF forecast
Gross domestic product (2017)	growth in %, const.pr.	2.6	3.0	2.8	3.1
Gross domestic product (2018)	growth in %, const.pr.	2.1	2.8	2.6	2.9
Average inflation rate (2017)	%	2.1	2.5	2.4	2.2
Average inflation rate (2018)	%	1.8	2.3	2.0	1.6
Average monthly wage (2017)	growth in %	4.2	5.1	4.7	4.9
Average monthly wage (2018)	growth in %	4.5	5.3	4.7	5.2
Current account / GDP (2017)	%	0.3	1.2	0.9	0.7
Current account / GDP (2018)	%	0.6	1.4	1.0	0.8

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

According to the average of the monitored institutions' estimates, real GDP growth should reach 2.8% in 2017, slightly slowing down to 2.6% in the following year. The average inflation rate should show a similar development. The price level increase should reach 2.4% in 2017, slowing down to 2.0% afterwards. The average nominal wage growth should remain relatively dynamic at about 4.7%; the current account surplus should hover at 1% of GDP in both years.

In the case of estimation of the real GDP development, the MoF's forecast already takes into account the strong

Graph 4.1: Forecast of Real GDP Growth for 2017

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

growth of the economy in the first quarter and anticipates GDP growth to be higher by 0.3 pp in both mentioned years. On the other hand, the growth rate of the price level should slow down more significantly in 2018, due to the expected lower growth rate of oil prices and the faster exchange rate appreciation. Due to increasing frictions in the labour market, the Ministry of Finance of the Czech Republic expects a more dynamic wage growth in both years. Regarding the current account balance, the MoF's forecast is in line with the estimates of the monitored institutions.

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

Ministry of Finance of the Czech Republic

Economic Policy Department Letenska 15 118 10 Prague 1

http://www.mfcr.cz/en

output, prices, labour market, external relations, international external environment, fiscal policy, monetary policy and the financial sector, exchange rates, structural policies, demographic trends, position within the economic cycle, business cycle indicators, economic events and the financial sector, exchange rates, structural policies, demographic trends, position within the economic cycle, business cycle indicators, economic events and the financial sector, exchange rates, structural policies, demographic trends, position within the economic cycle, business cycle indicators, economic events and the financial sector, exchange rates, structural policies, demographic trends, position within the economic cycle, business cycle indicators, economic events and the financial sector, exchange rates, structural policies, demographic trends, position within the economic events and the financial sector, exchange rates, structural policies, demographic trends, position within the economic events and the financial sector, exchange rates, structural policies, demographic trends, position within the economic events and the financial sector, exchange rates, structural policies, demographic trends, position within the economic events and the financial sector, exchange rates, structural policies, demographic trends, position within the economic events and the financial sector, exchange rates, structural policies, demographic trends, position within the economic events and the financial sector, exchange rates, structural policies, demographic trends, position within the economic events and the econ of other institutions' forecasts, external environment, fiscal policy, monetary policy and the financial sector, exchange rates, structural policies, demographic trends, positi rates, structural policies, demographic trends, position within the economic cycle, business cycle indicators, economic output, prices, labour market, external relations, international comparisons, monitori comparisons, monitoring of other institutions' forecasts, external environment, fiscal policy, monetary policy and the financial sector, exchan and the financial Ø ____ ٥ ٥