Ministry of Finance
Economic Policy Department

Fiscal Outlook

of the Czech Republic

November 2016

Fiscal Outlook of the Czech Republic
November 2016

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

Tel.: 257 041 111
Fiscal.Outlook@mfcr.cz

ISSN 1804-7998

Issued annually, free distribution

Electronic archive:
http://www.mfcr.cz/FiscalOutlook

Fiscal Outlook
of the Czech Republic

November 2016

Table of Contents

The Fiscal Outlook of the Czech Republic is published by the Economic Policy Department of the MF CR, since 2016 annually in the half of November. It contains forecast of the current and next year (i.e. up to 2017) and also the outlook of some economic indicators to the following 2 years (i.e. up to 2019). The Outlook is available on internet pages of MF CR at:

http://www.mfcr.cz/FiscalOutlook

As an integral part of the Fiscal Outlook stands the Methodological Manual, which defines, specifies and explains terms, methods and statistics used in the Outlook.

Relevant comments and ideas helping to improve the quality of the publication are welcomed at:

Fiscal.Outlook@mfcr.cz

List of Tables

List of Graphs

List of Boxes

List of Abbreviations

bn ..... billion
c. p. ..... current prices
CNB ..... Czech National Bank
CR ..... Czech Republic
CZK ..... Czech koruna currency code
CZSO ..... Czech Statistical Office
EC ..... European Commission
ECB ..... European Central Bank
ESA 2010 ..... European System of National and Regional Accounts from year 2010
EU, EU28 ..... European Union (EU28 coverage)
EUR ..... euro currency code
GDP ..... gross domestic product
GFS 2014 ..... Government Finance Statistics methodology from year 2014
MF CR ..... Ministry of Finance of the Czech Republic
QoQ ..... quarter-on-quarter
p. a. ..... *per annum* (per year)
pp ..... percentage point
s. p. ..... constant prices (volumes)
YoY ..... year-on-year

Symbols Used in Tables

A dash (–) in place of number indicates that the phenomenon did not occur or is not possible for logical reasons. "Billion" means a thousand million.

Cut-off Date for Data Sources

Macroeconomic data used pertain to the 13 October 2016 release, fiscal data to the 31 October 2016 release, government bond yields and data for international comparison to the 9 November 2016 release, respectively.

Note

In some cases, published aggregates do not match the sum of individual items to the last decimal point due to rounding.

Introduction

In the last year's Fiscal Outlook we wrote about two exceptional events in the fiscal area – a very strong investment growth and negative yields on government bonds. Achieving negative interest on government bonds also continues in 2016. A positive development of general government sector performance started which ended with a balance of −0.6 % of GDP in 2015, which is the best result in the history of the CR in relative terms. The MF CR's current estimate of the general government balance for this year is −0.2 % of GDP.

Medium-term and long-term government bonds with negative yields were placed on the primary market on 28 August 2015 for the first time. Since then, twenty more auctions of medium-term and long-term government bonds with negative yields took place on the primary market. The CR has been selling state bonds with negative yields which resulted into net additional revenues to the state budget of approximately CZK 1 billion between September 2015 and October 2016. Late in October 2016, government bonds with a residual maturity of 2 years and 9 months in total nominal value of CZK 6.2 billion were sold for a historically lowest yield to maturity of −0.608% p. a. Treasury bills have been traded continuously with a negative yield to maturity since 2015. At the same time a partial substitution of state treasury bills outstanding for zero-coupon medium-term and long-term government bonds takes place with a positive impact on refinance risk, as they extend average time to maturity of the debt portfolio. The MF CR also takes advantage of favourable market conditions and issues medium-term and long-term government bonds with relatively longer time to maturity at low interest rates. Interest revenues for state bonds with time to maturity of 10 years traded on the secondary market declined to a monthly average of 0.25% p. a. in September 2016.

In terms of investment activity, there has been a YoY slump. However, this year's decreasing government investment had long been predicted based on the closure of the 2007–2013 programming period. Last year's strong economic growth was significantly supported by faster implementation of European funds. The decrease in investments between 2015 and 2016 is therefore completely natural. The previous perspective was being closed in the first half of 2016, and operational programmes of the 2014–2020 perspective are starting up now. We therefore expect that investment activity will speed up from 2017.

In the institutional area of public finance, the CR has been criticised for a weak budgetary framework for several years although it has always met its obligations in terms of general government sector performance over the last years. Since the termination of the excessive deficit procedure with the CR (in June 2014), the medium-term budgetary objective has been met every year. A set of proposals for regulations on budgetary responsibility (a draft constitutional law on fiscal responsibility, a draft law on rules for fiscal responsibility and a draft law amending certain laws in connection with adoption of fiscal responsibility regulations) was approved by the Government already in February 2015, and after then it was under consideration in the Chamber of Deputies of the Parliament of the CR until October 2016. The first reading took place already in spring 2015 but the bills passed the second reading almost a year and a half later, in September 2016. After the first reading, a party in government proposed that the measures to strengthen fiscal responsibility be not addressed at the level of a constitutional law but only by means of an ordinary law. A motion to amend was filed in this sense, which was eventually approved by the Chamber of Deputies in the third reading on 19 October 2016, because a constitutional law on fiscal responsibility had not been approved. The Act on Fiscal Responsibility Rules, which introduces, among other things, new fiscal rules and independent Fiscal Council in the CR's budgeting – see e.g. the Convergence Programme (MF CR, 2016a), takes effect from 1 January 2017, except measures applicable to local governments with effect from 1 January 2018.

The submitted Fiscal Outlook is based on the Macroeconomic Forecast of November 2016 of the Ministry of Finance (MF CR, 2016b) and the draft state budget and state funds budgets for 2017, including the draft medium-term budgetary outlook until 2019. The budgetary documents reflect the coalition cabinet programme, and everything is subordinated to the target to keep the general government structural balance above medium-term budgetary objective defined by the EU regulations. For 2017, we expect the total balance of the general government sector to be −0.2 % of GDP and this indicator should be gradually improving with stable economic growth and decreasing structural balance to surplus performance.

The thematic chapter in this issue is dedicated to long-term projections of health-care expenditure with a projection horizon up to 2060. We focused on projections of expenditures on pensions several times in the past. This time we introduce analysis of another component of long-term expenditure. This expenditure is used as one of the indicators for the long-term sustainability assessment. The results of our projections clearly show that the negative impact of demographics on health-care expenditure may be significantly offset by greater emphasis on prevention. The Fiscal Outlook traditionally includes a large table appendix, freely downloadable in the full numerical series on the website of the MF CR (www.mfcr.cz/FiscalOutlook).

1 Macroeconomic Framework of Fiscal Forecast

After extraordinarily strong growth in 2015 which was, however, partly due to one-off factors, seasonally adjusted YoY growth of real GDP slowed down in the first half of 2016. Despite this, the Czech economy is in a very good condition. We expect that real GDP will increase by 2.4% in the whole of 2016. In 2017 economic growth could accelerate slightly to 2.5%, and the economy could grow by 2.4% per year in the years of the outlook, i.e. in 2018–2019.

The dominant factor of growth in 2016 should be final consumption expenditure, and balance of foreign trade should also have a significantly positive contribution to GDP growth. Export growth should be supported not only by export markets growth but also by increasing export performance. Import of goods and services should grow more slowly than export, mainly due to an expected decrease in gross fixed capital formation, which is, similarly to export, characterised by high import content. Net exports should support economic growth also in the coming years, although not as significantly as in 2016. GDP growth in the coming years should be driven mainly by domestic demand, both consumption and investment.

Real household consumption in the Czech economy is supported by a slight increase in consumer prices, increasing disposable income, very low unemployment and also consumers' optimistic expectations. Household consumption should therefore increase by 2.5% in 2016. With regard to the expected decline in savings rate in line with the expected position of the economy in the cycle, household consumption growth could accelerate to 2.8% in 2017. In the coming years, real consumption could grow, due to higher inflation, at a pace of approx. 2.4% per year. In the whole horizon of the forecast and the outlook, rising final consumption expenditure of households will be positively affected by a good labour market situation and dynamic growth of the wage bill.

In 2016, private and government sector investment are significantly influenced by the development of investment co-financed from EU funds. While this investment grew dynamically in 2015 in relation to closure of the 2007–2013 programming period, investment expenditure related to projects supported from EU funds recorded a sharp drop in 2016. Private investment funded from sources other than EU funds is growing dynamically, supported by the economic outlook of the CR, easy monetary conditions and corporate profitability. On the other hand, the growth in private investment may be hampered by external environment risks, mainly in connection with impacts of the United Kingdom's withdrawal from the EU. Despite that, our overall expectation is that total private investment will increase in 2016. In the case of general government sector investment, we expect not only a decrease in investment co-financed from EU funds, but also a YoY decrease in investment expenditure financed from national resources (see Chapter 2 for details), which is, however, due to a one-off inclusion of the lease of supersonic aircrafts JAS-39 Gripen in 2015. Without this statistical effect, government sector investment financed by domestic budgetary means would increase. Total gross fixed capital formation in the economy should thus decrease by 3.6% in 2016. As a result of – among other things – a normal level of investment co-financed from EU funds, investment in fixed capital could increase by 2.8% in 2017, with positive contributions of both private and government investment. We expect investment to grow by approx. 3% per year in the years of the outlook.

The average inflation rate should be very low in 2016 – similarly to the previous two years – and reach only 0.5%. The main anti-inflationary factor is a positive supply shock in the form of a considerable decrease in the crude oil price. However, the crude oil price should start increasing in a YoY comparison from late 2016, and thus act as a pro-inflationary factor. Growth in domestic demand amid a positive output gap and an increase in unit labour costs have a positive impact on price level growth. Other important factors affecting inflation (exchange rate, regulated prices and indirect taxes) should be neutral in 2017. The average inflation rate should thus reach 1.2% in 2017. In the years of the outlook, inflation should gradually approach the CNB's inflation target.

In connection with the expected economic growth, the labour market situation should further improve. The unemployment rate (Labour Force Survey methodology) should decrease from 5.1% in 2015 to 4.0% in 2016. In subsequent years, its decrease should only be slight as it will face increasing frictions. The unemployment rate could thus be 3.8% in 2019. Employment could increase by 1.6 % in 2016, but it should grow at a considerably slower pace in 2017–2019, by 0.3% per year, according to our estimates. There will be two contradictory forces at play: a decrease in the working age population and an increase in the participation rate, which will also be supported, in addition to increasing the statutory retirement age, by changes in the structure of the working age population (the share of age groups with a naturally high participation rate will grow). The wage bill should dynamically increase in the whole horizon of the forecast and the outlook — it could increase by approx. 5% in 2016 and 2017 and by 4.5% per year in the years of the outlook. The wage bill should rise not only thanks to improving situation in the private sector and growth of the wage bill in the general government sector, but also the aforementioned tensions on the labour market.

In terms of external macroeconomic balance, the current account of the balance of payments has been in surplus since 2014, which is, moreover, steadily

increasing. The current account should show a positive balance in the whole horizon of the forecast and the outlook, with a high surplus on the balance of goods and services and a slightly deepening deficit on the primary income balance. Thus, the Czech economy is probably becoming one of the countries with a structural surplus of the current account of the balance of payments.

We consider the forecast risks to be tilted to the downside, especially due to risks in the external environment of the Czech economy. In our view, the greatest risk is the uncertainty associated with the process and impacts of the United Kingdom's withdrawal from the EU. Another negative risk is the possibility of a more considerable slowdown of the growth of the Chinese economy. Another unfavourable factor is geopolitical risks (migration crisis, tensions in Ukraine). Economic growth in some countries of the EU, and indirectly via foreign trade also in the CR, may be affected negatively should the risks in the financial sector materialize. Domestic risks include mainly the possibility of existence of a bubble in the real estate market or use of other, less conventional, instruments of monetary policy by the CNB.

Table 1.1: Main Macroeconomic Indicators (2015–2019)

		2015	2016	2017	2018	2019	2015	2016	2017	2018
		Actual	Current Forecast and Outlook				May 2016 Convergence Programme			
Gross domestic product	*bn CZK, c.p.*	**4555**	**4703**	**4864**	**5048**	**5249**	4472	4629	4812	5009
	% growth, s.p.	**4.5**	**2.4**	**2.5**	**2.4**	**2.4**	4.2	2.5	2.6	2.4
Private consumption	*% growth, s.p.*	**3.0**	**2.5**	**2.8**	**2.4**	**2.3**	2.8	3.1	2.7	2.4
Government consumption	*% growth, s.p.*	**2.0**	**2.3**	**1.6**	**1.4**	**1.3**	2.8	2.1	1.6	1.4
Gross fixed capital formation	*% growth, s.p.*	**9.0**	**-3.6**	**2.8**	**2.9**	**3.1**	7.3	0.6	3.0	3.1
Contr. of net exports to GDP growth	*p.p., s.p.*	**0.1**	**1.3**	**0.2**	**0.4**	**0.4**	-0.2	0.2	0.2	0.3
GDP deflator	*% growth*	**1.0**	**0.8**	**0.9**	**1.3**	**1.5**	0.7	1.0	1.3	1.6
Inflation	*in %*	**0.3**	**0.5**	**1.2**	**1.6**	**1.8**	0.3	0.6	1.4	1.8
Employment	*% growth*	**1.4**	**1.6**	**0.3**	**0.3**	**0.3**	1.4	1.7	0.2	0.1
Unemployment rate	*average in %*	**5.1**	**4.0**	**3.9**	**3.9**	**3.8**	5.1	4.1	4.0	4.0
Wages and salaries	*% growth, c.p.*	**4.4**	**5.4**	**5.0**	**4.5**	**4.5**	4.0	4.5	4.6	4.6
Current account balance	*in % of GDP*	**0.9**	**2.3**	**1.8**	**1.8**	**1.7**	0.9	1.1	1.0	1.2
Assumptions:										
Exchange rate CZK/EUR		**27.3**	**27.0**	**26.9**	**26.2**	**25.6**	27.3	27.0	26.9	26.2
Long-term interest rates	*% p.a.*	**0.6**	**0.4**	**0.6**	**1.2**	**1.6**	0.6	0.6	0.8	1.2
Crude oil Brent	*USD/barrel*	**52.4**	**43.6**	**51.4**	**53.8**	**55.5**	52.4	40.9	47.4	51.4
GDP in Eurozone EA12	*% growth, s.p.*	**2.0**	**1.4**	**1.1**	**1.7**	**1.8**	1.6	1.3	1.5	1.8

Note: Figures for employment and unemployment are based on the Labour Force Survey.
Differences in the Government final consumption forecast published in the Macroeconomic Forecast and in the Fiscal Outlook are caused by data of the notification of government deficit and debt, which have not yet been reflected in quarterly national accounts by the CZSO.
Source: MF CR (2016a, 2016b).

2 Short-term Development of General Government Sector Finances

2.1 General Government Sector Development in in the CR in 2015

General government sector finances in 2015 ended with a deficit of 0.6% of GDP (CZSO, 2016b). In comparison with 2014, it is an improvement by 1.3 pp; in structural terms, the deficit has decreased by 0.5 pp. Simply speaking, the improvement is due to discretionary measures from approx. 40% and from 60% the result may be attributed to very good economic performance. However, even the dynamics of economic development was significantly influenced by measures of the Government, which has managed, since its entrance into power in 2014, to restore the absorption of EU funds and thus use almost 50% of the total allocation of the 2007–2013 programming period. It was in particular an increase in investments co-financed from EU funds which significantly contributed to GDP development in 2015.

In comparison with the 2016 Convergence Programme of the CR (MF CR, 2016a), the CZSO revised the 2015 figures, taking into account, among other things, new information about the amount of funds the CR will not be reimbursed from the EU. Therefore, there has been an increase in expenditure capital transfers as well as a decrease in revenue capital transfers from the EU. A positive revision of tax revenue acted against this effect. The overall effect of revisions deepened the deficit by almost CZK 10 billion, i.e. by 0.2% of GDP.

The growth of total revenue was 8.3% in 2015. Revenue from taxes and social security contributions increased by 7.0%, of which the highest growth was in indirect taxes. In relative terms, total revenue achieved 41.3% of GDP. Tax revenue and social security contributions were in sum more than CZK 100 billion higher in a YoY comparison with 2014, which is one of the greatest increases of these revenue items in the available times series since 1995.

Indirect tax revenue increased by 10% YoY, influenced mostly by the development of revenues from excise tax on tobacco products. In the course of 2014, a measure was approved introducing a time limitation on the sale of tobacco stamps with the immediately preceding rate. Due to that the motive of stockpiling was reduced considerably which lead to a decline in the excise tax on tobacco products revenue (up to 50%) in 2014. The tax revenue returned to normal levels in 2015 which was, in addition, supported by the tax rate increase. Consequently, collection of excise tax as a whole increased by 21% YoY.

The annual revenue of the value added tax increased by 4.3%, thus exceeding the dynamics of household consumption by more than 1 pp. Moreover, the tax revenue was hampered by the introduction of the second reduced tax rate on medicines, books and irreplaceable child nutrition. After adjustment of the tax revenue for discretionary measures, autonomous growth was above 5% and exceeded the growth of the nominal household consumption by more than 2 pp.

Direct tax revenue also grew relatively dynamically, in comparison with 2014, by 5.4%. It was driven mainly by corporate income tax, which grew by 9.1% YoY. Discretionary measures applicable to this tax had practically negligible fiscal impact. The result was influenced by the growth in macroeconomic tax bases (especially net operating surplus), further supported by the positive impulse of realization of projects financed by EU funds, but also by a positive supply-side effect of low crude oil price.

Personal income tax revenue increased, in comparison with 2014, only by 2.2%, which is significantly less than the increase of 4.4% in wage bill in the economy. The weaker result is due to several discretionary measures. The biggest one is the reintroduction of a previously abolished basic tax credit for working pensioners with a fiscal effect of approx. CZK 3.5 billion, other factors were the tax credit on child in preschool institution or increase of tax credit on the second and any additional dependent child.

Table 2.1: General Government Revenue (2010–2016)
(in % of GDP)

	2010	2011	2012	2013	2014	2015	2016
General government revenue	**38.6**	**40.3**	**40.5**	**41.4**	**40.3**	**41.3**	**40.2**
Tax revenue	**17.8**	**18.9**	**19.3**	**19.9**	**19.1**	**19.6**	**19.8**
Individual income tax	3.3	3.5	3.6	3.7	3.7	3.6	3.7
Corporate income tax	3.2	3.2	3.1	3.2	3.3	3.4	3.4
Value added tax	6.7	6.9	7.0	7.4	7.4	7.3	7.4
Excise taxes	3.7	4.2	4.3	4.4	3.5	4.0	4.0
Other taxes and contributions	0.8	1.1	1.2	1.2	1.2	1.2	1.2
Social security contributions	**14.6**	**14.7**	**14.8**	**14.8**	**14.6**	**14.6**	**14.8**
Sales	**3.0**	**3.6**	**3.6**	**3.7**	**3.5**	**3.3**	**3.2**
Other revenues	**3.2**	**3.1**	**2.8**	**3.0**	**3.1**	**3.8**	**2.5**

Source: CZSO (2016a, 2016b). Year 2016 MF CR.

Social security contributions increased by 5.5% YoY, which is an increase by CZK 35 billion in the amount. The growth was influenced by a favourable economic development which was reflected not only in corporate profits but also in the 2.4% growth of average wage and 2% growth of employment in the domestic economy.

The capital income from EU funds, which increased by more than 66% in accrual terms in comparison with 2014, was the most dynamic item on the revenue side. This development was due to successful completion of realised projects financed by remaining EU funds from the 2007–2013 programming period. The year of 2015 was, according to the rules, basically the last one in which the funds could be drawn. Capital revenue form EU funds thus has a direct reflection on the expenditure side in the investment expenditure of the general government sector. There has also been YoY growth in current subsidies, again due to co-financing of non-investment projects by EU funds.

Total expenditure increased by 4.9% and in relative terms achieved 42.0% of GDP, which is a slight decrease in a YoY comparison, despite significantly higher expenditure associated with the termination of use of allocation from the 2007–2013 programming period.

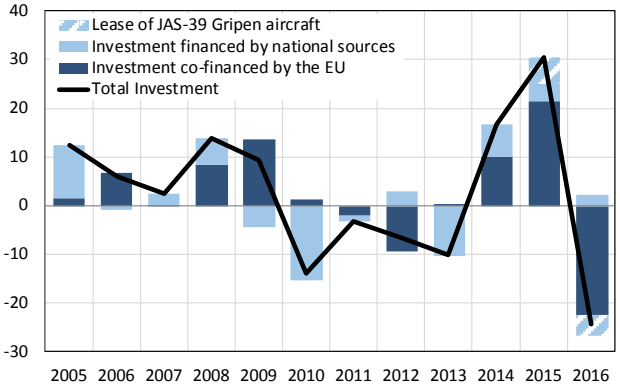
Nominal final government consumption, which increased by 4.4% in 2015, significantly contributed to the nominal GDP growth. Development of general government consumption was driven mainly by an increase of 4.8% in the compensation of employees in public administration as a result of an increase in pay tariffs and also in wages and salaries co-financed from EU funds. Intermediate consumption also contributed to final consumption growth; its 3.5% growth was also largely determined by EU projects. In contrast, there has been a YoY slowdown in social transfers in kind, which are represented mainly by payments by health insurance companies for care paid to health facilities outside the general government sector. Introduction of the third reduced value-added tax rate on selected commodities, in this case especially medicines, which ultimately leads to savings on the side of health insurance companies, may also have had influence. While there were several discretionary measures that increased the costs of health care, these applied mainly to state-owned hospitals, which are already included in the general government sector. Such measures thus appear directly in items such as compensation of employees and intermediate consumption.

Expenditure on cash social benefits increased by 2.3%. Discretionary influences amounting to approx. CZK 5.7 billion were reflected in the dynamics. These include mainly an extraordinary indexation of pensions by 1.8% as a compensation for reduced indexation in the previous years.

General government investments increased by approx. 30% YoY. Investments thus reached the highest amount in the entire time series since 1995. Investments grew mainly on EU projects, whose effect on the deficit is limited to the amount of Czech funding. A significant fiscal impulse in the economy was thus achieved with a relatively low cost for Czech public finance. Investments also increased with inclusion of the lease of JAS-39 Gripen supersonic aircraft, which is included as a one-off item in the fourth quarter of 2015. Funds for solely national projects were reduced slightly as general government sector units fully concentrated on absorption of the remaining allocation. This eliminated unnecessary loss of EU funds which was imminent due to very weak drawing before 2014.

Graph 2.1: Investment of the General Government

(growth in %, contributions to growth in percentage points)



Source CZSO (2016b), MF CR Calculations.

The expenditure side was also influenced by the refund of gift tax collected in an unauthorised manner for emission allowances amounting to CZK 4.5 billion. Although the tax refund was actually paid from the corporate income tax account, it is accounted for, according to the ESA 2010 methodology, as a capital transfer to non-financial corporations.

A very positive development was seen in interest costs of the debt servicing. Their decrease by CZK 7.2 billion (i.e. by almost 13%) was due to a stability of the state debt as a result of a significantly lower than approved state budget deficit and effective management of financial assets, a decline in the entire yield curve for government bonds, excess liquidity on interbank markets due to the effect of easing of CNB and ECB monetary policies and last but not least of confidence in the government fiscal policy.

The general government debt reached CZK 1,836.3 billion, which is 40.3% of GDP. The debt decreased by 1.9 pp YoY. The reason is the aforementioned more effective management of available liquid funds of the general government sector entities and the final cash deficit of the state budget, which was markedly better than expected.

Table 2.2: General Government Expenditure (2010–2016)
(in % of GDP)

	2010	2011	2012	2013	2014	2015	2016
General government expenditure	**43.0**	**43.0**	**44.5**	**42.6**	**42.2**	**42.0**	**40.5**
Government consumption	20.5	20.2	19.8	20.2	19.7	19.5	19.7
Social benefits other than social transfers in kind	13.1	13.1	13.1	13.3	12.9	12.5	12.4
Gross fixed capital formation	4.7	4.5	4.2	3.7	4.1	5.1	3.7
Other expenditures	4.7	5.3	7.4	5.4	5.5	4.9	4.6

Source: CZSO (2016a, 2016b).Year 2016 MF CR.

Table 2.3: Balance of General Government and of Subsectors (2010–2016)
(in % of GDP)

	2010	2011	2012	2013	2014	2015	2016
General government balance	**-4.4**	**-2.7**	**-3.9**	**-1.2**	**-1.9**	**-0.6**	**-0.2**
Central government balance	-3.8	-2.3	-3.7	-1.6	-2.0	-1.2	-0.9
Local government balance	-0.4	-0.3	-0.1	0.3	0.2	0.6	0.6
Social security funds balance	-0.2	-0.2	-0.2	0.0	-0.1	0.0	0.0
Primary balance	**-3.1**	**-1.4**	**-2.5**	**0.1**	**-0.6**	**0.4**	**0.7**

Source: CZSO (2016a, 2016b). Year 2016 MF CR.

Table 2.4: Debt of General Government and of Subsectors (2010–2016)
(in % of GDP)

	2010	2011	2012	2013	2014	2015	2016
General government debt	**38.2**	**39.8**	**44.5**	**44.9**	**42.2**	**40.3**	**38.6**
Central government debt	35.7	37.3	41.8	42.3	39.7	38.2	36.7
Local government debt	2.5	2.6	2.8	2.8	2.7	2.4	2.1
Social security funds debt	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Change in debt-to-GDP ratio	**4.1**	**1.7**	**4.6**	**0.4**	**-2.7**	**-1.9**	**-1.7**
Primary general government balance	3.1	1.4	2.5	-0.1	0.6	-0.4	-0.7
Interest expenditure	1.3	1.3	1.4	1.3	1.3	1.1	1.0
Nominal GDP growth	-0.3	-0.8	-0.3	-0.4	-2.2	-2.2	-1.3
Other factors	0.0	-0.3	1.0	-0.4	-2.4	-0.3	-0.7

Source: CZSO (2016a, 2016b). Year 2016 MF CR and Eurostat (2016b).

2.2 General Government Sector Development in the CR in 2016

In 2016, we expect the deficit to decrease by 0.4 pp to 0.2% of GDP. As part of the improvement is due to positive developments of the economy, which causes opening of a positive output gap, we estimate a decrease in the structural deficit by 0.2 pp to 0.4% of GDP). Such a low structural deficit is well below the medium-term budgetary objective corresponding to 1% of GDP, thus creating a larger financial cushion in case of an unexpected negative event.

In comparison with the 2016 Convergence Programme of the CR (MF CR, 2016a), there has been an improvement in the balance for 2016 by 0.4 pp due to several factors. On the revenue side, the expected amount of tax revenue was revised upwards for direct and indirect taxes in connection with the development of cash collection of the state budget and local government budgets. On the expenditure side, we expect lower interest costs of the state debt servicing. The last substantial change is a correction of assumptions regarding government investments. With regard to the previously known situation and development of cash collection and development of gross fixed capital formation in the first half of the year, we expect a greater decrease in investment expenditure.

Total general government revenue should increase by 0.5% to 40.2% of GDP in 2016; slow growth is mainly due to reductions in funds from the EU. As a percentage of GDP, there has been a YoY decrease in total revenue by 1.1 pp; conversely, the compound tax burden has increased, similarly to the previous year, by 0.4% pp to 34.7% of GDP due to further increasing of effectiveness of tax collection and introduction of new measures in this area.

Indirect tax revenue should increase by approximately 4.0%, mainly due to value added tax revenue, which should increase by 4.5%, thus exceeding the growth of its macroeconomic base by almost 1.5 pp. The reason is introduction of the electronic tax reporting, which was designed to limit frauds in the area of value-added tax, at the beginning primarily in terms of detection of fraudulent invoices. The total discretionary effect is expected to be 0.2% of GDP. The current state of cash collection shows that the value-added tax collection increased by almost 6%

in the first 9 months of this year, which is a significantly higher pace than the household consumption growth.

Excise tax revenue should increase by 2.9% only. The dynamics is slightly higher than real household consumption because it is subject to a positive discretionary effect in the form of repeated increase in excise duties on tobacco products in the context of tax harmonization with EU regulations.

Direct taxes should increase by 4.5% YoY, primarily due to the influence of the personal income tax, where we expect an increase of 6.4% thanks to continued favourable economic situation in the CR and further significant increase in the wage bill in the economy. The dynamics is slightly faster than the wage bill because the effective tax rate increases with wage growth due to existence of tax deductions and tax credits fixed in absolute terms.

A slower growth is expected for corporate income tax, by 2.6%, related to an expected slowdown in corporate profit growth in this year. There has been a drop in large part of investments financed from EU funds, an increase in crude oil prices on world markets, reducing the original positive cost effect, and, at the same time, wages and salaries have been increasing at a relatively higher pace. Developments of cash collection of corporate tax is very high in state budget cash collection, but this is mainly due to high amounts of supplementary tax payments after filing tax returns for an extraordinarily profitable year of 2015. Consequently, according to the accrual methodology, these revenues concern the year 2015.

Social security contributions will increase, according to our estimates, by 4.7%, thus maintaining a relatively high dynamics. Their developments are determined by developments in the area of wages and salaries and by the payment of the state for state-insured persons.

After the termination of the possibility to use funds from the 2007–2013 financial perspective, we expect a decrease in both current and especially capital subsidies. The start of the new programming period is not fully able to make up for the end of the previous perspective. We also expect that the time pattern of drawing will be more fluent and more even in the following years of this programming period than that in the previous one. Decrease in accrual investment subsidies from the EU will probably exceed 50% in 2016.

General government expenditure should decrease slightly in comparison with 2015 (by 1.5 pp), thus reaching 40.5% of GDP. The cause is the drop in investments due to the closure of the old financial perspective.

Government consumption should, in comparison with the previous year, slightly accelerate its dynamics and increase by 4.6%. Government consumption expenditure is driven mainly by developments of intermediate consumption, which should increase by nearly 6%. Growth is apparent already in the figures for the first two quarters, primarily for the central government subsector. In this subsector, the Road and Motorway Directorate and the Railway Infrastructure Administration realise their higher expenditure. Due to the drop in investments, these investment agencies have been given a possibility to spend funds for reparations and maintenance of road and railway networks.

The second fastest growing item of government consumption expenditure is a 5% YoY increase in the compensation of employees. Expenditure reflects salary increase in various groups of employees in the general government sector. The total discretionary effect should reach almost CZK 20 billion, specifically CZK 15.9 billion for state administration, teachers and non-teaching staff in schools, including an increase in functional positions; judges and state attorneys CZK 0.7 billion; government officials CZK 0.1 billion; and health-care workers CZK 3.0 billion. Social transfers in kind should increase by 3.1% due to an approved Reimbursement Decree. Other discretionary measures in health care rather applied, as in 2015, to public hospitals.

Social benefits in cash should increase by 2.4%. Their increase reflects, in addition to regular statutory indexation, an extraordinary contribution of CZK 1,200 paid to pensioners in February 2016, whose impact is approx. CZK 3.5 billion.

Total subsidies and transfers should increase by more than 2%; they should reflect an increase in state contributions to renewable energy resources amounting to CZK 4.7 billion.

General government sector investments should be lower than in 2015 due to the aforementioned reason of transition to the 2014–2020 EU financial perspective. The decrease should be almost 25%. Gross fixed capital formation financed solely from national resources should slightly increase in a YoY comparison after adjustment for imputation of JAS-39 Gripen supersonic aircraft in 2015 (nearly CZK 10 billion).

We expect the interest expenditure to decrease this year again. Prudential financial policy, debt portfolio management strategies, effective management of liquid disposable financial assets, interest in Czech government bonds fostered by temporary exchange rate policy of the CNB and the situation in world markets create a favourable environment for repeated issuance of government bonds with negative yields to maturity.

The estimated decrease in the absolute amount of the general government debt by more than CZK 22 billion by the end of 2016 and nominal GDP growth of 3.3% should lead to a decrease in relative debt by 1.7 pp to 38.6% of GDP.

The year of 2016 is therefore a continuation of the success achieved in 2015; there has been further decline in the general government sector deficit, with tax measures increasing the collection of taxes, the costs of the state debt servicing further decrease, and the CR continues to be perceived very positively on the financial markets.

2.3 International Comparison

2.3.1 General Government Balance

The general government deficit of EU countries was 2.4% of GDP in 2015. In comparison with 2014 it was lower by 0.6 pp. With a deficit of 0.6% of GDP, the CR was well below the EU average.

In 2015, the worst development of the general government balance was recorded in Greece. The general government balance amounted to −7.5% of GDP, mainly in connection with accrual adjustments in finances of extra-budgetary funds and public enterprises in the central government subsector. Deficits above 4% of GDP were also reported by Spain (5.1% of GDP), Portugal (4.4% of GDP) and the United Kingdom (4.3% of GDP). In 2015, surpluses were achieved by Luxembourg, Germany, Sweden and Estonia, which are more or less traditionally fiscally disciplined countries. In Germany, this was contributed to by all subsectors, i.e. including the state government subsector[1]. In Sweden, the only deficit sector was, rather unusually, the local government sector. On the contrary, the subsector of social security funds saw a favourable performance in countries such as Croatia, Italy, Hungary, Portugal or Romania. The criterion of the Stability and Growth Pact for a maximum deficit of 3% of GDP was met by 22 EU countries in 2015, i.e. significantly more than in previous years.

In 2016, except for Luxembourg, Germany and Estonia, all EU countries expect a deficit performance of the general government sector, although deficits are generally expected to be lower. The lowest deficits should be achieved by the CR and Sweden (0.2% of GDP) and Cyprus (0.3% of GDP). Conversely, the highest deficits should be reported by Spain, France and the United Kingdom; these countries would be the only ones failing to meet the Stability and Growth Pact requirement regarding the relative amount of balance in 2016. Compared to 2015, a worse result of the general government sector performance is expected (in relative terms to GDP) in six EU countries and the same in Poland.

Very good fiscal performance, in terms of the headline balance, of the CR within the EU is confirmed also in terms of structural balance (see Graph 2.3). While in 2015 the CR was the ninth best in the EU, this year should be the seventh best.

2.3.2 General Government Debt

General government debt, expressed in nominal values always at the end of the particular year, basically mirrors the long-term development of the deficit of the respective country. Across the EU, the general government debt reached a consolidated value[2] of 85.0% of GDP in 2015, i.e. 1.7 pp less than in 2014.

The CR has succeeded in reducing its debt in recent years by managing assets on the accounts of the state treasury system and involving available liquidity. However, it is still important to be aware of potential risks arising from extraordinary events as the examples of Ireland, Latvia, Cyprus or Slovenia have shown in the recent past.

Greece remains the most indebted EU country. In recent years, part of the general government debt has been remitted by private creditors. Nevertheless, due to the marked economic decline lasting several years, the relative indicator of general government debt further deepened to 177.4% of GDP in 2015. According to Eurostat, the debt is to increase by 1.5 pp in 2016. Other countries with general government debts exceeding 100% of GDP remain Italy[3], Portugal, Belgium and Cyprus. Debts have been rising quite quickly in recent years in Bulgaria, Finland, Croatia and Slovenia. On the contrary, Ireland has reduced its debt significantly since 2014. In addition to the CR, the relative debt indicator is developing positively in Denmark, Hungary, Germany and the Netherlands. This indicator remains by far the lowest in Estonia, although in absolute terms the debt more than doubled in 2011–2014. However, it has been decreasing in 2015 and 2016, and it should return to a one-digit value as a percentage of GDP in 2016. The fiscal debt criterion in 2015 was not satisfied by 17 EU countries, and this should not change in 2016.

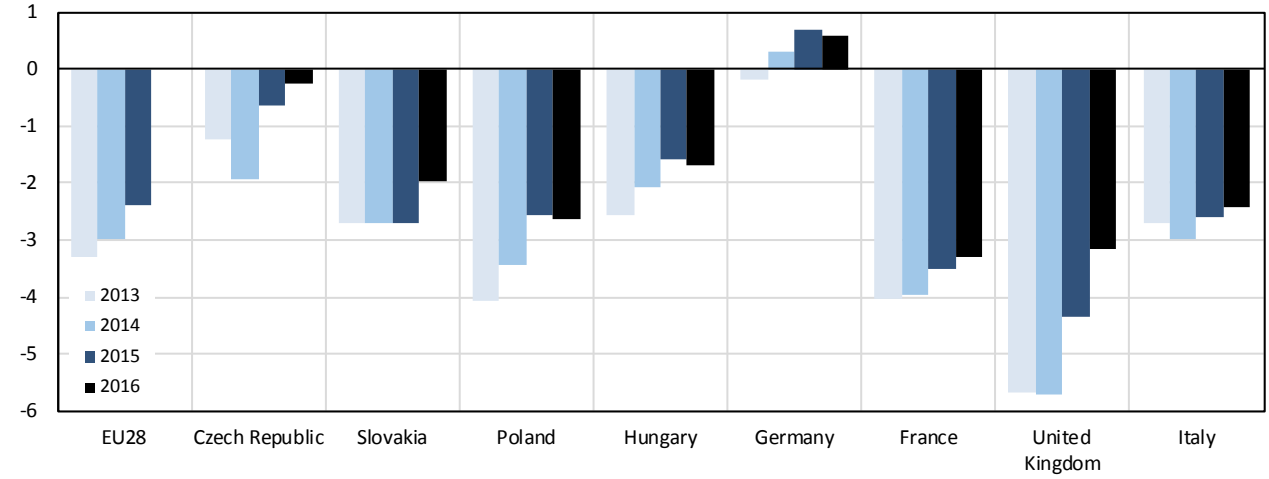
Note: In connection with the Autumn Government Deficit and Debt Notification according to Art. 15 (1) of the Regulation of the Council EC No. 479/2009, as subsequently amended, Eurostat has expressed a reservation to Cyprus regarding poor quality of the reported data, whose origin has not been clarified yet. Reservations raised after Spring Notification of government deficits to Belgium and Hungary remain. In Belgium, this applies to failure to include public hospitals into the general government sector, in Hungary the same in the case of *Eximbank* (equivalent of the Czech Export Bank) and certain operations carried out by the Hungarian Central Bank in favour of the state. Conversely, Eurostat has withdrawn its reservations to France as *Fonds de Garantie des Dépôts et de Résolution* (French equivalent of the Czech Guarantee System of the Financial Market) has now been included into the general government sector.

[1] The state government subsector exists in federal countries of Germany and Austria and the federative constitutional monarchies of Belgium and Spain. The general government sector therefore consists of four subsectors in these countries. Conversely, in the United Kingdom, Ireland and Malta, it only consists of two subsectors as there is no subsector of social security funds.

[2] Consolidated values of general government debt are smaller than non-consolidated values, which is caused by excluding intergovernmental loans and, in the case of the euro area, financial assistance as part of the European Financial Stability Facility. This has been the case, for example, with the granting of loans to Ireland, Portugal and Greece in recent years. However, non-consolidated values are not listed in this Fiscal Outlook, unlike in the previous two issues, due to unavailability of all relevant data inputs.

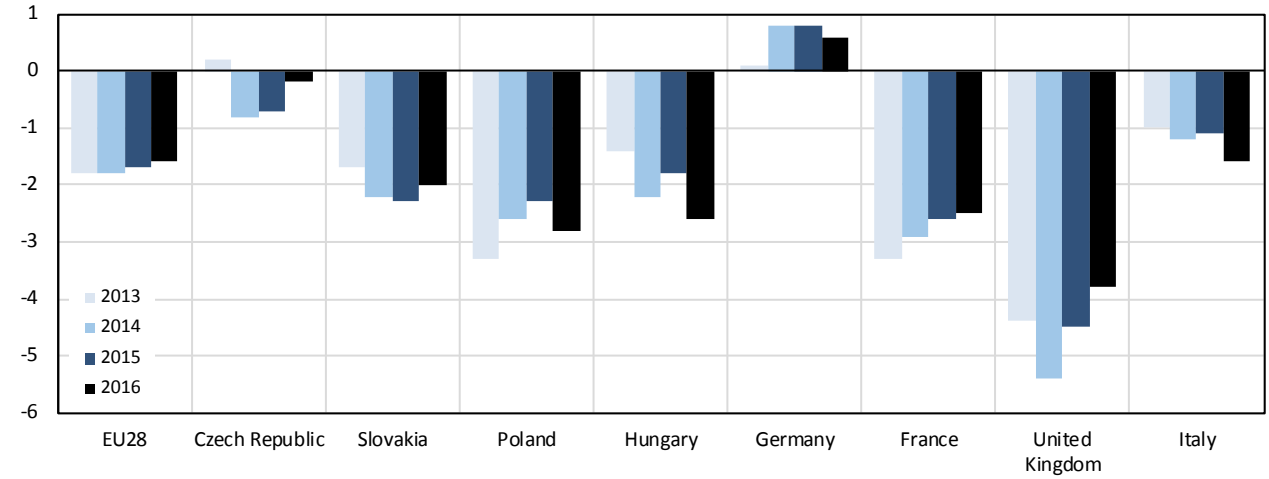
[3] The figures for 2016 are not available, but one can hardly expect a YoY reduction in the general government debt in the case of Italy by more than 30 pp.

Graph 2.2: General Government Balance in Selected EU Countries (2013–2016)
(in % of GDP)



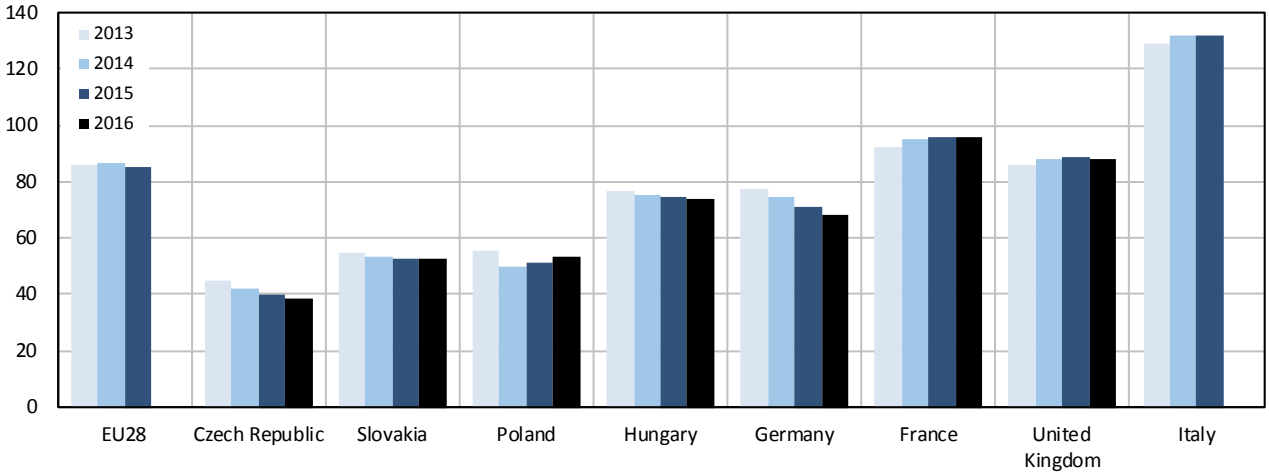
Note: Data for the EU 28 in 2016 is not available.
Source: Eurostat (2016b). Nominal GDP of the Czech Republic in 2016: MF CR (2016b).

Graph 2.3: Structural Balance of the General Government in Selected EU Countries (2013–2016)
(in % of GDP)



Source: EC (2016b).

Graph 2.4: General Government Debt in Selected EU Countries (2013–2016)
(in % of GDP)



Note: Data for the EU 28 and Italy in 2016 are not available.
Source: Eurostat (2016b). Nominal GDP of the Czech Republic in 2016 and debt in the Czech Republic in 2016: MF CR (2016b).

2.3.3 State Debt Financing

Graph 2.5 shows the development of spreads (based on monthly averages) expressed as the differences in yields of ten-year state (government) bonds against German bonds of the same kind in the period from January 2008 to October 2016. Their development correlates to a certain extent with the fiscal indicators of the general government deficit and debt and characterises especially the confidence of the financial markets in the given country. According to the current figures, a significant decrease in government bonds interest rates can be seen in almost all EU countries in 2016 (except Portugal and especially Greece, where considerable economic problems still persist). Government bond yields dropped to historical lows in a half of EU countries. The cause is a combination of factors in the form of, in particular, a decrease in inflation expectations and currently a consistently lower equilibrium level of interest rates.

To achieve greater clarity, the selected EU countries are divided into four groups. The upper graph on the left includes countries (except for the Nordic ones) with a very low spread, enjoying the confidence of financial markets. High confidence of financial markets in the German economy was also reflected in a decrease in yields of state bonds with maturity up to 10 years down into negative values in June 2016. As a result of this phenomenon, bonds of any EU country do not show lower yield than the reference rate of German bonds, i.e. they do not have a negative spread. Despite the results of the referendum on the United Kingdom's withdrawal from the EU, government bond interest rates in the United Kingdom did not increase; conversely, their value decreased in line with the trend of decline in yields in most Member States. The higher spreads of Belgium are caused by the high indebtedness of the general government sector, although the situation has been stabilising slowly since mid-2012 and they show relatively stable values in 2015–2016.

The upper right graph shows the development in EU countries which accepted assistance from EU rescue funds. Spreads of these countries have decreased significantly since the outbreak of the debt crisis. An exception is Cyprus, where bondholders were charged with a one-off tax in 2013 in the context of fulfilment of conditions of acceptance of a rescue mechanism. As a result, Cyprus, despite leaving the rescue programme in March 2016, still has not gained investors' confidence. The largest decrease in spreads in this group was recorded in Ireland, which managed to kick-start its economy and improve fiscal indicators (see the previous Subchapter 2.3.2). After capital controls were temporarily introduced due to insufficient liquidity of Greek banks in July 2015, spreads of Greece exceeded 10%. They decreased after acceptance of the third rescue mechanism in August 2015 and subsequent implementation of reforms required by creditors. Spreads of Greece have relatively stabilised since 2016, reflecting successful negotiations of the country with creditors on implementation of the rescue mechanism.

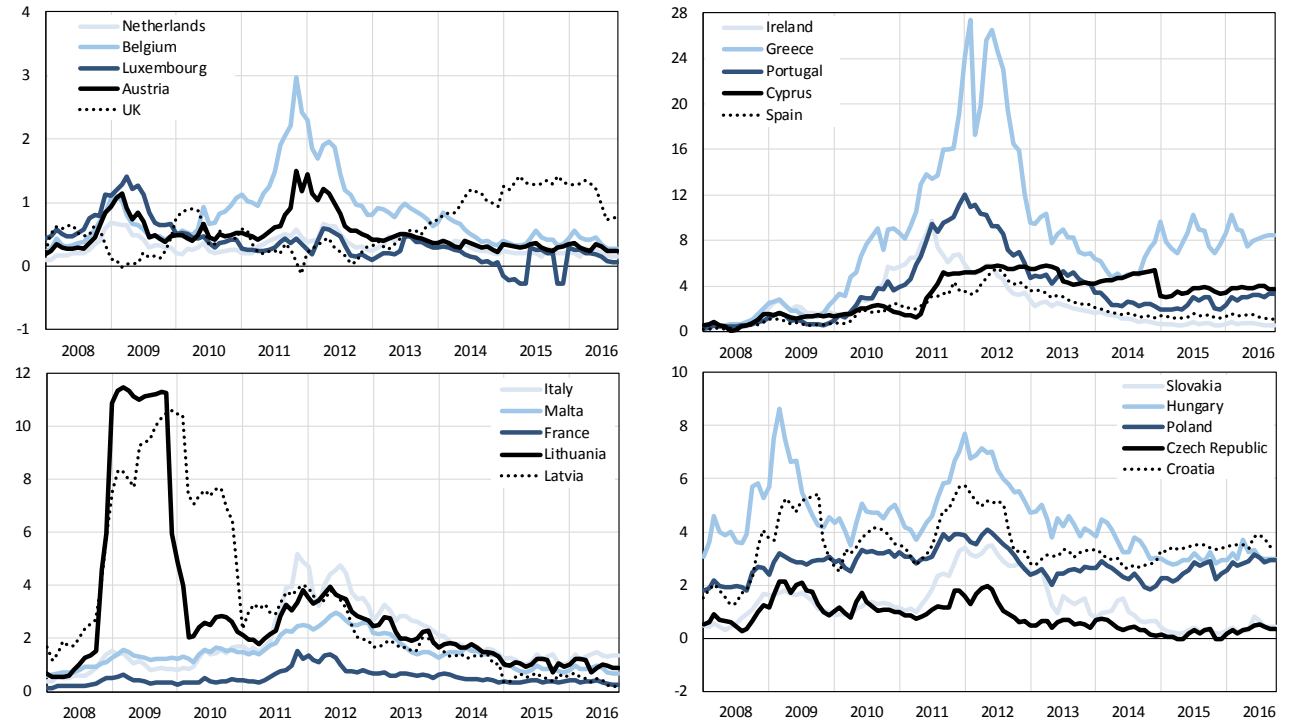
The left lower graph shows countries with marked fluctuations in the values of spreads during the global crisis which, unlike the groups in the right upper graph, did not accept assistance from EU rescue funds. The values of spreads of French government bonds reflect structural problems and long-term exceeding of limits of the Stability and Growth Pact. A broadly downward course of the spread level may be seen in Latvia and Lithuania after the end of the financial crisis.

The group in the right bottom graph shows the developments in Central European countries and Croatia, which have undergone post-communist transformation. Thanks to the good condition of public finance, the CR is the most positively perceived country by financial markets in this geographic area; it even recorded, in January 2015, a lower risk premium on bonds issued by the state than that in Germany, and in October 2016, government bonds with a residual maturity of 2 years were traded on the secondary market with a yield to maturity slightly above −1% p. a.

Issuance of government bonds is not the only method to cover the state (government) debt. There are countries in the EU with another important source of funding, which is loans. It follows from the National Autumn Government Deficit and Debt Notifications that in 2015 loans made up more than a half of total funds for covering the total gross government consolidated debt in three Member States. These states include Estonia (86.8 % of total debt), Greece (78.4 %) and Cyprus (68.9 %). While this share has been more or less constant in Estonia due to long-term loans from the European Investment Bank and very low indebtedness of the general government sector, it has recently shot up in Greece and Cyprus. In 2011, this share was 29 % in Greece and 31.1 % in Cyprus. These increases reflect acceptance of loans from the International Monetary Fund and EU stabilisation mechanisms.

Graph 2.5: Spreads between German and EU Countries Bonds (January 2008 to October 2016)

(in percentage points)



Note: Spreads are calculated as the difference in yields of ten-year bonds for convergence means of the specific country and those of Germany. The data for Luxembourg are comparable since May 2010, which is the start of Luxembourg government bonds emissions. Before that, private bond issuers were taken into account.

Source: ECB (2016). MF CR calculations.

3 Medium-term Fiscal Outlook

3.1 Fiscal Policy Objectives

The main objective of the current Government's budgetary strategy is a gradual consolidation at the level of the state budget in the cash concept, which is to lead from a deficit of CZK 100 billion proposed in the 2015 budget to a deficit of CZK 30 billion in 2019. An accompanying attribute of the consolidation is a commitment not to increase tax rates. Although excise taxes on tobacco products have increased, the value added tax rate on selected commodities has been reduced. On the revenue side, the major efforts are to improve tax collection and thus straighten the market environment. Since January 2016, electronic tax reporting has been in effect, and from December 2016, electronic registration of sales is going to be introduced in the accommodation and food services sector, which should gradually expand to other sectors of the economy (see Subchapter 3.3.1). Results so far of implemented changes are successful and they allow the Government to fulfil its priorities on the expenditure side, mainly in the social area.

Based on the results of the Autumn Government Deficit and Debt Notification (Eurostat, 2016b), the general government deficit ended at the level of 0.6% of GDP in 2015 and it should reach 0.2% of GDP in 2016. For 2017–2019, we predict gradual improvement in the general government sector performance; according to our forecast, surplus in terms of the total balance should be achieved in 2018 for the first time in the history of the CR. This reflects not only the surplus finances of local governments but also the aforementioned strategy declared by the Government to reduce state budget deficits. The structural balance should also develop positively. It reached the level of −0.6% of GDP in 2015 and we estimate it should be −0.4% of GDP in 2016. There has therefore been a positive fiscal effort and moderate counter-cyclical effects of the fiscal policy in recent years. In 2017, we expect a slight deterioration of the structural balance to −0.6% of GDP. However, given the volatility of structural balance calculations, we can talk about de facto stabilised level of structural balance in years 2015–2017. In the years of the outlook, there should be again a gradual decrease of structural deficits and public finance should be essentially structurally balanced in 2019 (see Table 3.1). The predicted development of general government sector revenue and expenditure is detailed in Subchapter 3.3.

The concept of structural balance is closely related to the institution of medium-term budgetary objective, which corresponds to −1% of GDP for the CR. It is undoubtedly a success that this objective has always been met in recent years. However, this success should not affect the efforts for consolidation at the state budget level in any way, although the CR fulfils its commitments under the preventive arm of the Stability and Growth Pact, specifically its medium-term budgetary objective. The problem of the CR is an imbalance in the finances of individual subsectors in the general government sector. The subsector of social security funds has essentially a balanced budget and does not have any debt. The subsector of local governments has consistently been in surplus in recent years, mainly in 2015, and we expect even better result in 2016 (see Chapter 2.2). It is of course important to bear in mind that both these subsectors achieve their results also due to subsidies from the state budget and changes in taxes assignment. According to the cash methodology, the state budget is, however, chronically deficient in most years, although with a downward trend in recent past. In the case of need of an active fiscal policy during an economic downturn, practically the entire burden of potential fiscal stimulus lies on the state budget. It is therefore necessary to manage public finance prudently and to create reserves in good times not only as a whole but with regard to each subsector.

Ensuring reserves for the performance of counter-cyclical fiscal policy thus currently must lead through reducing the deficit of state budget and state funds. This strategy is reflected by medium-term expenditure frameworks. They have been designed by the Government so as to gradually decrease the projected deficit of CZK 60 billion for 2017 to CZK 50 billion in 2018, and finally to CZK 30 billion in 2019.

Table 3.1: Fiscal Policy Stance (2013–2019)

(in % of GDP, fiscal effort in percentage points)

	2013	2014	2015	2016	2017	2018	2019
General government balance	**-1.2**	**-1.9**	**-0.6**	**-0.2**	**-0.2**	**0.1**	**0.5**
Cyclical component	-1.4	-0.6	0.2	0.3	0.4	0.5	0.5
One-off and other temporary measures	0.0	-0.3	-0.2	-0.1	0.0	0.0	0.0
Structural balance	0.2	-1.1	-0.6	-0.4	-0.6	-0.3	0.0
Fiscal effort (Change in structural balance)	**1.3**	**-1.3**	**0.5**	**0.2**	**-0.2**	**0.3**	**0.3**
Cyclical component according to ECB method	-0.9	-0.4	0.2	0.0	0.2	0.2	0.2
Structural balance according to ECB method	-0.3	-1.3	-0.6	-0.1	-0.4	0.0	0.3
Fiscal effort according to ECB method	**1.1**	**-1.0**	**0.7**	**0.5**	**-0.3**	**0.4**	**0.3**

Note: Different development of the cyclical component of the balance (and therefore of the structural balance) according to the Organisation of Economic Co-operation and Development and the European Central Bank is caused because the method of Organisation of Economic Co-operation and Development uses the cycle calculated directly from output gap, while the other method models the cyclical development of cyclically-dependent items of revenue and expenditure to the cyclical development of specific macroeconomic bases (compensation of employees in the private sector, wages in the private sector, net operating surplus, consumption of households and unemployment). These bases have different cyclical behaviour than the GDP and its potential.
Source: CZSO (2016a, 2016b). Forecast and calculations by MF CR.

3.2 Medium-term Expenditure Framework

The binding force of the medium-term expenditure framework (hereinafter referred to as the Framework) is generally derived from Act No. 218/2000 Coll., and the specific amounts of the Framework are defined by resolutions of the Chamber of Deputies of the Parliament of the CR. In 2012, an amendment to Act No. 218/2000 Coll. (Act No. 501/2012 Coll.) came into force, regulating the contents of the expenditure framework amounts in accordance with the methodology for drawing up the state budget and state funds budget. Despite the fiscal targeting methodology in the area of data reporting and budgeting being thereby cancelled, this regulation does not impact the method for deriving the amounts of expenditure frameworks.

The current Framework for 2017 and 2018 was approved by the Chamber of Deputies of the Parliament of the CR on 9 December 2015. The amounts of the Framework, according to the Resolution, are CZK 1,211.7 billion for 2017 and CZK 1,245.7 billion for 2018 (in consolidated terms).

Without the consent of the Chamber of Deputies of the Parliament of the CR, an approved Framework can only be adjusted in relation to specifically enumerated items, such as a significant divergence in consumer prices, changes to the estimate of expenditure co-financed from EU funds and from financial mechanisms, the impacts of changes in tax assignment on expenditure, and other exceptional circumstances. The Framework can also be increased by 1 thousandth of the total expenditure for the year of the draft state budget, and by 2 thousandths for the following year. For 2017, the Framework amount has been increased by CZK 98.0 billion due to expected expenditure co-financed from EU funds and from financial mechanisms. No other adjustments mentioned above are considered during the period of the outlook. These modifications are shown in Table 3.2.

By updating the approved Framework according to adjustments permitted by law, we get an expenditure ceiling of CZK 1,309.7 billion for 2017 and the amount of CZK 1,245.7 billion remains for 2018. Due to the government's efforts to implement its priorities according to the Policy Statement of the Government, including strengthening of expenditure on security, the Framework for 2017 was increased by CZK 31.2 billion and by CZK 32.5 billion for 2018. The increase in the Framework for the two years was proposed by the Government in May 2016, and the Chamber of Deputies approved this proposal by its Resolution No. 1324/2016 on 8 September 2016. After being updated by these modifications, the Framework reaches values of CZK 1,340.9 billion for 2017 and CZK 1,278.2 billion for 2018.

These modifications set new limits for expenditure as part of the state budget and state funds. A new draft Framework approved by the Government on 21 September 2016, which is currently being considered by the Chamber of Deputies of the Parliament of the CR, has been decreased by CZK 0.2 billion in 2017 and by CZK 4.0 billion in 2018 in comparison with limits set by Resolution No. 1324/2016. For 2019, the Government approved an expenditure limit of CZK 1,298.8 billion.

The total overview of the approved, updated and newly set Framework is presented in Table 3.3. As it is apparent, the Framework amounts for 2018 and 2019 are significantly lower. This significant decrease, however, is due to a calculation of the Frameworks, where for the years t+2 and t+3 funds from the EU and from financial mechanisms and their financing are included in neither revenues nor expenditure.

Table 3.2: Adjustments of the Original Medium-Term Expenditure Framework
(in CZK bn.)

		2017	2018
Medium-term expenditure frameworks according to Act no. 1324/2016 - consolidated	1	1242.9	1278.2
Adjustments according to budgetary rules (Law no. 218/2000)	2	98.0	-
Medium-term expenditure frameworks adjusted according to budgetary rules	3=1+2	**1340.9**	**1278.2**

Source: MF CR.

Table 3.3: Differences between Medium-Term Expenditure Framework approved in 2015, adjusted in 2016 and newly proposed to 2019
(in CZK bn.)

		2017	2018	2019
Medium-term expenditure frameworks according to Act no. 999/2015 and budgetary rules	1	**1309.7**	**1245.7**	**-**
Medium-term expenditure frameworks according to Act no. 1324/2016 and budgetary rules	2	**1340.9**	**1278.2**	**-**
Newly proposed medium-term expenditure frameworks	3	**1340.7**	**1274.2**	**1298.8**
Tightening (-) / breach (+) of medium-term expenditure frameworks	4=3-2	-0.2	-4.0	-

Note: The decrease in the level of expenditures between 2017 and 2018 is caused i.a. by the fact that the outlook for 2018 and 2019 does not contain expenditures financed by EU funds and financial mechanisms.
Source: MF CR.

3.3 General Government Medium-term Outlook

The general government sector consists of sectors of central government, local governments and social security funds. The dominant entity in central government is the state budget, whose development influences most the outlook of finances of this subsector. As far as social security funds are concerned, we expect, with regard to their finances in the past, balanced revenues and expenditures. Local governments show considerable surpluses, especially in recent years. This is due not only to an increase in revenues (whether by changes in taxes assignment or positive developments of tax revenues in the whole general government sector), but also to a decrease on the expenditure side, where the reason is in particular the development in a part of capital expenditures. This reflects the development of investments in the entire economy, especially the closure of the 2007–2013 financial perspective and transition to a new perspective of 2014–2020. Therefore, we expect a gradual increase in investment expenditure by local governments (similarly to the entire general government sector) and, in line with this, a decrease in surpluses in this subsector (see Table 3.4).

Table 3.4: General Government Development
(in % of GDP, growth in %)

		2015	2016	2017	2018	2019
General government balance	*% of GDP*	**-0.6**	**-0.2**	**-0.2**	**0.1**	**0.5**
Central government	*% of GDP*	-1.2	-0.9	-0.6	-0.2	0.3
Local governments	*% of GDP*	0.6	0.6	0.4	0.3	0.2
Social security funds	*% of GDP*	0.0	0.0	0.0	0.0	0.0
Total revenue	*% of GDP*	**41.3**	**40.2**	**40.5**	**40.5**	**40.3**
	growth in %	8.3	0.5	4.0	3.9	3.4
Total expenditure	*% of GDP*	**42.0**	**40.5**	**40.7**	**40.4**	**39.8**
	growth in %	4.9	-0.4	3.9	3.0	2.5

Source: Year 2015 CZSO (2016a, 2016b). Forecast and calculations by MF CR.

3.3.1 General Government Revenue

In medium-term outlook, we expect an average annual increase in general government revenue amounting to 3.8%, increase in tax revenue on average by 3.5%, which reflects the positive macroeconomic development and increased effectiveness of tax collection using more efficient means of preventing tax evasion.

We expect that the dynamics of the development of personal income tax revenue will be influenced, in addition to the forecast of the wage bill, by introduction of electronic registration of sales in 2017 and 2018. The primary participants in the system will be, from 1 December 2016, sectors of accommodation and food services, which will be joined by the retail and wholesale segment on 1 March 2017. A year later, liberal professions (doctors, lawyers, accountants) and persons conducting business in transport or agriculture will join in the third stage. Coverage will be completed on 1 June 2018 by selected trades and other manufacturing activities (e.g. manufacture of textiles and garments, processing and production of wood, paper, plastic or metal; repair and installation of machinery and equipment). This measure is to increase the personal income tax revenue gradually by CZK 3.4 billion in 2017, by CZK 2.4 billion in 2018 and by CZK 0.5 billion in 2019. The aforementioned impacts already include a one-off credit for taxpayers registering sales with a total impact of CZK 1 billion, which should compensate for the initial cost. In addition to the above measure straightening the market environment, the outlook also expects other changes in the tax system. From 2017, as part of the support of families with more children, tax allowances will be increased for the second child by CZK 200 per month and for the third and any additional child by CZK 300 per month, compared to the present situation. As a result of this measure, payments for personal income tax will be decreased in 2017 by CZK 1.6 billion. Another measure negatively affecting personal income tax revenue is tax exemption on service pension payments and housing benefits for professional soldiers, and service pension entitlements of members of security forces with an expected impact of CZK 1 billion from 2017. Support for savings in pension funds will also have a negative effect on the volume of collected personal income taxes. In 2017, it will mean, among other things, an increase in the limit for deduction from the income tax base for pension products from CZK 12 thousand to 24 thousand for all participants in this pillar. The same tax deduction is allowed for a private life insurance. Support for a private life insurance and savings in the 3rd pillar will therefore reduce general government sector revenue by CZK 1.4 billion from 2017.

As regards social security contributions, as the most important budget item for the general government sector, we predict an average annual growth in revenues at 4.8% in the outlook years. The development is in line with the growth in the wage bill in the economy and impacts of discretionary measures. Development of revenue of the public health insurance system will be influenced by an increase in the monthly assessment base for payments by state for state insured persons from CZK 6,444 to CZK 6,814, approved by the

Government. From 1 January 2017, there will thus be an increase in monthly payments by the state for state insured persons by CZK 50 to CZK 920 (with an impact of approx. CZK 3.3 billion). Another discretionary increase in social security contributions from 2017 to 2019 is expected again mainly in connection with the act on electronic registration of sales taking effect (by gradual involvement of additional sectors in the system); its impacts for social and health insurance are, in YoY terms, approx. CZK 3.8 billion in 2017, CZK 2.2 billion in 2018, and CZK 0.5 billion in 2019. We also expect a positive effect on the development of social security contributions in connection with increasing the minimum and guaranteed wage.

The corporate income tax revenue should grow on average by 3.4%; however, with a growing dynamics in the forecast horizon. This trajectory is autonomously affected by the development of the economy. The expected increase in nominal GDP will gradually accelerate, whereas the growth in the wage bill should be relatively lower in the outlook years than it is now. This should lead to an increase in corporate profits and the volume of paid tax. We expect there will be an increase in revenue of this tax as a result of introduction of electronic registration of sales, amounting to, in YoY terms, CZK 1.7 billion in 2017, CZK 1 billion in 2018, and CZK 0.2 billion in 2019. From 2017, tax revenues will be lower by CZK 0.2 billion due to measures enabling state-funded institutions established by a local government or voluntary associations of municipalities to depreciate, in addition to their own assets, also assets entrusted to them. Payments of corporate income tax in 2017 will be, similarly to 2016, burdened with the establishment of the Crisis Resolution Fund. Contributions to this Fund represent a tax-deductible expense for contributors. The predicted decrease in revenue due to this measure is CZK 0.1 billion.

As regards value added tax revenues, we expect an average growth by 4.7% in the outlook years. Growth in nominal household consumption (by approx. 4%), social transfers in kind (by 3%), increased effectiveness of tax collection and key measures to fight tax evasions, will have a positive impact. With electronic tax reporting (introduced since January 2016), we expect an impact on value added tax revenue only. In 2017, we expect this will lead to a YoY increase in value added tax collection by CZK 2 billion and further CZK 3 billion in 2018. The effect of the law on electronic registration of sales will show, with regard to its effect from 1 December 2016, primarily in 2017–2019. We estimate the discretionary positive impact at CZK 5.1 billion in 2017, a further CZK 2.7 billion in 2018 and an additional CZK 0.6 billion in 2019. An amendment to Act on value added tax was passed together with the law on electronic registration of sales. From 1 December 2016, the amendment, among other things, reduces the tax rate in food services from 21 to 15%, except for alcoholic beverages. This measure with an impact of CZK −0.5 billion in 2017 is aiming at eliminating the systemic mismatch of different tax rates of food in restaurants and in stores.

The excise tax revenue reflects mainly impacts of discretionary measures. An amendment to the Act on Excise Duties sets the trajectory of increased tax burden of tobacco products in compliance with the European legislation until 2018. The effects on the YoY increase in excise tax revenue should be approx. CZK 1.1 billion for 2017 and CZK 1.4 billion in 2018. A slight YoY decrease of 1.4% in 2017 is due to the anti-smoking law and return of excise duties to agricultural primary producers ("green diesel"). We expect that the government bill on health protection against the harmful effects of addictive substances (anti-smoking law) will lead to a decrease in excise tax revenue on tobacco products of CZK 1.4 CZK. In the case of the government bill on tax advantage of mineral oil consumption in selected activities in livestock production and animal production ("green diesel"), we expect a subsequent negative influence on excise tax revenue of CZK 1.9 billion in 2017. In the subsequent years, the effect of this measure should gradually diminish and it should stabilise at CZK 0.4 billion per year from 2019.

As regards other income, for 2017–2019 we expect growth in investment accrual subsidies in line with gradual increase in drawdown from EU funds in the 2014–2020 programming period.

Table 3.5: General Government Revenue

	2015	2016	2017	2018	2019
bn CZK					
Total revenue	**1883**	**1893**	**1969**	**2045**	**2115**
Tax revenue	**894**	**931**	**960**	**999**	**1033**
Taxes on production and imports	562	584	597	619	636
Value added tax	333	348	366	385	400
Excise taxes	183	188	186	189	191
Current taxes on income, wealth, etc.	332	347	363	380	396
Personal income tax	165	175	186	198	207
Corporate income tax	157	161	166	171	178
Capital taxes	0	0	0	0	0
Social contributions	**663**	**694**	**735**	**767**	**799**
Property income	**36**	**36**	**33**	**34**	**34**
Other	**290**	**231**	**240**	**245**	**250**
growth in %					
Total revenue	**8.3**	**0.5**	**4.0**	**3.9**	**3.4**
Tax revenue	**8.2**	**4.2**	**3.1**	**4.1**	**3.3**
Taxes on production and imports	10.0	4.0	2.2	3.8	2.8
Value added tax	4.3	4.5	5.2	5.2	3.8
Excise taxes	21.0	2.9	-1.4	1.8	1.2
Current taxes on income, wealth, etc.	5.4	4.5	4.6	4.7	4.2
Personal income tax	2.2	6.4	6.5	6.1	4.7
Corporate income tax	9.1	2.6	2.8	3.4	3.9
Capital taxes	10.0	175.7	-36.6	-19.8	-24.6
Social contributions	**5.5**	**4.7**	**5.8**	**4.4**	**4.2**
Property income	**-0.4**	**0.2**	**-8.0**	**0.3**	**0.5**
Other	**17.0**	**-20.4**	**4.1**	**1.8**	**2.0**
Tax burden *% of GDP*	**34.3**	**34.7**	**35.0**	**35.1**	**35.0**

Source: Year 2015 CZSO (2016b). Forecast and calculations by MF CR.

Table 3.6: Structure of Discretionary Measures (2017–2019)

	2017	2018	2019
Total revenue measures	**15.7**	**14.5**	**2.8**
Direct taxes	**14.6**	**6.5**	**1.2**
Personal income tax	2.1	3.3	0.5
Corporate income tax	1.4	1.0	0.2
Social security contributions	11.1	2.2	0.5
Indirect taxes	**4.6**	**7.9**	**1.6**
Value added tax	6.8	6.0	0.6
Excises	-2.2	1.9	1.0
Other revenues	**-3.5**	**0.1**	**0.1**
Total expenditure measures	**-38.1**	**-0.8**	**0.0**
Social benefits	-4.4	0.0	0.0
Compensation of employees	-19.1	-0.1	0.0
Healthcare	-10.1	0.0	0.0
Other expenditures	-4.5	-0.7	0.0
Total impact on balance	**-22.5**	**13.6**	**2.8**
% GDP	-0.5	0.3	0.1

Note: Figures in the table represent YoY discretional changes that are stemming from all envisaged and approved measures on revenue and expenditure side of the general government budget.
Source: MF CR.

3.3.2 General Government Expenditure

In 2017–2019, we expect an average YoY increase in general government expenditure of 3.1%. We expect a slight increase in expenditure by 0.2 pp in relative terms in 2017, when expenditure should reach 40.7% of GDP. In the two subsequent years of the outlook, we predict a slight decrease of the relative indicator to 39.8% of GDP.

For 2017 we expect a significant increase in compensation of employees in the general government sector (4.9%), which is, among other things, related to an increased volume of resources for salaries of teaching staff in regional schools by 8% and for employees in state organisational components, government-regulated state allowance organisations and non-teaching staff in regional schools by 5%, and increase in pay tariffs of doctors and other health-care employees by 10%. The impacts of increasing salaries on the general government expenditure and the associated higher social security contributions paid by the general government sector are quantified in sum as approx. CZK 19 billion in 2017. The net impact on the balance is, however, significantly lower due to the fact that a large part of the increased volume of compensation of employees at the same time represents higher general government revenue in the form of personal income tax and contributions to social and health insurance, leaving aside consumption taxes as a secondary effect. An increase in contributions to the Cultural and Social Needs Fund from the current 1.5% share in the wage bill to 2% in 2017 will also have an impact on the compensation of employees item. In the subsequent years of the outlook, in light of the government's strategy to reduce state budget deficits and an expected slowdown in the dynamics of wage bill growth in the entire economy, we predict that the growth rate of compensation of employees will stabilise at 3.5%, which means a return to the 2014 dynamics.

Growth of approximately 3% is expected for cash social benefits. The dynamics of growth will be driven primarily by pensions. On 17 February 2016, the government approved an amendment to the Act on Pension Insurance, amending the system of pension indexation. The government now has full power to modify indexation up to 2.7% if the indexation is lower according to the standard rule (for details see Subchapter 3.5). Indexation at 2.7% is approved for 2017 (or, specifically, the flat rate increases by CZK 110 per month and the earnings-related part increases by 2.2%, which means an average increase in monthly pension of CZK 308), with an impact on expenditure of CZK 10.7 billion. In the case of standard indexation according to law, the expenditure growth would be less than a half, approx. CZK 5 billion. We expect a rather average dynamics at the end of the outlook.

Expenditure on cash social benefits will also be impacted by approval of an amendment to the Social Services Act. The amendment increases care allowance by 10% with effect from 1 August 2016. It responds to a decrease in the value of the allowance in real terms. Discretionary expenditure growth due to the introduction of this measure is calculated to be CZK 1.3 billion in 2017.

Growth of social transfers in kind should be approximately 3% per year. The predicted development is primarily based on an assumption of balanced finances of the subsector of social security funds, taking into account the expected development of other components in the expenditure of the public health insurance system (especially compensation of employees and intermediate consumption). In 2017, we expect that the total expenditure of the public health insurance system will reach approx. CZK 275.6 billion (i.e. YoY growth is 5.3%). Health insurance companies will redistribute, using the reimbursement mechanism, CZK 266.6 billion (i.e. 5.5% of GDP) to medical facilities, which is a YoY increase by approx. CZK 13.3 billion. The increase in expenditure on health services is primarily due to an increase in expenditure in the segment of acute inpatient care (approx. CZK 9.2 billion). In other segments of health care, we expect a total expenditure increase by approx. CZK 4.1 billion (for example, expenditure increase by approx. CZK 2.3 billion is expected for outpatient care, which is caused by the natural growth of the segment and increasing volume of care).

We predict that intermediate consumption will increase by 2.6% in 2017. It is a significant slowdown in dynamics in comparison with the expected growth rate in 2016 (5.7%). We identify the cause as, among other things, a slower implementation of the 2014–2020 financial framework; investments co-financed from EU funds have not properly started by 2016 yet and national resources are rather used for activities related to reparations and reconstructions of roads and motorways. In the subsequent years, however, we expect a gradual increase in investments financed from EU funds, and accordingly a slowdown in intermediate consumption growth. For 2018, therefore, we expect an increase in intermediate consumption of 2.4% and 2.2% in 2019. We expect investments co-financed from EU funds to grow by 15% in 2017 due to the low 2016 base; in the subsequent years of the outlook, we expect a slow growth at approx. 2% per year. We predict a stable 3% growth in national investments.

The year of 2017 should be the third one in a row when nominal interest costs of debt servicing decrease, and they should be, in relative terms, 0.9% of GDP. Due to refinancing of earlier issues with higher interest rates, a further decrease in interest expenditure to 0.8% of GDP can be expected in the subsequent years of the outlook. Subchapter 3.3.3 deals with these issues in detail.

Table 3.7: General Government Expenditure

	2015	2016	2017	2018	2019
CZK bn					
Total expenditure	**1912**	**1904**	**1979**	**2037**	**2088**
Final consumption expenditure	**887**	**928**	**958**	**983**	**1008**
Collective consumption	418	441	454	466	480
Individual consumption	469	487	504	517	528
Social benefits in kind	142	146	150	155	160
Transfers of individual non-market goods and services	327	341	354	362	369
Social transfers other than in kind	**568**	**582**	**600**	**618**	**633**
Interest	**49**	**45**	**43**	**42**	**42**
Subsidies	**105**	**111**	**116**	**119**	**121**
Gross fixed capital formation	**232**	**176**	**186**	**191**	**197**
Other	**70**	**61**	**75**	**85**	**88**
Compensation of employees	**398**	**418**	**438**	**453**	**469**
Total social transfers	**710**	**728**	**750**	**773**	**793**
growth in %					
Total expenditure	**4.9**	**-0.4**	**3.9**	**3.0**	**2.5**
Final consumption expenditure	**4.4**	**4.6**	**3.2**	**2.6**	**2.6**
Collective consumption	5.9	5.4	2.9	2.8	2.9
Individual consumption	3.1	4.0	3.5	2.4	2.2
Social benefits in kind	1.4	3.1	3.0	3.0	3.0
Transfers of individual non-market goods and services	3.9	4.3	3.7	2.2	1.9
Social transfers other than in kind	**2.3**	**2.4**	**3.0**	**3.0**	**2.5**
Interest	**-12.8**	**-7.4**	**-5.0**	**-3.0**	**-0.6**
Subsidies	**5.6**	**5.6**	**5.0**	**2.0**	**2.0**
Gross fixed capital formation	**30.5**	**-24.3**	**6.0**	**2.7**	**2.7**
Other	**-16.1**	**-12.7**	**22.5**	**13.1**	**3.2**
Compensation of employees	**4.8**	**5.0**	**4.9**	**3.5**	**3.5**
Total social transfers	**2.1**	**2.6**	**3.0**	**3.0**	**2.6**

Source: Year 2015 CZSO (2016b). Forecast and calculations by MF CR.

3.3.3 General Government Debt

In 2016, we expect the general government debt to be CZK 1,814 billion, i.e. 38.6 % of GDP. In absolute terms, the general government debt should decrease by more than CZK 22 billion in comparison with 2015. The decrease should be determined by reduction in the state debt (by CZK 13 billion) due to a significantly improved cash development of the state budget balance and effective asset management in the state treasury system, as well as due to reduction in the local government debt in connection with their surplus performance.

In terms of trends, the relative debt ratio of the general government sector has been significantly improving in recent years. With the current fiscal policy stance, we expect this trend to continue. A decline in the debt-to-GDP ratio was recorded in 2014 for the first time since 2007. Overall, the general government debt decreased in relative terms by 4.6 pp between 2013 and 2015. The CR is still one of the relatively least indebted countries in the EU. The debt-to-GDP ratio level is relatively safely far from both the debt reference value given by the Maastricht Convergence Criteria and the Stability and Growth Pact and below the limit of the draft national debt rule included in the set of proposals on regulations of budgetary responsibility approved in October 2016 in the third reading in the Chamber of Deputies of the Parliament of the CR.

We also predict a decrease in debt-to-GDP ratio in the years 2017–2019, in total by approx. 1.4 pp down towards 37 % (Table 3.8). The main factor for the forecast of the general government debt is the outlook of this sector's finances.

Due to the continued low government bond yields and decrease in the debt-to-GDP ratio, we expect a more rapid decrease in contributions of interest expenditure to a change in the debt-to-GDP ratio in comparison with the outlook in the 2016 Convergence Programme of the CR (MF CR, 2016a). Record-breaking low yields on government bonds in all maturity segments were achieved, among other things, thanks to positive perception of the CR's fiscal discipline on financial markets. This was also confirmed by international rating agencies; they appreciated in particular budgetary stability and resilience to external shocks. Another factor influencing interest rates is excess liquidity on interbank markets due to the effect of easing of CNB and ECB monetary policies and due to time-limited regime of foreign exchange interventions or also lower supply of government bonds on the primary market in

connection with the favourable development of cash collection of the state budget and effective asset management in the state treasury system. As a result of these events, medium-term government bonds with negative yields were sold on the primary market in late August 2015 for the first time in the history of the CR. Since September 2015, the CR has regularly achieved negative yields to maturity in auctions of medium-term and long-term government bonds within the short end of the yield curve and also in auctions of treasury bills.

The current prediction does not foresee any significant privatisation revenue.

The highest share in the general government debt is held by the subsector of central government institutions (see Table 3.8). In 2016, the value of the debt is expected to be CZK 1,727.6 billion, i.e. 95% share in the total debt. The local government debt represents the remaining 5% of the total debt; for 2016, we predict its amount as CZK 101.1 billion. Its value should gradually decrease in 2017–2019 due to the expected surplus of this subsector (among other things due to more effective tax collection and increase in income from shared taxes due to changes in tax assignment). The subsector of social security funds does not have any debt in 2016.

Table 3.8: Gross Consolidated Government Debt

		2014	2015	2016	2017	2018	2019
General government	*CZK bn*	**1819**	**1836**	**1814**	**1872**	**1920**	**1948**
Central government	*CZK bn*	1714	1740	1728	1787	1838	1868
Local government	*CZK bn*	116	111	101	99	96	95
Social security funds	*CZK bn*	1	1	0	0	0	0
General government debt to GDP ratio	*% of GDP*	**42.2**	**40.3**	**38.6**	**38.5**	**38.0**	**37.1**
Contributions to change in debt-to-GDP ratio							
Change in debt	*p.p.*	-2.7	-1.9	-1.7	-0.1	-0.4	-0.9
Primary balance	*p.p.*	**0.6**	**-0.4**	**-0.7**	**-0.7**	**-1.0**	**-1.3**
Interest	*p.p.*	**1.3**	**1.1**	**1.0**	**0.9**	**0.8**	**0.8**
Nominal GDP growth	*p.p.*	**-2.2**	**-2.2**	**-1.3**	**-1.3**	**-1.4**	**-1.5**
Stock-flow adjustment	*p.p.*	**-2.4**	**-0.3**	**-0.7**	**1.0**	**1.1**	**1.1**
Difference between cash and accruals	*p.p.*	0.1	-0.4	0.0	0.0	0.0	0.0
Net acquisition of financial assets	*p.p.*	-2.4	0.3	-0.7	1.0	1.1	1.0
Revaluation effects and other	*p.p.*	-0.1	-0.1	0.0	0.0	0.0	0.0

Source: Data on general government sector and subsectors debt up to 2015 CZSO (2016b). Forecast and calculations by MF CR.

3.3.4 Cyclical Development, Breakdown of the Balance and Fiscal Impulse

We expect that the positive output gap, in which the Czech economy has been since 2015, should widen throughout the forecast horizon. As a result, we presume the cyclical component of the general government balance to be also positive.

In the item One-off and other temporary measures, one-off revenue of CZK 5.2 billion to the Deposit Insurance Fund from bankruptcy settlement was taken into account in 2015. The most significant one-off expenditure in 2015 was financial lease of the supersonic aircrafts JAS-39 Gripen in the amount of CZK 9.9 billion. In 2015, there was also a one-off expenditure due to returns of gift tax collected in an unauthorised manner from emission allowances in the expected amount of CZK 4.5 billion. In 2016, there has been realised one-off revenue from auction sales of new frequency bands in an estimated amount of CZK 2.6 billion. On the expenditure side, in 2016 there has been a one-off pension increase of CZK 3.5 billion and also subsidies to help farmers due to draught of CZK 1.2 billion have been paid. We expect the overall impact of one-off and temporary measures to be negligible in 2017–2019.

Fiscal effort, which was positive in 2015 (and we also expect a positive result for 2016), will probably be slightly negative in 2017. This is mainly due to expenditure measures such as increased expenditure on wages and salaries or social benefits including pensions. On the other hand, the method of cyclical component calculation is not completely able to precisely handle discretionary tax revenue. Specifically, those revenues which do not depend on the stage of the economic cycle, such as the measures currently being implemented against tax evasion. We expect that the total general government balance will remain unchanged in 2016 and 2017, at −0.2% of GDP. In 2018–2019, we expect the fiscal policy to be more restrictive again due to the gradual start of measures to improve tax collection and due to slowdown of dynamics of some expenditure items (see Subchapter 3.3.2). The total balance should thus continually improve to 0.5% of GDP in 2019; while we expect the structural balance to be practically balanced in that year.

Table 3.10 provides a comparison of the development of the fiscal input impulse and the fiscal effort with the opposite sign. It should be noted that these indicators are used for different purposes. Whereas fiscal effort indicates the fiscal policy character (e.g. the pace of consolidation) and in the EU environment it is used to

evaluate excessive deficit procedure implementation or evaluate the fulfilment of the preventive arm of Stability and Growth Pact (the medium-term budgetary objective), fiscal impulse expresses the impact of fiscal policy on economic growth, and therefore it is adjusted for some other items.

It is apparent that the value of fiscal impulse significantly differs from fiscal effort (with the opposite sign) in 2015 and 2016. The main cause of the difference is exclusion of income from EU funds and of contributions to the EU budget, which are not a fiscal impulse; whereas the investment expenditure co-financed from the EU are part of fiscal impulse. The YoY decline in investment expenditure is the main cause of the significantly negative input impulse in 2016. The values of fiscal impulse and the opposite fiscal effort are essentially identical for 2018–2019. For more information on the methods of fiscal impulse calculation see the November 2015 Fiscal Outlook (MF CR, 2015).

Table 3.9: Structural Balance of the General Government (OECD Method)

		2015	2016	2017	2018	2019
Real GDP growth	%	4.5	2.4	2.5	2.4	2.4
Potential GDP growth	%	1.8	2.1	2.2	2.3	2.3
Output gap	% PP	0.6	0.9	1.1	1.2	1.4
General government balance	% of GDP	**-0.6**	**-0.2**	**-0.2**	**0.1**	**0.5**
Cyclical budgetary component	% of GDP	0.2	0.3	0.4	0.5	0.5
Cyclically adjusted balance	% of GDP	**-0.8**	**-0.6**	**-0.6**	**-0.3**	**0.0**
One-off and other temporary measures	% of GDP	-0.2	-0.1	0.0	0.0	0.0
Structural balance	% of GDP	**-0.6**	**-0.4**	**-0.6**	**-0.3**	**0.0**
Change in structural balance (fiscal effort)	p.p.	**0.5**	**0.2**	**-0.2**	**0.3**	**0.3**
Interest	% of GDP	1.1	1.0	0.9	0.8	0.8
Structural primary balance	% of GDP	**0.5**	**0.5**	**0.2**	**0.5**	**0.8**
Change in structural primary balance	p.p.	**0.3**	**0.1**	**-0.3**	**0.3**	**0.2**

Source: MF CR.

Table 3.10: Fiscal Impulse

(in percentage points)

	2015	2016	2017	2018	2019
Fiscal effort with opposite sign (expenditure – revenue)	**-0.5**	**-0.2**	**0.2**	**-0.3**	**-0.3**
Difference of fiscal effort and fiscal impulse	**-1.0**	**1.1**	**-0.2**	**0.0**	**0.0**
Difference in revenue	**-0.8**	**1.1**	**-0.1**	**0.0**	**0.0**
EU flows	-0.8	1.2	-0.1	0.0	0.0
Renewable energy inputation	0.0	-0.1	0.0	0.0	0.0
Differnce in expenditure	**-0.2**	**0.0**	**-0.1**	**0.0**	**0.0**
Adjusted interest expenditure	-0.2	-0.1	-0.1	0.0	0.0
EU flows	0.0	0.0	0.0	0.0	0.0
Renewable energy inputation	0.0	0.1	0.0	0.0	0.0
Fiscal impulse - input approach	**0.5**	**-1.3**	**0.4**	**-0.3**	**-0.3**

Note: The basis for calculation of the fiscal input impulse is the YoY change in the structural balance with the opposite sign, adjusted for certain other items, which are, in addition to interest payments, mainly income from EU Funds (items D.74 – Current international cooperation and D.92 – Investment grants) and contributions to the EU budget (D.76 – Value added tax and Gross national income-based EU own resources) and redirecting, i.e. imputations of renewable energy resources, which includes certain amounts in revenue items D.214 – Excise taxes, D.29 – Other taxes on production and the corresponding expenditure items D.319 – Subsidies and D.759 – Other miscellaneous current transfers. Further adjustment of the impulse for activating science and research and payments for state-insured persons do not affect the balance; however, due to various multiplicators they may influence the output impulse calculation.

Source: MF CR.

3.4 Sensitivity Analysis

The sensitivity analysis is conducted by means of a dynamic general equilibrium model developed by the MF CR. The model enables us to analyse the impact of both macroeconomic and fiscal shocks on the economy. In the case of the small and open Czech economy, economic development is largely dependent on the development of the external environment, in particular within the EU. Sensitivity analyses thus focus on this aspect and show the importance of the impacts of worse than expected growth dynamics in the EU on the domestic economy. Another alternative scenario simulates the impacts of an unexpected sharp increase in the currently low domestic interest rate on the Czech economy. All alternative scenarios are derived from the macroeconomic framework of this Fiscal Outlook.

3.4.1 Lower GDP Growth in the EU in 2017

The first scenario is based on an assumption that GDP growth in the EU will be approximately 2 pp lower in 2017 compared to the baseline scenario. This difference corresponds to the amount of standard deviation of growth for the period from 2000 to mid- 2016.

Considering the close relationship between the Czech economy and the EU, this scenario would impact negatively on real growth in the CR primarily through exports, more than 80% of which are directed to EU countries. Lower foreign demand would lead to a decrease in export activity and a deterioration of the current account balance; however, this would be partially compensated by lower imports. A worse result for foreign trade would be negatively reflected in real GDP growth and in the development of unemployment. This effect would be most marked in 2017. Mainly because of current positive situation on the labour market, we do not expect the effects on unemployment to be pronounced. Influences on inflation would stem mainly from lower demand for domestic goods, both from domestic and foreign entities.

In the standard regime, the impacts of deterioration on the foreign trade balance would be mitigated, to a certain extent, by fluctuations in the CZK exchange rate. Our simulations, however, expect, in accordance with the policy announced by the CNB, that the exchange rate will be maintained above the level of 27 CZK/EUR in the first half of 2017 and that the monetary policy stance will not allow its sharp appreciation even in the subsequent period.[4]

The investment activity of firms would also be affected negatively, the growth rate of which would be almost 2% versus the baseline scenario expecting growth of 2.8%. Household consumption would record a decrease in the growth rate of approximately 1.3 pp, in particular as a consequence of lower wage growth (and higher unemployment).

The general government balance would be affected by lower income tax revenue from both individuals and companies, as well as by lower tax receipts from consumption. Together with an increase in spending due to a greater amount paid out in unemployment benefits, general government deficits would deteriorate by 0.4 pp in the first year and by 0.2 pp and 0.1 pp, respectively, in the following years. Higher deficits would accumulate subsequently into higher debt, at 37.3 % of GDP in the last year of the monitored period (versus 37.1 % considered in the baseline scenario).

Alongside the subsequent recovery of foreign demand in 2018, the Czech economy would accelerate its growth and approximation of the baseline scenario.

3.4.2 Permanently Lower GDP Growth in the EU

The second scenario analyses long-term unfavourable economic development in the EU, defined similarly as in the previous scenario. Thus, there is 2 pp lower growth again but now, however, in each year of the outlook (2017–2019).

Under this scenario, the Czech economy's negative response in each year of the presumed pessimistic development in the EU would be caused by the same mechanisms as in the previous scenario. The most significant differences versus the baseline scenario would occur in the first two years of the forecast. However, since the economy would gradually tend to adjust and begin to recover, the negative impacts of development abroad would be gradually mitigated in the following years (probably, however, beyond the outlook horizon). In spite of that, the debt-to-GDP ratio should continue to grow more quickly in the general government sector versus the baseline scenario, by 1.7 pp in the last year of the outlook.

3.4.3 Rise in the Domestic Interest Rate

The last scenario considered is the assumed sudden growth in the short-term domestic interest rate of 1.5 pp in 2017. In this scenario, we also assume an unchanged CZK/EUR exchange rate in the first half of 2017.[5] A higher interest rate reduces domestic supply, in particular through investment (and to a smaller extent through consumption), which would be hampered by higher interest rates (increasing costs of investment due to higher rates on loans to companies). In consequence, the growth rate of household consumption would decrease through lower wage growth implied by the problems of companies. In contrast, consumption would be influenced favourably by slightly lower domestic price level. Impacts on foreign trade in the first half of 2017 would be more or less neutralised by the central bank's monetary policy. However, in the subsequent period, the gradual slight strengthening of the CZK exchange rate would affect worsening of the balance of foreign trade, and therefore also GDP.

In total, the aforementioned effects would be reflected within the horizon of the outlook by a lower GDP growth, approximately by 0.3–0.6 pp, and concomitant higher unemployment.

As in the case of lower GDP growth in the EU, but to a lesser extent, general government revenue would be affected by the drop in tax revenue both from businesses and individuals. With higher unemployment, government expenditure would again rise. A negative balance would then be reflected in debt accumulation, whose yield curve itself would also be impacted by higher interest rates.

[4] The assumption about the development of the koruna exchange rate is consistent in all sensitivity scenarios with the basic macroeconomic scenario of the Fiscal Outlook.

[5] Although this scenario is not very probable to happen, we include it for the sake of complexity and comparability with previous Fiscal Outlooks and Convergence Programmes.

Table 3.11: Model Scenarios of Macroeconomic Simulations

		2016	2017	2018	2019
Baseline Scenario					
Gross domestic product	*Y-o-Y in %*	**2.4**	**2.5**	**2.4**	**2.4**
Private consumption	*Y-o-Y in %*	2.5	2.8	2.4	2.3
Gross fixed capital formation	*Y-o-Y in %*	-3.6	2.8	2.9	3.1
Exports	*Y-o-Y in %*	5.8	4.8	4.9	5.0
Imports	*Y-o-Y in %*	4.6	5.0	4.9	4.9
Inflation (CPI)	*Y-o-Y in %*	**0.5**	**1.2**	**1.6**	**1.8**
Unemployment rate	*in %*	**4.0**	**3.9**	**3.9**	**3.8**
General government balance	*% of GDP*	**-0.2**	**-0.2**	**0.1**	**0.5**
Gross government debt	*% of GDP*	**38.6**	**38.5**	**38.0**	**37.1**
Alternative Scenario I - Lower GDP Growth in EU in 2017					
Gross domestic product	*Y-o-Y in %*	**2.4**	**1.2**	**2.3**	**2.5**
Private consumption	*Y-o-Y in %*	2.5	1.5	1.9	2.1
Gross fixed capital formation	*Y-o-Y in %*	-3.6	1.9	2.9	3.4
Exports	*Y-o-Y in %*	5.8	3.0	4.8	5.1
Imports	*Y-o-Y in %*	4.6	3.6	4.7	5.0
Inflation (CPI)	*Y-o-Y in %*	**0.5**	**0.8**	**1.2**	**1.5**
Unemployment rate	*in %*	**4.0**	**4.4**	**4.2**	**3.9**
General government balance	*% of GDP*	**-0.2**	**-0.6**	**-0.1**	**0.4**
Gross government debt	*% of GDP*	**38.6**	**39.0**	**38.2**	**37.3**
Alternative Scenario II - Permanently Lower GDP Growth in EU					
Gross domestic product	*Y-o-Y in %*	**2.4**	**1.2**	**1.3**	**1.3**
Private consumption	*Y-o-Y in %*	2.5	1.5	0.8	0.6
Gross fixed capital formation	*Y-o-Y in %*	-3.6	1.9	2.1	2.6
Exports	*Y-o-Y in %*	5.8	3.0	3.3	3.5
Imports	*Y-o-Y in %*	4.6	3.6	3.5	3.6
Inflation (CPI)	*Y-o-Y in %*	**0.5**	**0.8**	**1.1**	**1.3**
Unemployment rate	*in %*	**4.0**	**4.4**	**4.4**	**4.3**
General government balance	*% of GDP*	**-0.2**	**-0.6**	**-0.4**	**-0.1**
Gross government debt	*% of GDP*	**38.6**	**39.0**	**39.1**	**38.8**
Alternative Scenario III - Higher Interest Rate					
Gross domestic product	*Y-o-Y in %*	**2.4**	**2.2**	**1.8**	**1.9**
Private consumption	*Y-o-Y in %*	2.5	2.7	2.1	2.0
Gross fixed capital formation	*Y-o-Y in %*	-3.6	2.5	2.5	2.7
Exports	*Y-o-Y in %*	5.8	4.6	4.6	4.7
Imports	*Y-o-Y in %*	4.6	4.8	4.9	4.9
Inflation (CPI)	*Y-o-Y in %*	**0.5**	**1.1**	**1.5**	**1.7**
Unemployment rate	*in %*	**4.0**	**4.2**	**4.3**	**4.2**
General government balance	*% of GDP*	**-0.2**	**-0.3**	**-0.1**	**0.3**
Gross government debt	*% of GDP*	**38.6**	**38.6**	**38.4**	**37.6**

Source: Baseline scenario MF CR (2016b). MF CR calculations.

3.5 Long-term Sustainability of General Government Finance

In May 2015, the Ageing Report update (EC, 2015) was published, as it is every three years jointly published by the EC and the Economic Policy Committee within the Ageing Working Group. The Report contains projections of expenditure until 2060 traditionally in five areas—pensions, health-care, long-term care, education and unemployment benefits. MF CR actively participates in preparing this Report and processes forecasts of pension expenditures. The projections of other expenditures are calculated on the basis of a model developed by the EC and verified by the Member States.

In addition to macroeconomic and demographic assumptions and projections (see Table 3.12), approved reform measures are also factors influencing new projections.

Table 3.12: Demographic and Macroeconomic Assumptions of Projections

		2013	2020	2030	2040	2050	2060
Labour productivity growth	*per hour*	0.9	1.8	1.9	1.8	1.7	1.5
Real GDP growth	*%*	-0.9	1.6	1.9	1.6	1.5	1.7
Participation rate males	*%, aged 20–64*	86.1	87.6	86.8	86.1	87.8	88.7
Participation rates females	*%, aged 20–64*	69.5	72.2	72.4	71.9	74.8	76.0
Total participation rate	*%, aged 20–64*	77.9	80.0	79.7	79.2	81.4	82.5
Unemployment rate	*%, aged 20–64*	7.0	6.3	6.0	6.0	6.0	6.0
Population aged 65+ over total population	*%*	17.1	20.2	22.3	24.7	27.5	28.2

Source: EC (2015).

First and foremost, as far as the pension system parameters are concerned, mention should be made of prolonging the statutory retirement age. Historically, retirement age was first shifted to 63 years and subsequently to 65 years (for women, the age is differentiated according to the number of children raised). Retirement age will continue to differ according to the date, but the number of children raised will no longer be taken into consideration. Unification of the retirement age should occur after 2040, while for people born in 1977 the retirement age will be precisely 67 years. For each subsequent year, the retirement age will shift by two months per year (i.e. the year 1978 will have a statutory retirement age of 67 years and 2 months, the year 1979 will be entitled to a regular pension at 67 years and 4 months, etc.). Extending of the statutory retirement age also influences the conditions for permanent widows and widowers pensions, as well as early retirements. The limits for both types of pensions will also increase under the applicable rules.

Several changes in the area of statutory retirement age are currently proposed. The Government has agreed to introduce a ceiling for retirement age at 65 years with expected effect from 1 January 2018. The bill is now being considered in the Chamber of Deputies. The bill envisages the Ministry of Labour and Social Affairs' periodical reporting, every five years, on the pension system to the Government. The reports will evaluate the current retirement age and, where applicable, determine an adjusted retirement age based on the principle that an insured person is to spend a quarter of his/her life in retirement. However, changes to the retirement age should not apply to persons over 55 years of age at the time of revision. The Government will thus be able to commission the Ministry of Labour and Social Affairs, based on the report submitted, with preparation of respective proposals on changes to the pension system, especially determining the retirement age. Since the bill has not been passed yet, MF CR's projection does not include its impacts.

Since 2011, indexation of pensions had been determined according to a fixed rule, not by a minimal rule. The intention was to remove space for the government for discretion when determining the amount of pension indexation, in particular to avoid *ad hoc* increases in connection with the political cycle. However, as a result of consolidation efforts, there has been a change in indexation from the sum of consumer price index and one third of real wage growth to the sum of one third of consumer price index and one third of real wage growth for the period 2013 to 2015. The current Government cancelled this measure one year earlier and, on the contrary, for 2015 opted for an extraordinary indexation of pensions by 1.8% as a compensation for previous indexation cuts. As a result of very low inflation, the Government paid out, in February 2016, a one-off benefit in the amount of CZK 1,200 in connection with standard (statutory) indexation by 0.4%. Due to the continuing low inflation, there has been a change to the system of pension indexation which returns a limited possibility of discretion to the Government. Should the situation arise that an increase in the average pension does not reach 2.7% under the standard indexation formula, the Government may order indexation of pensions up to this value. In other cases it is proceeded strictly in accordance with the statutory indexation formula. The amendment also advanced the reference period for determining the price development by two months (from August to June).

Pension projections also markedly reflect the influence of lower costs for disability pensions. In extending the number of disability pension types (from two – full and partial – to three groups), some previously full pensions were shifted to the second level (with the previous partial pension rate) and some of the previously partial disability pensions were shifted to the first level (which has a rate at two-thirds of the formerly partial disability pensions). In addition, this effect could be, with regard to new available data on the developments, taken into account in the current projections to a larger extent than in the previous ones (EC, 2012).

The last update of long-term projections was published in the 2015 Ageing Report (EC, 2015). From the perspective of these projections, the most problematic area appears to be the area of public expenditure on health care (see Table 3.13). This is estimated to increase from the initial value of 5.7% of GDP in 2013 to 6.7% of GDP in 2060. The projection of health-care expenditure in a model of the MF CR is detailed in Chapter 4. The quickest increase can be seen in expenditure of long-term care the volume of which will probably double. In volume terms, however, this constitutes a very small expenditure item.

The originally most important item in terms of budgetary impact, pensions, should increase from 9.0% of GDP in 2013 to 9.7% of GDP in 2060. The negative factor still remains the demographic development; nevertheless, the

current demographic projection (EC, 2014) is more favourable for the CR than projections in the last rounds.

In addition to the aforementioned expenditure of pensions, the resulting projection of the pension system balance (see Graph 3.1), also considers revenue of the pension system, which is at the constant level of 7.9% of GDP in all years of the projection. We expect that until 2040 this balance will be relatively stable at a level around −1% of GDP. In the following period, the unfavourable demographic development will take effect and the balance will fall nearly to −2% of GDP before the end of the projection horizon. It will reach its minimum in 2057, while the deficit will start decreasing in the last years. The reason is both the demographic development and the pension reforms adopted, in particular the current shifting of the statutory retirement age. A similar development is apparent virtually in all projected components of pension expenditure. In contrast, course of other projected expenditure components dependant on the age structure (health care, long-term care, education) shows a permanent increase in the whole horizon.

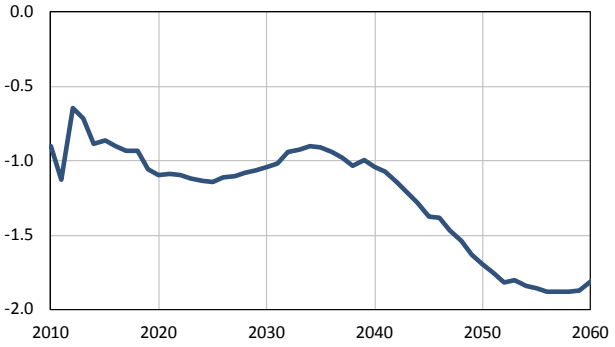
As a result of recent measures (partial discretion in indexation and in particular the ceiling on the retirement age), pensions will probably become again the most problematic issue in terms of long-term sustainability. Change to the possibility of minimum indexation should have an impact in long-term projections of approx. 0.2 pp, due to the assumptions of inflation and real wage developments used in the projections. In 2060, the level of pension expenditure would be, in comparison with the previous projection (EC, 2015), around 9.9% of GDP. As regards the absolute ceiling of the retirement age, the Ministry of Labour and Social Affairs estimates its impact at approx. 1.5% of GDP at the end of the projection horizon (2060). In other words, the absolute ceiling on the retirement age would lead to an increase in pension expenditure, in current terms, by approx. CZK 70 billion.

Table 3.13: Long-term Expenditure Projections 2013–2060
(in % of GDP)

	2013	2020	2030	2040	2050	2060
Pension expenditure	9.0	9.0	9.0	9.0	9.6	9.7
Health care	5.7	5.9	6.2	6.5	6.6	6.7
Long-term care	0.7	0.9	1.0	1.2	1.2	1.4
Education expenditure	3.4	3.6	3.9	3.7	4.0	4.1

Note: Results are calculated for the ESA 2010 methodology. The new methodology affected only the level, not the dynamics of macroeconomic assumptions of the projections, which in the EC (2014) have been in the ESA 95 methodology.
Source: EC (2015).

Graph 3.1: Projection of Pension Account Balance
(in % of GDP)



Source: Years 2010–2015 based on the State Final Account. Years 2016–2060 projections of MF CR and the Ageing Working Group of the Economic Policy Committee.

The sustainability analysis, based on long-term projections, identifies the extent of fiscal consolidation necessary to ensure the stability of public finance. So-called sustainability indicators are calculated, showing the scope of measures required for decreasing expenditure or increasing revenues as a percentage of GDP in order that they correspond to the required levels.

The EC publishes three standard sustainability indicators (EC, 2016a). The S1 indicator expresses generally the percentage of GDP by which it is necessary to permanently improve the primary balance of the government sector so that general government debt amounts to 60% of GDP in 2030. This indicator for the CR is currently at −0.6% of GDP (an improvement from 0.1% of GDP).

The S2 indicator specifies the amount of fiscal effort necessary for fulfilling the intertemporal budget constraint in the infinite horizon. According to the EC's latest Fiscal Sustainability Report (2016a), this indicator stands at 3.2% of GDP (an improvement from 5.5% of GDP).

Lastly, the S0 indicator specifies possible fiscal or financial risks over a short period of time. It is a composite leading indicator consisting of macro-financial and fiscal indicators, which in the past proved to be relevant for detecting fiscal risks in the near future. Its nature is thus different from the remaining two indicators S1 and S2, which determine the necessary fiscal consolidation; S0, in contrast, quantifies risk. The S0 indicator level for the CR is currently around 0.11, which is significantly below the critical limit of 0.43.

The CR is thus currently assessed as a medium-risk country in the area of long-term sustainability of public finance. The reason is the value of the S2 indicator as the values of S0 and S1 rather correspond to a low risk. This confirms the fact that the CR should further implement measures to enhance long-term sustainability.

Table 3.14: Sustainability Indicators S1 and S2 for the Czech Republic
(in % of GDP)

	S1	S2
Cost of Ageing	0.7	2.5
Initial budgetary position	0.2	0.8
Impact of current debt	-1.5	
Total	**-0.6**	**3.2**

Source: EC (2016a).

4 Long-term Projections of Public Expenditure on Health Care

Long-term projections of public expenditure on health care are co-ordinately performed in the EU in regular three-year intervals within the Working Group on Ageing Populations and Sustainability of the Economic Policy Committee, and they are the basis for updates to the Ageing Report. This document of the EC and the Economic Policy Committee was last published in 2015 (EC, 2015). Projections of health-care expenditure are performed by the EC for the purposes of this Report and verified by Member States.

In addition to verification of EC's calculations, MF CR performs its own long-term projections of public expenditure on health care in order to flexibly respond to new data on actual expenditure in the previous year, alternative demographic projections or to quantify the impact of planned policies in the area of health care on the sustainability of public finance. Long-term projections do not aim to predict specific values but they only show the trend and dynamics of development of these expenditures in the long run. Therefore, they may not be confused with predictions. Expenditure projections are performed under the assumption of no policy change. They thus reflect the essence of the system legislatively enshrined at the time of projection creation. This chapter presents results of projections of public expenditure on health care in the CR with the current horizon to 2060.

4.1 Assumptions for Projections and the Institutional Framework of the Health-Care System

The projections of health-care expenditure are based on assumptions of the EC and Eurostat. The EC provides macroeconomic assumptions, Eurostat provides demographic projections. The projections contained herein thus do not reflect the current medium-term macroeconomic outlook of the MF CR.

The results of the projections of health-care expenditure presented in this chapter differ slightly from the results in EC (2015); however, the resulting trend development which is crucial for projections is the same. The difference is mainly due to a different base year for projections (here 2014 as opposed to 2013 in the EC's publication) and some methodological differences (e.g. own adjustment of age-specific expenditure profiles in the form of interpolation of unit costs for individual years).

Health-care expenditure according to the EC is defined in a narrower sense than health-care expenditure as reported e.g. by the CZSO. In our case, the definition corresponds to that by the EC, namely public expenditure on health care (i.e. social security funds expenditure and expenditure of the state budget, including local government budgets), which, however, does not include expenditure on long-term care but does include expenditure on investments in health care[6].

Health-care expenditure in the base year 2014 is influenced by a transition to a new methodology of the System of Health Accounts 2011. It included new items[7] for long-term care and extended the scope of preventive care expenditure.

Funding of health care in the CR is primarily based on the payment of contributions to compulsory health insurance by employees, employers and self-employed persons. Another component of the public health insurance system revenues is payments from the state budget for state insured persons (in 2014, 6.1 million persons, mainly pensioners, the unemployed, children and women on maternity leave). These payments from the state budget are paid monthly by the MF CR to a special account of public health insurance based on the number of state insured persons communicated by health insurance companies. Total resources of the public health insurance system are subsequently, based on the number of insured persons, their sex, age structure and cost indexes of age groups of insured persons, redistributed from the special account of public health insurance among individual health insurance companies to finance health care guaranteed by Act No. 48/1997 Coll. In the long term, payments from public health insurance cover approx. 77% of health-care expenditure. State budget expenditure on specific

[6] Thus defined health care expenditure may be expressed schematically as $\sum_{i=1}^{9} HC(i) - HC(3) + HK(1)$, where categories HC(i) and HK(1) denote health care expenditure according to the health care function classification in the System of Health Accounts 2011.

[7] According to the System of Health Accounts 2011 methodology (CZSO, 2016c), part of expenditure on inpatient curative care was moved to public expenditure on inpatient long-term care, and expenditure on day long-term care were included in 2014. The scope of expenditure on home-based long-term care as well as items of expenditure on preventive care were extended. The result of the methodological changes in using the EC's approach, is a decrease in public expenditure on health care in comparison with the previous methodology by approx. 0.6% of GDP from the original level of approx. 6.1% of GDP for 2014.

activities not covered by the public health insurance (e.g. expenditure on science, education of health-care workers, operation of public health authorities, etc.) is complementary funding from public budgets. Social security funds expenditure, state budget and local government expenditure thus on average cover approx. 84% of total health-care expenditure. Household out-of-pocket payments, which include out-of-pocket of health-care recipients or their possible cost-sharing, reached 14.9% of total health-care expenditure in the CR in 2014 (i.e. approx. 1% of GDP). In the long term, they cover approx. 14% of total health-care expenditure, which was also below the OECD average. The smallest share in health-care funding in the CR is held by private sources without household out-of-pocket payments (e.g. voluntary health insurance). These cover 2% of total health-care expenditure.

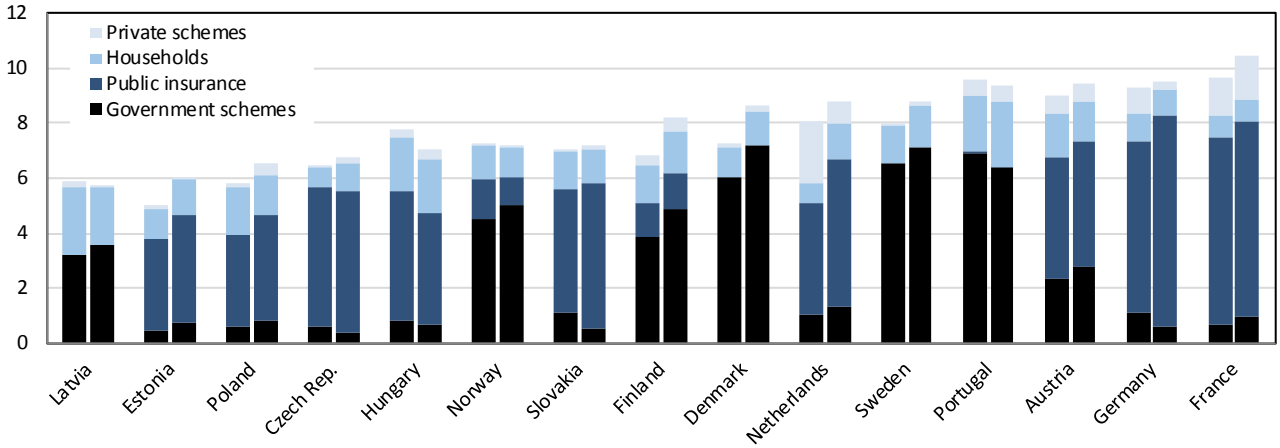
Several changes took place in the health-care system in the CR in recent years, which impacted its funding. In 2013, a ruling of the Constitutional Court abolished, with effect from 2014, regulatory fees for hospital stays and, with effect from 2015, the Government abolished regulatory fees for clinical examination and for prescriptions in pharmacies. At present, in the health-care system, households only pay fees for the use of emergency medical services. Introduction of the fees in 2008 brought approx. CZK 5 billion per year to the public health insurance system, which increased the share of household expenditure in total health-care expenditure (from 13.7% in 2007 to 15.1% in 2013). In the coming years, we can expect, due to the abolishment of regulatory fees, stagnation of this share or rather a slight decrease at the expense of increasing the share of general government expenditure.

Since 2013, health-care expenditure from the state budget to the public health insurance system has been increasing as a result of discretionary increases in payments for state insured persons, from a monthly amount of CZK 723 at the end of 2012 to CZK 920 approved by the government for 2017. Also under way is implementation of a system of classification of clinical cases in the area of inpatient acute care which should reflect real prices of operations and thus increase the effectiveness of spending of health insurance companies' resources.

In 2014, public expenditure on health care amounted to 5.5% of GDP in the CR, which is below the OECD average (29 OECD countries were evaluated).

In international comparison, the CR is, together with e.g. France or Germany, one of the countries whose system of health-care financing is primarily based on public health insurance, where revenue from contributions covers approx. 70% of total health-care expenditure. Conversely, in Sweden or Denmark, health care is financed mainly from central government budgets and local government budgets (they finance more than 80% of total health-care expenditure). Household out-of-pocket payments for health care play an important role in Scandinavian countries (approx. 18% of total expenditure) and in, for example, Hungary, Portugal or Latvia, where they cover more than 25% of health-care expenditure. In France or the Netherlands, private resources excl. household out-of-pocket payments, are relatively largely represented in the structure of funding resources (approx. 15% of total expenditure).

Graph 4.1: Health-Care Expenditure by Financing Scheme in Selected OECD Countries (2004 and 2014)
(in % of GDP)



Note: Data for 2014 are based on new methodology of System of Health Accounts 2011 and contain a structural break.
Source: OECD (2011, 2016). MF CR Calculations.

4.2 Results of Projections of Health-Care Expenditure

The amount of health-care expenditure is generally affected by factors influencing demand for health care (population growth and its structure, health status, individual and national income) and factors on supply side (mainly institutional framework and the system of health-care funding, its availability, technological progress, etc.). The supply factors, however, are relatively hard to quantify and, moreover, depend on *ad hoc* measures. Therefore, their influence is usually not included in long-term projections. They are described in more detail in Box 1. Long-term projections primarily focus on the demand side, and some supply factors are analysed in the context of sensitivity scenarios. Purely demographic factors (population development), factors influencing the health status of population and, finally, non-demographic factors (e.g. in association with the Wagner's law of public expenditure increasing, which means with increasing income and welfare of society the demand for the general government sector services – education, health care, etc. – grows more than proportionally) are distinguished.

It is obvious that total health-care expenditure increases with population growth. The effect of population ageing is significantly less clear. The expenditure profiles in Graph 4.2 clearly show an increase in average expenditure in higher age cohorts, starting approximately at 50 years of age. The key question regarding the impact of ageing on public expenditure is whether we spend the additional time from increasing life expectancy in good or bad health and whether, therefore, the overall effect on spending relatively increases or remains constant. A ten-year comparison of expenditure profiles does show nominal increase in expenditure, but no significant change is noticeable in the structure. As a percentage of GDP per capita, as shown in Graph 4.3, there is an apparent shift of the curve to the right—this can be seen as a sign that increased morbidity moves to higher age, this is, that people gradually spend more years in good health (for details see the reduced morbidity scenario in Subchapter 4.3). The second problem related to population ageing is the increasing old-age dependency ratio (see Table 4.1).

Box 1: Effect of Supply Factors on Health-Care Expenditure

In addition to demographic effects and income growth (GDP) which are factors influencing the demand for health care, factors on the supply side are also described. These include in particular the influence of technological progress, development of relative prices (Baumol effect) or institutional framework of the health-care system. Due to poor data availability, long-term projections in the current form focus on demand side only. Evaluation of supply factors effect, which in general account for excess cost growth, can be found in the following studies. These evaluate how much the health-care expenditure growth (adjusted for demographic effects) differs from a mere GDP growth.

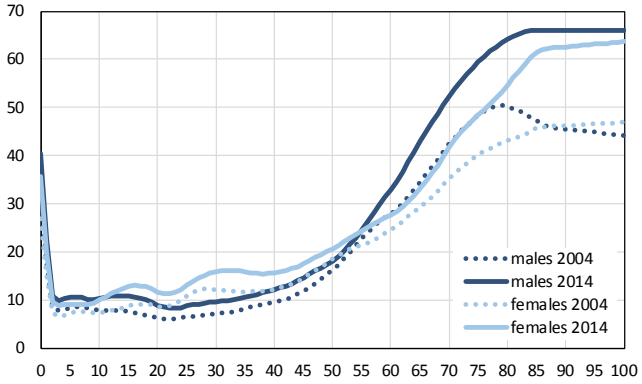
Maisonneuve and Martins (2013) confirm in their study that faster growth in health-care expenditure than income is significantly influenced by **technological progress in health care**. Health-care technology is understood mainly as medicines, medical devices, etc. The effect of technological progress in health care can be captured as a residue after separation of demographic changes effect, health status, prices and income (e.g. Peden and Freeland, 1998), or technological progress can be captured using a proxy variable such as expenditure on research and development (e.g. Okanude and Murthy, 2002), linear time trend (e.g. Dybczak and Przywara, 2010) or the number of certain medical devices (e.g. Baker and Wheeler, 2008).

Baumol (1967, 2012) put forward a **hypothesis of relative prices**. It is based on the premise that in services such as health care or education where automation is not possible to the same extent as in other sectors, there is a significantly slower growth in labour productivity. At the same time, however, wage growth driven by increasing labour productivity growth in the rest of the economy extends equally to these services, otherwise doctors and teachers would prefer other professions. This creates imbalance: the price of production unit in health care grows in comparison with the price of production unit in the rest of the economy, or the relative price of health care in comparison with the rest grows. Assuming that health care is price inelastic good, an increase in relative price will necessarily translate into total health-care expenditure growth. The importance of this effect on health-care expenditure growth was tested and confirmed e.g. in Hartwig (2008), for EU countries e.g. in Medeiros and Schwierz (2013).

Expenditure is also affected by the institutional **characteristics of the health-care system**. Defining characteristics include health-care financing system – social-insurance-based or tax-based system. Wagstaff (2009) shows, for example, that health-care expenditure per capita is generally higher in countries with social-insurance-based systems. Other determinants of the system are the method of payment for health care – by operation, capitation, etc. (e.g. Gerdtham et al., 1998), type of entity providing health services – whether health services are primarily provided by the public sector or the private sector, or the supply size of health-care personnel (e.g. Gerdtham and Jonsson, 2000).

Graph 4.2: Annual Public Health-Care Expenditure in the Czech Republic by Age Cohort (Age Profiles)

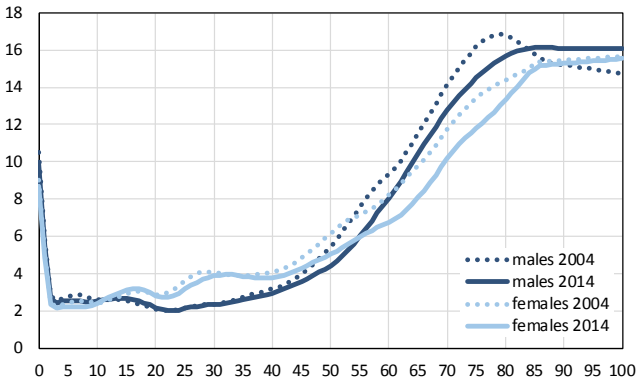
(CZK thousands per capita)



Source: CZSO (2009, 2016c). MF CR Calculations.

Graph 4.3: Annual Public Health-Care Expenditure in the Czech Republic by Age Cohort

(in % of GDP per capita)



Source: CZSO (2009, 2016c). MF CR Calculations.

Based on the above factors, projections on health-care expenditure may be represented, in a simplified manner[8], by the following schematic equation:

Total expenditure = **Population** × **Expenditure profile** × **Indexation according to GDP growth**

Based on the assumptions adopted with respect to these three areas (population growth, health status and the influence of changes in production), various alternative scenarios to the baseline scenario of projection of health-care expenditure may be considered.

In all scenarios, indexation according to the GDP growth is expressed as

$$\upsilon_t = \Delta Ypc_t \cdot \varepsilon_t \tag{1}$$

where ΔYpc_t is the YoY change in GDP per capita, and ε_t means income elasticity. Unit costs in year *t* for the given gender *g* and age *a* are then calculated using this indexation for the previous year's expenditure:

$$c_{g,a,t} = c_{g,a,t-1} \cdot \upsilon_t \tag{2}$$

Total expenditure for gender *g* in the respective age cohort *a* at time *t* are calculated from unit expenditure using population projection *p*:

$$S_{g,a,t} = p_{g,a,t} \cdot c_{g,a,t} \tag{3}$$

Table 4.1: Demographic and Macroeconomic Assumptions of Projections

		2014	2020	2030	2040	2050	2060
Nominal GDP	*% growth*	5.3	3.6	4.0	3.7	3.5	3.7
Real GDP	*% growth*	2.7	1.6	1.9	1.6	1.5	1.7
Population	*million*	10.5	10.7	10.8	10.9	11.1	11.1
Fertility rate		1.53	1.63	1.72	1.77	1.79	1.80
Life expectancy of males at birth	*years*	75.8	76.5	78.3	80.1	81.7	83.3
Life expectancy of females at birth	*years*	82.0	82.3	83.8	85.3	86.6	87.9
Net migration rate	*thousand*	22.0	28.0	35.8	40.7	25.5	21.2
Age dependency ratio	*%*	28.0	34.1	38.7	44.5	53.0	55.5

Note: Fertility rate is defined as the average number of children born to one woman. Net migration flow is expressed as the difference in population due to immigration and emigration. The old-age dependency ratio is defined as the share of population aged 65+ in population aged 20–64 years.
Source: EC (2015), Eurostat (2016), OECD (2016), MF CR Calculations.

[8] For more precise results, it would have been necessary to state the expenditure profile at time *t–1*, see equations (1)–(3).

The projection of health-care expenditure is primarily performed based on the **baseline**, i.e. pure **demographic scenario**. This scenario tries to isolate the effect of population ageing, which influences health-care expenditure. There is an assumption, however, that the age-specific share of expenditure per capita in total health-care expenditure remains constant throughout the projection as in the base year (currently 2014). Any changes in life expectancy increase then have an impact on extending the lifetime in bad health; the time spend in good health remains constant.

Demographic and macroeconomic assumptions imply that public expenditure on health care will increase in the CR according to the baseline scenario from 5.5% of GDP in 2014 to 6.7% of GDP in 2060.

The purpose of long-term projections is to provide insight into the future development of public health-care expenditure, with respect to the various aforementioned assumptions. Changes in these assumptions generate individual alternative scenarios, which are discussed in the following parts: starting from changes in demographic development ($p_{g,a,t}$), through alternative expenditure profiles ($c_{g,a,t}$) to the influence of non-demographic demand factors, which are reflected in a change in GDP growth index (υ_t).

4.3 Alternative Assumptions about Demographics and Population Health Status

The key assumptions for demographic projections are fertility rate, life expectancy and net migration flow. In addition to basic demographic projections, the EC therefore provides sensitivity scenarios for higher life expectancy and for different migration development. The alternative scenario of health-care expenditure titled **high life expectancy** is based on the assumption of higher life expectancy at birth, 2 years compared to the baseline scenario in the projection horizon. This change also affects the projection of macroeconomic indicators (labour force, GDP). Based on the high life expectancy scenario, health-care expenditure reaches 6.8% of GDP in 2060 according to MF CR's projection.

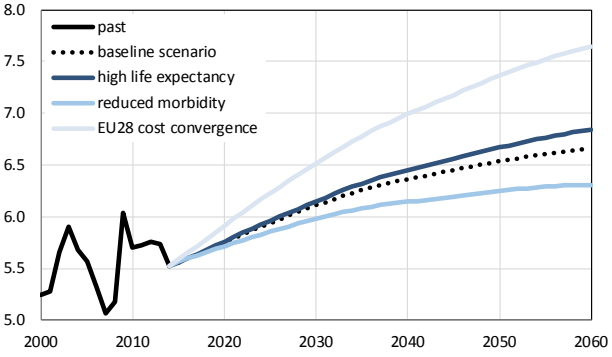
Another group of alternative scenarios is based on different assumptions regarding expenditure profiles in each age cohort. Increasing life expectancy is related to the issue of morbidity, this is, whether the morbidity rate remains constant, and therefore so does also proportional health-care expenditure in each age cohort, or whether the life expectancy increase will cause more years spent in good or, on the contrary, bad health. The baseline scenario outlined in the previous part is based on the expansion of morbidity hypothesis. The benefit from increased life expectancy is, in this scenario, spent largely in bad health because it is assumed that the reduction in mortality (and therefore higher life expectancy) is achieved mainly by slowing down the effects of chronic diseases, not reduction in morbidity.[9]

The **reduced morbidity scenario** is, unlike the baseline scenario, based on the hypothesis of dynamic equilibrium, i.e. that the ratio of lifetime spent in good and bad health remains constant. The increasing life expectancy in this scenario is due to a combination of both effects, slower effects of diseases and reduced morbidity. The consequence is that there are shifts of age-specific expenditure profiles according to changes in life expectancy in comparison with the base year of the projection[10]. Construction of this scenario then implies lower health-care expenditure than in the case of the baseline scenario. In the case of the reduced morbidity scenario, health-care expenditure reaches 6.3 % of GDP in 2060.

The last scenario in this group, **EU28 cost convergence scenario**, is based on the idea that in parallel with the convergence of living standards among EU countries, the differences in average health-care expenditure also diminish. This scenario is therefore based on the fact that countries whose unit costs on health care to GDP per capita ratio is below the EU average, will converge to this average in the long term. The convergence objective is not fixed because the EU average gradually increases over time. The speed of convergence is determined by the length of the projection period. The convergence mechanism significantly increases on the growth rate of health-care expenditure, which is thus the highest of all the alternative scenarios: it foresees public expenditure on health care at 7.6% of GDP in 2060.

Graph 4.4: Projections of Health-Care Expenditure in the CR, Alternative Assumptions on Demographics and Health Status

(in % of GDP)



Source: OECD (2016). MF CR Calculations.

[9] The expansion of morbidity hypothesis is confirmed empirically e.g. by Salomon *et al.* (2013) or Olshansky *et al.* (1991).

[10] This scenario therefore assumes that if life expectancy for age cohort *a* increases by *n* years between years *t* and *t+1*, then the expenditure profile of age cohort in year *t+1* will correspond to age cohort *a–n* in year *t*.

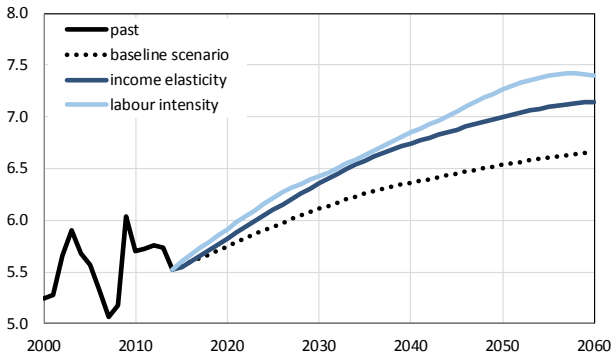
4.4 Alternative Non-demographic Assumptions

The third group of alternative scenarios is based on the same demographic projection and expenditure profiles as the baseline scenario. However, there are changes in the influence of income, or income elasticity of demand for health care – ε_t in equation (1), defined as the percentage change of health-care expenditure caused by a one-percent change in income. We assume elasticity in the baseline scenario to be 1. Higher elasticity would mean that health care is a luxury good, whereas elasticity less than 1 would mean it is a necessary good[11]. The **income elasticity scenario** is based on assumptions of the EC (2014), where alternative elasticity is arbitrarily set at 1.1 in the base year of the projection and gradually linearly converges to an elasticity of 1 in 2060. Increased influence of GDP growth will thus increase also the projected health-care expenditure in comparison with the baseline scenario, to 7.1% of GDP in 2060.

The **labour intensity scenario** is based on the account that health care is a sector with a high share of labour, in which wages and salaries make up a significant part of costs (the long-term average is more than one third) and output in health care is closely based on the performance of human labour (as opposed to sectors with lower shares of labour). This is why we refer to this sector as labour-intensive. Unit costs are thus driven mainly by wage and salary growth; this scenario assumes that wages in health care grow at the same rate as wages and salaries in the whole economy, which are based on the overall labour productivity. Consequently, unit costs will change based on labour productivity growth (GDP per hour worked). Since changes in GDP per hour worked are usually higher than changes in GDP per capita, the expenditure trajectory moves upward in this scenario.

Graph 4.5: Projections of Health-Care Expenditure in the CR, Alternative Non-demographic Assumptions

(in % of GDP)



Source: OECD (2016). MF CR Calculations.

[11] Estimates of income elasticity of demand for health care differ in the literature. Some, especially older, studies based on cross-sectional data (e.g. Newhouse, 1977) estimate elasticity higher than 1, mainly in countries where health care is not considered as available public good. Conversely, authors of newer studies using panel data (e.g. Medeiros and Schwierz, 2013) are inclined to income elasticity less than 1. For more detailed discussion of this issue see Maisonneuve and Martins (2013, pp. 48–52).

Table 4.2: Results of Long-Term Projections of Public Health-Care Expenditure
(in % of GDP)

	2014	2020	2030	2040	2050	2060	Maximum
Baseline (demographic) scenario	**5.5**	**5.8**	**6.1**	**6.4**	**6.5**	**6.7**	**2060**
Alternative scenarios:							
High life expectancy	5.5	5.8	6.2	6.5	6.7	6.8	2060
Reduced morbidity	5.5	5.7	6.0	6.1	6.2	6.3	2059
EU28 cost convergence	5.5	5.9	6.5	7.0	7.4	7.6	2060
Income elasticity	5.5	5.8	6.4	6.7	7.0	7.1	2060
Labour intensity	5.5	5.9	6.4	6.9	7.3	7.4	2058

Source: CZSO (2016c), MF CR Calculations.

4.5 Conclusion

Long-term projections of public health-care expenditure show its trend development and dynamics while taking into account certain macroeconomic and demographic assumptions and an assumption that current policies remain unchanged. The aim is therefore not to predict specific amounts of expenditure each year. The essential information is the trend of expenditure development, which shows in the case of the baseline scenario that there is a gradual increase in expenditure in the entire projection horizon in comparison with the base year of 2014.

Given the relative uncertainty regarding future development of population health status and some other non-demographic indicators, it is also important to look at alternative scenarios. These essentially confirm the growing trend in expenditure. Moreover, with exception of the reduced morbidity scenario, all alternative assumptions lead to higher expenditure in comparison with the pure demographic scenario. However, the analyses show that the most important factor behind the rising trajectory of expenditure in all scenarios is demographic development. The reduced morbidity scenario, which also implies lower average health-care expenditure, assumes enhancement of the importance of prevention and good lifestyle. This can be achieved, for example, through individual insurance plans, tax burden targeted at lifestyle risk factors, etc. Reaching the peak in this scenario just before the end of the projection horizon indicates possible reversal of the trend expenditure development and thus potential sustainability of public health-care expenditure.

In terms of long-term sustainability of public finance, an important fact is also that projection peaks are, in most scenarios, reached at the end of the visible projection horizon, i.e. that the projections do not foresee reaching a turning point in the trend development of expenditure by 2060. It can therefore be assumed that the increasing trend in health-care expenditure will continue beyond the projection horizon. This fact, combined with increasing expenditure on pensions or long-term care, may generate a major problem for long-term sustainability of public finance. Medium risks of fiscal sustainability stemming from the increase in public expenditure on pension and health care due to population ageing are also found by the Council of the EU in its opinion on the Convergence Programme of the CR (Council of the EU, 2016). The Council finds it fundamental to improve the cost-effectiveness of the health-care system and rationalise the utilisation of inpatient acute care.

5 References

Act No. 155/1995 Coll., on Pension Insurance, as amended.

Act No. 48/1997 Coll., on Public Health Insurance, as amended.

Act No. 218/2000 Coll., on Budgetary Rules and on Amendments of Some Related Acts (budgetary rules), as amended.

Act No. 235/2004 Coll., on Value-Added Tax.

Act No. 501/2012 Coll., amending Act No. 218/2000 Coll., on Budgetary Rules and on Amendments of Some Related Acts (budgetary rules), as amended and some other Acts.

Act No. 315/2015 Coll., amending Act No. 353/2003 Coll., on Excise Taxes, as amended.

Act No. 374/2015 Coll., on Recovery Process and Response to Financial Market Crisis.

Act No. 377/2015 Coll., of Amendment of some Acts in Relation to the Approval of Act on Termination of Pension Savings Pillar.

Act No. 400/2015 Coll., on State Budget of the Czech Republic for 2016.

Act No. 112/2016 Coll., on the Evidence of Sales.

Act No. 113/2016 Coll., amending some Acts in Relation with Approval of the Act on the Evidence of Sales.

Act No. 189/2016 Coll., amending the Act No. 108/2006 Coll., on Social Services, as amended, Act No. 292/2013 Coll., on Special Judicial Proceedings, as amended by Act no. 87/2015 Coll., and Act no. 372/2011 Coll., on Health Services and Conditions of their Provision }Health Services Act], as amended.

Act No. 212/2016 Coll., amending the Act No. 155/1995 Coll., on Pension Insurance, as amended and Other Related Acts.

Baker, L., Wheeler, S. (1998): Managed care and technology diffusion: the case of MRI. Health Affairs, No. 5, 195–207, September 1998, [cit. 23.9.2016].

Baumol, W. J. (1967): Macroeconomics of unbalanced growth: the anatomy of urban crisis. The American economic review, 57(3), 415-426.

Baumol, W. J. (2012): The cost disease: Why computers get cheaper and health care doesn't. Yale university press.

Council of the EU (2016): Council Recommendation of 13 June 2016 on the National Reform Programme 2016 of the Czech Republic and delivering a Council opinion on the Convergence Programme of the Czech Republic, 2016. Council of the European Union, 14 June 2016, Official Journal of the EU, [cit. 3. 10. 2016].

CZSO (2009): Health Care Accounts of the Czech Republic 2000 – 2007. Prague, Czech Statistical Office, March 2009. *In Czech only.*

CZSO (2016a): Quarterly National Accounts. Prague, Czech Statistical Office, 30.9.2016 [cit. 13.10.2016], <https://www.czso.cz/csu/czso/hdp_ts>.

CZSO (2016b): General Government Sector, Government Deficit and Debt. Prague, Czech Statistical Office, 30.10.2016 [cit. 30.10.2016], <http://apl.czso.cz/pll/rocenka/rocenka.indexnu_gov?mylang=EN>.

CZSO (2016c): Health Care Accounts of the Czech Republic in 2010–2014. Prague, Czech Statistical Office, May 2016. *In Czech only.*

Dybczak, K., Przywara, B. (2010): The role of technology in health care expenditure in the EU. Brussels, Economic Papers 400, European Commission, DG Economic and Financial Affairs, February 2010, [cit. 23.9.2016].

EC (2012): The 2012 Ageing Report: Economic and Budgetary Projections for the 27 EU Member States (2010-2060). Brussels, May 2012, European Economy No. 2. [cit. 21.10.2016], <http://ec.europa.eu/economy_finance/publications/european_economy/2012/pdf/ee-2012-2_en.pdf>.

EC (2014): The 2015 Ageing Report: Underlying Assumptions and Projection Methodologies, European Economy 8. November 2014. Brussels. 448pp. ISBN 978-92-79-35351-2 (online), [cit. 21.10.2016], <http://ec.europa.eu/economy_finance/publications/european_economy/2014/pdf/ee8_en.pdf>.

EC (2015): The 2015 Ageing Report: Economic and budgetary projections for the 28 EU Member States (2013-2060), European Economy 3. May 2015. Brussels. 424pp. ISBN 978-92-79-44746-4 (online), [cit. 21.10.2016], <http://ec.europa.eu/economy_finance/publications/european_economy/2015/pdf/ee3_en.pdf>.

EC (2016a): Fiscal Sustainability Report 2015. Brussels, European Commission, Institutional paper 018, January 2016, [cit. 21. 10. 2016], <http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip018_en.pdf>.

EC (2016b): European Economic Forecast, Autumn 2016. Brussels, European Commission, Directorate-General for Economic and Financial Affairs, November 2015, European Economy, Institutional Paper 038 [cit. 9.11.2016], <http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip038_en.pdf>.

ECB (2016): Interest Rate Statistics. European Central Bank, 11 November 2016 [cit. 11.11.2016], <http://www.ecb.europa.eu/stats/money/long/html/index.en.html>.

Eurostat (2016a): Eurostat Database. Luxembourg, Eurostat, November 2016 [cit. 4.11.2016], <http://ec.europa.eu/eurostat/data/database>.

Eurostat (2016b): Excessive Deficit Procedure Notification Tables. Luxembourg, Eurostat, October 2016 [cit. 2.11.2016], <http://ec.europa.eu/eurostat/web/government-finance-statistics/excessive-deficit-procedure/edp-notification-tables>.

Gerdtham, U., Jonsson, B. (2000): International comparisons of health expenditure: theory, data and econometric analysis. Handbook of Health Economics, Amsterdam, Elsevier, 11–53, [cit. 23.9.2016].

Gerdtham, U., Jonsson, B., MacFarlan, M., Oxley, H. (1998): The determinants of health expenditure in the OECD countries: a pooled data analysis. Boston: Kluwer Academic Publishers, 113–134, [cit. 23.9.2016].

Hartwig, J. (2008): What drives health care expenditures? – Baumol's model of unbalanced growth revisited. Journal of Health Economics, No. 3, 603–623, May 2 008, [cit. 23.9.2016].

Maisonneuve, C., Martins, J. (2013): A Projection Method for Public Health and Long-term Care Expenditures. OECD Economics Department Working Paper, No. 1048, [cit. 23.9.2016].

Marval, J., Štork, Z. (2012): Czech Pension Projections – a 2012 Update. Information paper 2/2012. Prague, Ministry of Finance of the CR, June 2012 [cit. 21.10.2016], <http://www.mfcr.cz/assets/en/media/CZECH-PENSION-PROJECTIONS-A-2012-UPDATE.pdf>.

Marval, J., Štork, Z. (2015): 2015 Pension Projections Update. Information paper 2/2015. Prague, Ministry of Finance of the CR, September 2015, [cit. 21.10.2016], <http://www.mfcr.cz/assets/en/media/2015-Pension-Projections-Update.pdf>.

Medeiros, J., Schwierz, Ch. (2013): Estimating the drivers and projecting long-term public health expenditure in the European Union: Baumol's "cost-disease" revisited. Brussels, Economic Papers 507, European Commission, DG Economic and Financial Affairs, September 2013, [cit. 23.9.2016].

MF CR (2015): Fiscal Outlook of the CR (November 2015). Prague, Ministry of Finance of the CR, November 2015 [cit. 21.10.2016], <http://www.mfcr.cz/assets/en/media/Fiscal-Outlook-of-the-Czech-Republic-November-2015.pdf>.

MF CR (2016a): Convergence Programme of the CR. Prague, Ministry of Finance of the CR, May 2016 [cit. 21.10.2016], <http://www.mfcr.cz/assets/en/media/Convergence-Programme-CR-May-2016_v01.pdf>.

MF CR (2016b): Macroeconomic Forecast of the CR. Prague, Ministry of Finance of the CR, November 2016 [cit. 21.10.2016], <http://www.mfcr.cz/assets/en/media/Macroeconomic-Forecast-November-2016.pdf>.

Newhouse, J. (1977): Medical care expenditures: a cross-national survey. Journal of Human Resources, vol. 12(1), December 1977, [cit. 21.10.2016].

OECD, Eurostat, WHO (2011): A System of Health Accounts, Organisation for Economic Co-operation and Development, Eurostat, World health Organisation. OECD Publishing. DOI: 10.1787/9789264116016-en. [cit. 21.10.2016], <https://www.oecd.org/els/health-systems/a-system-of-health-accounts-9789264116016-en.htm>.

OECD (2016): OECD Statistics, Organisation for Economic Co-operation and Development. [cit. 21.10.2016], <http://stats.oecd.org/>.

Okanude, A., Murthy, V. (2002): Technology as a major driver of health care costs: a cointegration analysis of the Newhouse conjecture. Journal of Health Economics, No. 1, 147–159, January 2002, [cit. 23.9.2016].

Olshansky, S., Rudberg, M., Carnes, B., Cassel, C., Brody, J. (1991): Trading off longer life for worsening health. University of Chicago, Journal of Aging and health, No. 2, 194-216, May 1991, [cit. 26.9.2016].

Peden, E., Freeland, M. (1998): Insurance effects on US medical spending (1960–1993). Health Economics, No. 8, 671–687, December 1998, [cit. 23.9.2016].

Proposal of the Act on Health Protection against Harmful Effects of Addictive Substances (Chamber of Deputies Print 828/0).

Proposal of the Act amending some Tax Acts – EU (Chamber of Deputies Print 873/0).

Proposal of the Act amending the Act No. 155/1995 Coll., On Pension Insurance, as amended and Other Related Acts (Chamber of Deputies Print 912/0).

Proposal of the Act on State Budget of the Czech Republic for 2017 (Chamber of Deputies Print 921/0).

Proposal of Medium-Term Expenditure Framework for 2018 and 2019 (Chamber of Deputies Print 922/0).

Regulation No. 135/2010 Coll., The Constitutional Court Decision of 23 March 2010 on the Right to Adequate Material Security (on the Proposal to Repeal § 15 of Act No. 155/1995 Coll., on Pension Insurance).

Regulation No. 238/2013 Coll., The Constitutional Court Decision of 20 June 2013 on the Proposal of Amendment of Act No. 48/1997 Coll., on Public Health Insurance).

Regulation No. 181/2016 Coll. of the Government of the Czech Republic, on Establishing the Assessment Base for a Person for whom the Premium Payer of the Public Health Insurance is the State.

Regulation No. 336/2016 of the Government of the Czech Republic of 5 October 2016 on the amending Regulation of the Government No. 567/2006 Coll. on minimum wage, on minimal levels of guaranteed wages, on the definition of difficult working conditions and on wage bonus for work in difficult working conditions, as amended.

Resolution of Chamber of Deputies No. 998 of 9 December 2015 on draft medium-term budgetary frameworks for the years 2017 and 2018 / Chamber of Deputies Press 618/.

Resolution of Chamber of Deputies No. 1324 of 8 September 2016 on proposal of increase of medium-term budgetary frameworks for the years 2017 and 2018 / Chamber of Deputies Press 832/.

Resolution of Chamber of Deputies No. 1384 of 19 October 2016 on the Amendment of the Act on Income Taxes (Chamber of Deputies Print 866/0).

Resolution of Chamber of Deputies No. 1396 of 21 October 2016 on the Amendment of the Act on Excise Taxes – EU (Chamber of Deputies Print 839/0).

Resolution of the Government of the Czech Republic of 2 July 2014 No. 144 on the Proposal of Act amending the Act No. 48/1997 Coll. on Public Health Insurance and on amending Some Relevant Acts, as amended, and other Relevant Acts.

Resolution of the Government of the Czech Republic of 22 June 2016 No. 563 on draft 2017 State budget Act and on draft medium-term outlook of the Czech Republic for the years 2018 and 2019.

Resolution of the Government of the Czech Republic of 12 September 2016 No. 821 on the Regulation of the Government amending Regulation of the Government No. 564/2006 Coll. on wages of public and administrative employees, as amended.

Resolution of the Government of the Czech Republic of 21 September 2016 No. 831 on draft 2017 State budget Act and on draft medium-term outlook of the Czech Republic for the years 2018 and 2019 and medium-term budgetary frameworks for the years 2018 and 2019.

Salomon, J. A., Wang, H., Freeman, M. K., Vos, T., Flaxman, A. D., Lopez, A. D., & Murray, C. J. (2013). Healthy life expectancy for 187 countries, 1990–2010: a systematic analysis for the Global Burden Disease Study 2010. The Lancet, 380(9859), 2144-2162.

Wagstaff, A. (2009): Social Health Insurance vs. Tax-Financed Health Systems—Evidence from the OECD. The World Bank. Policy Research Working Paper 4821, January 2009, [cit. 26.9.2016].

A Annex of Tables – ESA 2010 Methodology

The data on general government sector aggregates are consolidated at the relevant levels.

Table A.1: General Government Revenue

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
CZK bn										
Total revenue	**1352**	**1504**	**1528**	**1494**	**1524**	**1626**	**1646**	**1695**	**1739**	**1883**
Current taxes on income, wealth, etc.	295	330	306	271	262	282	282	294	315	332
Social contributions [1)]	525	577	599	560	578	593	600	607	629	663
Taxes on production and imports [2)]	361	404	416	424	441	481	502	522	511	562
Capital taxes [3)]	1	0	0	0	0	0	0	0	0	0
Property income	28	30	35	37	37	35	35	38	36	36
Interest	13	16	13	11	10	10	11	10	9	7
Other property income	15	14	22	26	26	25	25	28	28	29
Sales [4)]	96	111	119	122	117	146	148	150	152	151
Other current transfers and subsidies	26	23	22	27	33	35	39	44	42	49
Investment grants	14	15	27	50	53	50	35	36	49	81
Other capital transfers	5	13	3	3	4	4	4	5	5	9
% growth										
Total revenue	**7.2**	**11.3**	**1.6**	**-2.2**	**2.0**	**6.7**	**1.2**	**2.9**	**2.6**	**8.3**
Current taxes on income, wealth, etc.	7.4	11.9	-7.4	-11.4	-3.4	7.7	0.0	4.0	7.4	5.4
Social contributions [1)]	8.8	9.9	3.9	-6.6	3.2	2.5	1.3	1.1	3.6	5.5
Taxes on production and imports [2)]	2.9	12.0	3.0	1.9	3.9	9.2	4.3	4.0	-2.1	10.0
Capital taxes [3)]	9.2	-42.4	-44.8	-8.2	-3.4	0.9	0.9	-33.3	-93.5	10.0
Property income	23.5	7.2	15.7	4.7	1.0	-5.1	0.8	7.0	-3.6	-0.4
Interest	1.7	19.1	-20.3	-14.0	-3.7	-4.3	6.8	-5.5	-12.9	-20.4
Other property income	53.1	-3.5	55.7	15.4	2.9	-5.5	-1.6	12.5	-0.2	6.0
Sales [4)]	3.5	15.1	7.8	2.0	-4.0	25.1	1.2	1.1	1.8	-0.7
Other current transfers and subsidies	-2.0	-8.4	-7.4	26.0	20.7	7.3	10.5	13.5	-4.5	14.8
Investment grants	187.1	1.0	86.1	84.7	4.9	-6.0	-29.0	1.5	36.3	66.6
Other capital transfers	2.3	147.1	-77.8	14.6	24.7	-8.5	9.3	18.6	-10.6	96.7
% of GDP										
Total revenue	**38.5**	**39.3**	**38.1**	**38.1**	**38.6**	**40.3**	**40.5**	**41.4**	**40.3**	**41.3**
Current taxes on income, wealth, etc.	8.4	8.6	7.6	6.9	6.6	7.0	6.9	7.2	7.3	7.3
Social contributions [1)]	15.0	15.1	14.9	14.3	14.6	14.7	14.8	14.8	14.6	14.6
Taxes on production and imports [2)]	10.3	10.6	10.4	10.8	11.1	11.9	12.4	12.7	11.8	12.3
Capital taxes [3)]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Property income	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8
Interest	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2
Other property income	0.4	0.4	0.6	0.7	0.7	0.6	0.6	0.7	0.6	0.6
Sales [4)]	2.7	2.9	3.0	3.1	3.0	3.6	3.6	3.7	3.5	3.3
Other current transfers and subsidies	0.7	0.6	0.5	0.7	0.8	0.9	1.0	1.1	1.0	1.1
Investment grants	0.4	0.4	0.7	1.3	1.3	1.2	0.9	0.9	1.1	1.8
Other capital transfers	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2

Note: Time series contain a break between 2010–2011 caused by a methodical change in sectorisation.

[1)] Compulsory and voluntary payments of employers (on behalf of employees), employees, self-employed and self-payers to social security institutions and health insurance enterprises.

[2)] Compulsory payments, which are levied by general government, in respect of the production or import and/or usage of production factors (for example VAT, excises etc.).

[3)] Irregular taxes to the government on the values of the property, assets or net worth owned by institutional (e.g. inheritance tax, gift tax).

[4)] Consists of market output, output produced for own final use and payments for other non-market output.

Source: CZSO (2016b).

Table A.2: General Government Tax Revenue and Social Contributions

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
CZK bn										
Taxes and social contributions	**1182**	**1312**	**1322**	**1255**	**1281**	**1356**	**1384**	**1422**	**1455**	**1557**
Current taxes on income, wealth, etc.	**295**	**330**	**306**	**271**	**262**	**282**	**282**	**294**	**315**	**332**
Individuals or households	138	156	141	136	131	143	144	151	161	165
Corporations	154	171	162	132	127	129	127	133	144	157
Levy on lottery revenue	-	-	-	-	-	-	-	-	-	-
Other current taxes	3	3	3	3	3	10	10	10	10	11
Social security contributions	**525**	**577**	**599**	**560**	**578**	**593**	**600**	**607**	**629**	**663**
Actual contributions of employers	332	364	380	350	368	378	383	387	401	423
Imputed contributions of employers	0	0	0	1	1	1	1	1	1	1
Actual contributions of households	192	213	219	209	209	214	217	218	227	239
Additional contributions of households	-	-	-	-	-	-	-	-	-	-
Taxes on production and imports	**361**	**404**	**416**	**424**	**441**	**481**	**502**	**522**	**511**	**562**
Taxes on products [1)]	346	389	401	409	421	457	479	501	489	538
Value added tax	214	232	260	259	263	277	286	304	319	333
Excises	123	145	128	140	148	171	176	179	151	183
Other taxes on products [2)]	10	12	12	10	10	10	17	19	19	22
Other taxes on production [3)]	15	16	16	15	19	24	23	21	21	23
Capital taxes	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
% growth										
Taxes and social contributions	**6.6**	**11.0**	**0.8**	**-5.0**	**2.0**	**5.9**	**2.1**	**2.7**	**2.3**	**7.0**
Current taxes on income, wealth, etc.	**7.4**	**11.9**	**-7.4**	**-11.4**	**-3.4**	**7.7**	**0.0**	**4.0**	**7.4**	**5.4**
Individuals or households	1.0	12.7	-9.7	-3.8	-3.1	8.7	1.0	4.5	6.9	2.2
Corporations	13.9	11.4	-5.4	-18.3	-3.7	1.3	-1.2	4.0	8.5	9.1
Levy on lottery revenue	-	-	-	-	-	-	-	-	-	-
Other current taxes	4.7	4.5	0.1	4.1	1.0	212.8	1.8	-1.4	0.0	5.4
Social security contributions	**8.8**	**9.9**	**3.9**	**-6.6**	**3.2**	**2.5**	**1.3**	**1.1**	**3.6**	**5.5**
Actual contributions of employers	7.7	9.4	4.5	-7.9	5.1	2.7	1.4	1.3	3.4	5.5
Imputed contributions of employers	2.0	-26.2	-4.7	190.5	-27.5	56.8	-5.1	4.6	-21.5	40.1
Actual contributions of households	10.9	10.7	2.9	-4.6	0.3	2.2	1.2	0.7	4.1	5.4
Additional contributions of households	-	-	-	-	-	-	-	-	-	-
Taxes on production and imports	**2.9**	**12.0**	**3.0**	**1.9**	**3.9**	**9.2**	**4.3**	**4.0**	**-2.1**	**10.0**
Taxes on products [1)]	2.9	12.2	3.1	2.0	3.0	8.5	4.8	4.7	-2.3	10.0
Value added tax	-0.6	8.7	12.1	-0.7	1.9	5.0	3.5	6.2	5.2	4.3
Excises	8.9	17.9	-11.1	9.1	5.6	15.4	2.9	1.6	-15.4	21.0
Other taxes on products [2)]	11.7	17.7	-0.4	-14.6	-4.3	-1.3	75.9	10.5	-0.2	17.7
Other taxes on production [3)]	3.4	6.0	0.1	-2.5	26.8	25.0	-4.9	-9.8	2.7	9.6
Capital taxes	**9.2**	**-42.4**	**-44.8**	**-8.2**	**-3.4**	**0.9**	**0.9**	**-33.3**	**-93.5**	**10.0**

Note: Time series contain a break between 2010–2011 caused by a methodical change in sectorisation.

[1)] Taxes that are payable per unit of good or service produced or transacted.

[2)] This item contains, for example, customs duty, taxes from imported agricultural products, taxes from financial and capital transactions, payments from entertainment, lottery, game and betting taxes and other.

[3)] All taxes that enterprises incur as a result of engaging in production, independently of the quantity or value of the goods and services produced or sold (real estate tax, road tax, waste water toll etc.).

Source: CZSO (2016b).

Table A.3: General Government Tax Revenue and Social Contributions (in % of GDP)

(in % of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Taxes and social contributions	**33.7**	**34.2**	**32.9**	**32.0**	**32.4**	**33.6**	**34.1**	**34.7**	**33.7**	**34.2**
Current taxes on income, wealth, etc.	**8.4**	**8.6**	**7.6**	**6.9**	**6.6**	**7.0**	**6.9**	**7.2**	**7.3**	**7.3**
Individuals or households	3.9	4.1	3.5	3.5	3.3	3.5	3.6	3.7	3.7	3.6
Corporations	4.4	4.5	4.0	3.4	3.2	3.2	3.1	3.2	3.3	3.4
Levy on lottery revenue	-	-	-	-	-	-	-	-	-	-
Other current taxes	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.2	0.2
Social security contributions	**15.0**	**15.1**	**14.9**	**14.3**	**14.6**	**14.7**	**14.8**	**14.8**	**14.6**	**14.6**
Actual contributions of employers	9.5	9.5	9.5	8.9	9.3	9.4	9.4	9.5	9.3	9.3
Imputed contributions of employers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Actual contributions of households	5.5	5.5	5.4	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Additional contributions of households	-	-	-	-	-	-	-	-	-	-
Taxes on production and imports	**10.3**	**10.6**	**10.4**	**10.8**	**11.1**	**11.9**	**12.4**	**12.7**	**11.8**	**12.3**
Taxes on products [1)]	9.9	10.1	10.0	10.4	10.7	11.3	11.8	12.2	11.3	11.8
Value added tax	6.1	6.1	6.5	6.6	6.7	6.9	7.0	7.4	7.4	7.3
Excises	3.5	3.8	3.2	3.6	3.7	4.2	4.3	4.4	3.5	4.0
Other taxes on products [2)]	0.3	0.3	0.3	0.3	0.2	0.2	0.4	0.5	0.4	0.5
Other taxes on production [3)]	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.5	0.5	0.5
Capital taxes	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Note: Time series contain a break between 2010–2011 caused by a methodical change in sectorisation.

[1)] Taxes that are payable per unit of good or service produced or transacted.

[2)] This item contains, for example, customs duty, taxes from imported agricultural products, taxes from financial and capital transactions, payments from entertainment, lottery, game and betting taxes and other.

[3)] All taxes that enterprises incur as a result of engaging in production, independently of the quantity or value of the goods and services produced or sold (real estate tax, road tax, waste water toll etc.).

Source: CZSO (2016b).

Table A.4: Central Government Revenue

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
CZK bn										
Total revenue	**925**	**1033**	**1042**	**1001**	**1029**	**1167**	**1180**	**1202**	**1221**	**1333**
Current taxes on income, wealth, etc.	197	221	203	180	174	190	190	193	207	218
Social contributions	343	376	392	352	365	374	378	379	391	413
Taxes on production and imports	291	328	329	337	350	387	406	420	404	450
Capital taxes	1	0	0	0	0	0	0	0	-	-
Property income	21	22	26	29	30	28	27	30	29	30
Sales	44	53	56	56	59	75	76	75	78	76
Other revenue	28	31	35	49	51	112	103	105	112	146
% growth										
Total revenue	**6.7**	**11.7**	**0.9**	**-3.9**	**2.7**	**13.4**	**1.1**	**1.9**	**1.6**	**9.1**
Current taxes on income, wealth, etc.	7.7	12.2	-8.2	-11.6	-3.0	9.1	0.0	1.3	7.5	5.3
Social contributions	7.5	9.8	4.3	-10.4	3.7	2.7	0.9	0.4	3.2	5.6
Taxes on production and imports	3.7	12.9	0.4	2.4	3.9	10.4	4.9	3.4	-3.7	11.4
Capital taxes	10.0	-42.6	-45.7	-10.4	-2.7	-2.3	3.8	-33.5	-	-
Property income	30.8	6.1	15.9	10.4	4.1	-6.2	-3.0	11.4	-4.8	2.9
Sales	5.6	21.3	5.6	-0.8	5.5	27.9	0.9	-1.1	4.4	-2.1
Other revenue	8.0	10.4	11.1	39.2	5.0	120.0	-8.0	1.8	6.4	30.1

Note: Time series contain a break between 2010–2011 caused by a methodical change in sectorisation.

Source: CZSO (2016b).

Table A.5: Local Government Revenue

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
CZK bn										
Total revenue	**376**	**410**	**416**	**433**	**431**	**483**	**455**	**478**	**506**	**545**
Current taxes on income, wealth, etc.	98	109	103	91	87	92	92	101	108	114
Social contributions	0	0	0	0	0	0	1	1	0	1
Taxes on production and imports	71	77	87	87	90	94	96	102	107	112
Capital taxes	0	0	0	0	0	0	0	0	0	0
Property income	7	7	8	7	7	7	8	8	8	7
Sales	52	58	63	66	58	71	72	75	74	75
Other revenue	148	160	155	181	188	219	187	192	209	237
% growth										
Total revenue	**6.7**	**9.2**	**1.3**	**4.0**	**-0.5**	**12.3**	**-5.8**	**4.9**	**5.8**	**7.7**
Current taxes on income, wealth, etc.	6.6	11.3	-5.8	-11.0	-4.2	4.9	0.0	9.8	7.2	5.6
Social contributions	61.6	-43.2	-79.1	2428.6	-20.6	76.5	17.7	-0.3	-19.9	50.4
Taxes on production and imports	-0.2	8.3	13.8	0.0	3.7	4.4	1.9	6.5	4.2	4.7
Capital taxes	-55.6	0.0	50.0	83.3	-18.2	77.8	-37.5	-30.0	42.9	10.0
Property income	4.7	6.1	6.4	-9.5	-4.5	1.2	16.5	-4.3	0.8	-13.0
Sales	1.8	10.0	9.8	4.4	-12.0	22.3	1.7	3.3	-0.7	0.8
Other revenue	12.4	8.0	-3.1	16.5	3.8	16.6	-14.6	2.8	8.7	13.5

Note: Time series contain a break between 2010–2011 caused by a methodical change in sectorisation.
Source: CZSO (2016b).

Table A.6: Social Security Funds Revenue

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
CZK bn										
Total revenue	**185**	**203**	**211**	**211**	**216**	**221**	**225**	**230**	**239**	**252**
Current taxes on income, wealth, etc.	-	-	-	-	-	-	-	-	-	-
Social contributions	182	200	207	208	213	218	222	227	237	249
Taxes on production and imports	-	-	-	-	-	-	-	-	-	-
Capital taxes	-	-	-	-	-	-	-	-	-	-
Property income	0	1	1	1	1	0	1	0	0	0
Sales	0	0	0	0	0	0	0	0	0	0
Other revenue	2	2	2	2	2	3	2	2	3	3
% growth										
Total revenue	**9.0**	**10.1**	**3.6**	**0.2**	**2.1**	**2.4**	**1.8**	**2.2**	**4.3**	**5.2**
Current taxes on income, wealth, etc.	-	-	-	-	-	-	-	-	-	-
Social contributions	11.4	10.0	3.2	0.4	2.6	2.2	2.0	2.2	4.3	5.2
Taxes on production and imports	-	-	-	-	-	-	-	-	-	-
Capital taxes	-	-	-	-	-	-	-	-	-	-
Property income	30.0	75.3	111.3	-23.9	-46.2	-17.7	9.7	-47.2	-5.2	-27.7
Sales	-2.7	-4.1	-14.4	-2.5	-1.7	20.2	-16.1	3.5	-5.9	-1.8
Other revenue	-59.8	3.2	3.5	-5.0	-14.5	29.2	-19.3	8.1	11.2	10.1

Note: Time series contain a break between 2010–2011 caused by a methodical change in sectorisation.
Source: CZSO (2016b).

Table A.7: General Government Expenditure

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
CZK bn										
Total expenditure	**1431**	**1531**	**1613**	**1711**	**1699**	**1736**	**1806**	**1746**	**1822**	**1912**
Compensation of employees	253	269	280	293	286	350	359	367	380	398
Intermediate consumption	205	212	222	230	227	281	259	270	274	283
Social benefits other than in kind [1)]	407	456	475	509	517	527	533	545	556	568
Social benefits in kind	174	187	199	219	222	124	130	133	140	142
Property income	36	41	40	49	53	53	59	55	57	49
Interest	36	41	40	49	53	53	58	55	56	49
Other property income	0	0	0	0	0	0	1	0	1	0
Subsidies	61	62	64	76	79	91	91	96	99	105
Gross fixed capital formation	171	175	199	218	187	181	169	152	178	232
Capital transfers [2)]	68	70	60	56	56	45	121	39	60	41
Investment grants [3)]	38	37	36	34	33	32	31	21	18	15
Other capital transfers	30	33	24	22	23	13	89	18	42	26
Other expenditure	56	58	73	61	72	84	84	89	79	93
Final consumption expenditure	**700**	**732**	**766**	**812**	**810**	**813**	**804**	**826**	**849**	**887**
Collective consumption [4)]	357	370	388	404	402	387	375	388	395	418
Individual consumption	342	362	378	408	408	427	429	438	454	469
% growth										
Total expenditure	**5.0**	**7.0**	**5.3**	**6.1**	**-0.7**	**2.2**	**4.0**	**-3.3**	**4.4**	**4.9**
Compensation of employees	6.1	6.4	4.1	4.7	-2.5	22.4	2.7	2.0	3.5	4.8
Intermediate consumption	8.0	3.7	4.8	3.6	-1.5	23.9	-7.7	4.1	1.5	3.5
Social benefits other than in kind [1)]	8.7	12.1	4.1	7.1	1.7	1.9	1.2	2.1	2.0	2.3
Social benefits in kind	2.1	7.8	6.1	10.3	1.5	-44.2	4.7	2.6	4.8	1.4
Property income	3.4	13.0	-2.2	21.3	7.7	1.5	9.9	-5.8	2.6	-13.1
Interest	3.4	13.0	-2.3	21.3	7.8	0.8	9.1	-4.9	2.0	-12.8
Other property income	41.2	9.7	26.6	11.0	-45.9	570.0	117.2	-69.4	119.1	-44.4
Subsidies	11.6	1.6	2.8	18.9	3.7	15.3	0.0	5.1	3.8	5.6
Gross fixed capital formation	6.1	2.4	13.9	9.2	-14.0	-3.3	-6.4	-10.0	16.8	30.5
Capital transfers [2)]	-23.5	2.8	-14.2	-6.5	-0.7	-19.6	169.8	-67.5	53.4	-32.7
Investment grants [3)]	7.4	-3.4	-2.0	-5.7	-3.8	-2.7	-1.8	-32.2	-14.5	-19.1
Other capital transfers	-44.1	10.8	-27.9	-7.6	4.0	-44.0	598.0	-79.8	133.5	-38.5
Final consumption expenditure	**5.3**	**4.6**	**4.6**	**6.0**	**-0.3**	**0.4**	**-1.1**	**2.7**	**2.8**	**4.4**
Collective consumption [4)]	6.6	3.4	5.0	4.1	-0.5	-3.8	-3.0	3.5	1.7	5.9
Individual consumption	4.0	5.7	4.3	8.0	0.0	4.6	0.6	2.0	3.8	3.1

Note: Time series contain a break between 2010–2011 caused by a methodical change in sectorisation.

[1)] Social benefits, which should serve households to relieve their costs or losses stemming from existence or development of some risks or needs. Mainly benefits paid in case of old age, disability, sickness, motherhood, unemployment, work injury, work sickness, current social need etc.

[2)] Transactions of capital distribution, which have no influence either on beneficiary's ordinary income or these transaction's payer but on amount of their net property. Both in cash and in kind.

[3)] Capital transfers in cash or in kind made by governments to other institutional units to finance all or part of the costs of their gross fixed capital formation.

[4)] Value of all collective services provided to the whole society or to specific groups, i.e. expenditure for public services, defence, security, justice, health protection, environmental protection, research and development, infrastructure development and economy.

Source: CZSO (2016b), MF CR.

Table A.8: General Government Expenditure (in % of GDP)

(in % of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total expenditure	**40.8**	**40.0**	**40.2**	**43.6**	**43.0**	**43.0**	**44.5**	**42.6**	**42.2**	**42.0**
Compensation of employees	7.2	7.0	7.0	7.5	7.2	8.7	8.9	8.9	8.8	8.7
Intermediate consumption	5.8	5.5	5.5	5.9	5.7	7.0	6.4	6.6	6.4	6.2
Social benefits other than in kind	11.6	11.9	11.8	13.0	13.1	13.1	13.1	13.3	12.9	12.5
Social benefits in kind	4.9	4.9	4.9	5.6	5.6	3.1	3.2	3.3	3.2	3.1
Property income	1.0	1.1	1.0	1.2	1.3	1.3	1.4	1.3	1.3	1.1
Interest	1.0	1.1	1.0	1.2	1.3	1.3	1.4	1.3	1.3	1.1
Other property income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subsidies	1.8	1.6	1.6	1.9	2.0	2.3	2.2	2.3	2.3	2.3
Gross fixed capital formation	4.9	4.6	5.0	5.5	4.7	4.5	4.2	3.7	4.1	5.1
Capital transfers	1.9	1.8	1.5	1.4	1.4	1.1	3.0	1.0	1.4	0.9
Investment grants	1.1	1.0	0.9	0.9	0.8	0.8	0.8	0.5	0.4	0.3
Other capital transfers	0.9	0.9	0.6	0.6	0.6	0.3	2.2	0.4	1.0	0.6
Other expenditure	1.6	1.5	1.8	1.5	1.8	2.1	2.1	2.2	1.8	2.0
Final consumption expenditure	**20.0**	**19.1**	**19.1**	**20.7**	**20.5**	**20.2**	**19.8**	**20.2**	**19.7**	**19.5**
Collective consumption	10.2	9.6	9.7	10.3	10.2	9.6	9.2	9.5	9.2	9.2
Individual consumption	9.8	9.4	9.4	10.4	10.3	10.6	10.6	10.7	10.5	10.3

Note: Time series contain a break between 2010–2011 caused by a methodical change in sectorisation.
Source: CZSO (2016b), MF CR.

Table A.9: Central Government Expenditure

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
CZK bn										
Total expenditure	**1006**	**1088**	**1132**	**1185**	**1179**	**1259**	**1331**	**1266**	**1309**	**1390**
Compensation of employees	128	137	143	150	147	172	179	183	190	200
Intermediate consumption	98	104	106	109	106	139	123	128	131	141
Social benefits other than in kind	394	437	453	485	491	501	530	540	552	564
Social benefits in kind	3	2	2	3	4	5	9	12	14	15
Interest	34	39	37	46	51	52	56	54	55	48
Subsidies	30	31	32	38	35	54	53	57	59	63
Gross fixed capital formation	98	106	116	117	98	88	88	76	80	118
Capital transfers	65	65	58	60	57	53	119	36	56	48
Other expenditure	155	167	186	178	191	195	174	179	172	195
% growth										
Total expenditure	**4.1**	**8.2**	**4.0**	**4.7**	**-0.5**	**6.8**	**5.7**	**-4.9**	**3.4**	**6.1**
Compensation of employees	6.1	6.7	4.2	5.0	-2.3	17.7	3.7	2.4	3.7	5.1
Intermediate consumption	7.3	6.7	1.5	2.6	-2.5	30.9	-11.3	4.2	2.5	7.3
Social benefits other than in kind	8.7	10.8	3.7	7.0	1.4	2.0	5.6	2.0	2.1	2.3
Social benefits in kind	-7.2	-23.9	-18.2	36.6	53.3	20.0	83.4	37.2	15.4	1.8
Interest	3.0	12.7	-3.6	24.8	10.0	1.0	8.9	-4.2	1.9	-13.0
Subsidies	17.5	3.4	1.1	20.7	-7.6	51.9	-0.5	6.9	2.7	7.0
Gross fixed capital formation	-4.9	8.3	9.8	1.2	-16.8	-9.9	0.2	-14.2	6.0	46.9
Capital transfers	-22.8	-0.2	-11.6	3.8	-5.7	-6.0	123.5	-69.3	55.1	-15.5
Other expenditure	9.0	7.9	11.0	-4.3	7.3	2.3	-10.9	3.0	-3.8	13.0

Note: Time series contain a break between 2010–2011 caused by a methodical change in sectorisation.
Source: CZSO (2016b).

Table A.10: Local Government Expenditure

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
CZK bn										
Total expenditure	**385**	**397**	**421**	**454**	**446**	**495**	**458**	**466**	**498**	**518**
Compensation of employees	121	129	133	139	135	174	177	180	186	194
Intermediate consumption	105	106	114	119	118	140	134	139	140	140
Social benefits other than in kind	13	20	22	24	26	26	4	4	4	4
Social benefits in kind	3	3	3	3	2	3	0	-	-	-
Interest	2	3	3	2	2	2	2	1	1	1
Subsidies	31	31	33	38	44	38	38	39	41	42
Gross fixed capital formation	73	69	83	99	89	92	81	77	97	114
Capital transfers	26	28	20	16	17	7	11	10	12	5
Other expenditure	11	10	10	13	13	14	12	15	16	17
% growth										
Total expenditure	**9.0**	**3.2**	**5.9**	**8.0**	**-1.8**	**10.8**	**-7.5**	**1.8**	**6.9**	**4.1**
Compensation of employees	6.1	6.1	3.8	4.3	-2.7	28.3	1.9	1.7	3.3	4.5
Intermediate consumption	9.1	0.7	7.6	4.1	-0.9	18.8	-4.4	4.4	0.7	0.0
Social benefits other than in kind	7.5	53.6	13.2	9.4	7.5	-1.3	-85.2	17.8	-11.1	7.0
Social benefits in kind	8.9	19.0	-11.3	0.2	-16.4	11.1	-99.0	-	-	-
Interest	8.2	15.8	17.7	-21.8	-33.2	-3.3	16.6	-23.3	4.0	-10.6
Subsidies	6.3	-0.1	4.4	17.1	14.9	-14.2	0.6	2.6	5.3	3.6
Gross fixed capital formation	26.5	-5.3	19.8	20.2	-10.6	4.1	-12.6	-5.1	27.1	17.3
Capital transfers	-5.8	5.0	-27.5	-17.9	6.1	-59.2	55.8	-11.2	25.8	-63.4
Other expenditure	-7.2	-9.5	1.9	32.4	0.9	5.6	-16.2	31.1	0.9	9.1

Note: Time series contain a break between 2010–2011 caused by a methodical change in sectorisation.
Source: CZSO (2016b).

Table A.11: Social Security Fund Expenditure

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
CZK bn										
Total expenditure	**173**	**187**	**201**	**222**	**224**	**228**	**232**	**229**	**242**	**250**
Compensation of employees	3	3	4	4	4	4	4	4	4	4
Intermediate consumption	2	2	2	3	3	3	3	2	2	2
Social benefits other than in kind	0	-	0	0	0	0	0	0	0	0
Social benefits in kind	168	181	194	213	216	116	121	121	125	127
Interest	-	0	0	0	-	0	-	-	-	-
Subsidies	-	-	-	-	-	-	-	-	-	-
Gross fixed capital formation	0	0	1	1	1	1	1	0	1	0
Capital transfers	-	-	-	-	0	-	-	-	-	-
Other expenditure	0	0	0	0	0	104	104	102	110	117
% growth										
Total expenditure	**1.9**	**8.3**	**7.1**	**10.5**	**1.2**	**1.5**	**1.7**	**-1.3**	**5.9**	**3.3**
Compensation of employees	5.3	6.5	12.0	9.6	-0.2	-2.3	-3.0	-0.6	2.5	4.9
Intermediate consumption	-13.3	10.5	22.2	26.1	10.0	-21.5	1.3	-15.8	-1.0	-6.4
Social benefits other than in kind	100.0	-	-	600.0	0.0	-28.6	-20.0	12.5	-22.2	28.6
Social benefits in kind	2.2	8.3	6.8	10.2	1.1	-46.1	3.8	0.0	3.7	1.4
Interest	-	-	-50.0	0.0	-	-	-	-	-	-
Subsidies	-	-	-	-	-	-	-	-	-	-
Gross fixed capital formation	-41.7	-0.4	64.4	48.4	-15.7	-14.1	-23.7	-59.6	119.0	-22.6
Capital transfers	-	-	-	-	-	-	-	-	-	-
Other expenditure	27.7	23.9	-15.5	7.7	14.0	22402.2	-0.3	-2.1	8.5	5.7

Note: Time series contain a break between 2010–2011 caused by a methodical change in sectorisation.
Source: CZSO (2016b).

Table A.12: General Government Net Lending/Borrowing by Subsectors

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
CZK bn										
General government	**-79**	**-27**	**-85**	**-216**	**-175**	**-110**	**-160**	**-51**	**-83**	**-29**
Central government	-81	-56	-90	-184	-150	-92	-151	-64	-88	-57
Local governments	-9	13	-5	-22	-16	-11	-2	12	8	26
Social security funds	12	16	10	-11	-9	-7	-7	1	-3	2
% of GDP										
General government	**-2.3**	**-0.7**	**-2.1**	**-5.5**	**-4.4**	**-2.7**	**-3.9**	**-1.2**	**-1.9**	**-0.6**
Central government	-2.3	-1.4	-2.2	-4.7	-3.8	-2.3	-3.7	-1.6	-2.0	-1.2
Local governments	-0.3	0.3	-0.1	-0.6	-0.4	-0.3	-0.1	0.3	0.2	0.6
Social security funds	0.3	0.4	0.2	-0.3	-0.2	-0.2	-0.2	0.0	-0.1	0.0

Note: Time series contain a break between 2010–2011 caused by a methodical change in sectorisation.
Source: CZSO (2016b).

Table A.13: General Government Debt by Instruments

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
CZK bn										
General government debt	**979**	**1066**	**1151**	**1336**	**1509**	**1606**	**1805**	**1840**	**1819**	**1836**
Currency and deposits	3	5	6	5	6	3	8	7	10	5
Securities other than shares	816	908	990	1155	1322	1408	1603	1639	1623	1648
Loans	160	152	155	176	181	195	194	194	186	183
Central government debt	**898**	**981**	**1063**	**1241**	**1413**	**1506**	**1698**	**1734**	**1714**	**1740**
Currency and deposits	3	5	6	5	6	3	8	7	10	5
Securities other than shares	791	883	966	1139	1307	1394	1592	1627	1613	1638
Loans	104	93	92	98	100	109	98	100	91	97
Local government debt	**86**	**88**	**91**	**97**	**98**	**103**	**113**	**116**	**116**	**111**
Currency and deposits	-	-	-	-	-	-	-	-	-	-
Securities other than shares	25	26	26	17	17	15	15	16	13	13
Loans	61	62	65	80	81	88	97	100	103	98
Social security funds debt	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**1**
Currency and deposits	-	-	-	-	-	-	-	-	-	-
Securities other than shares	-	-	-	-	-	-	-	-	-	-
Loans	0	0	0	0	0	0	0	2	1	1
% growth										
General government debt	**7.2**	**8.9**	**8.0**	**16.1**	**12.9**	**6.5**	**12.4**	**1.9**	**-1.2**	**0.9**
Currency and deposits	-18.9	59.6	7.8	-17.4	27.0	-44.3	153.8	-18.7	45.7	-46.2
Securities other than shares	12.8	11.4	9.1	16.6	14.4	6.5	13.9	2.2	-1.0	1.6
Loans	-13.8	-5.1	1.7	13.7	2.8	7.9	-0.8	0.5	-4.3	-1.9
Central government debt	**6.8**	**9.3**	**8.3**	**16.8**	**13.8**	**6.6**	**12.7**	**2.1**	**-1.2**	**1.6**
Currency and deposits	-18.9	59.6	7.8	-17.4	27.0	-43.6	151.8	-18.4	45.3	-46.0
Securities other than shares	13.3	11.7	9.4	18.0	14.7	6.7	14.2	2.2	-0.9	1.6
Loans	-25.2	-10.5	-1.5	6.4	2.9	8.1	-9.8	2.0	-9.1	6.5
Local government debt	**10.3**	**1.9**	**3.2**	**6.6**	**1.4**	**5.3**	**9.2**	**3.2**	**-0.1**	**-4.8**
Currency and deposits	-	-	-	-	-	-	-	-	-	-
Securities other than shares	-1.1	1.8	-0.4	-33.3	-0.6	-11.5	2.4	5.0	-17.1	-2.9
Loans	15.9	1.9	4.8	22.3	1.9	8.8	10.4	3.0	2.6	-5.0
Social security funds debt	**-30.5**	**-69.1**	**62.7**	**-44.8**	**-26.4**	**415.4**	**-9.0**	**928.4**	**-43.1**	**-41.1**
Currency and deposits	-	-	-	-	-	-	-	-	-	-
Securities other than shares	-	-	-	-	-	-	-	-	-	-
Loans	-30.5	-69.1	62.7	-44.8	-26.4	415.4	-9.0	928.4	-43.1	-41.1

Note: Time series contain a break between 2010–2011 caused by a methodical change in sectorisation.
Government debt consists of following financial instruments: currency and deposits, securities issued other than shares excluding financial derivatives and loans. The debt is expressed in the nominal value, which is considered equivalent to the face value. Government debt is consolidated, i.e. the debt in holding of other subjects of a subsector resp. the government sector is omitted.
Source: CZSO (2016b).

Table A.14: General Government Debt by Instruments (in % of GDP)

(in % of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
General government debt	**27.9**	**27.8**	**28.7**	**34.1**	**38.2**	**39.8**	**44.5**	**44.9**	**42.2**	**40.3**
Currency and deposits	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1
Securities other than shares	23.3	23.7	24.7	29.5	33.4	34.9	39.5	40.0	37.6	36.2
Loans	4.6	4.0	3.8	4.5	4.6	4.8	4.8	4.7	4.3	4.0
Central government debt	**25.6**	**25.6**	**26.5**	**31.7**	**35.7**	**37.3**	**41.8**	**42.3**	**39.7**	**38.2**
Currency and deposits	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1
Securities other than shares	22.5	23.0	24.1	29.0	33.0	34.6	39.2	39.7	37.4	36.0
Loans	3.0	2.4	2.3	2.5	2.5	2.7	2.4	2.4	2.1	2.1
Local government debt	**2.5**	**2.3**	**2.3**	**2.5**	**2.5**	**2.6**	**2.8**	**2.8**	**2.7**	**2.4**
Currency and deposits	-	-	-	-	-	-	-	-	-	-
Securities other than shares	0.7	0.7	0.6	0.4	0.4	0.4	0.4	0.4	0.3	0.3
Loans	1.7	1.6	1.6	2.0	2.1	2.2	2.4	2.4	2.4	2.1
Social security funds debt	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Currency and deposits	-	-	-	-	-	-	-	-	-	-
Securities other than shares	-	-	-	-	-	-	-	-	-	-
Loans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: Time series contain a break between 2010–2011 caused by a methodical change in sectorisation.

Government debt consists of following financial instruments: currency and deposits, securities issued other than shares excluding financial derivatives and loans. The debt is expressed in the nominal value, which is considered equivalent to the face value. Government debt is consolidated, i.e. the debt in holding of other subjects of a subsector resp. the government sector is omitted.

Source: CZSO (2016b).

Table A.15: General Government Balance and Debt of EU Countries (2012–2016)

(in % of GDP)

	Balance					Debt				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
EU28	-4.3	-3.3	-3.0	-2.4	.	83.8	85.7	86.7	85.0	.
EA19 [1)]	-3.6	-3.0	-2.6	-2.1	.	89.5	91.3	92.0	90.4	.
Austria	-2.2	-1.4	-2.7	-1.0	-1.4	82.0	81.3	84.4	85.5	83.2
Belgium	-4.2	-3.0	-3.1	-2.5	-2.9	104.1	105.4	106.5	105.8	106.7
Bulgaria	-0.3	-0.4	-5.5	-1.7	-0.8	16.7	17.0	27.0	26.0	30.9
Croatia	-5.3	-5.3	-5.4	-3.3	-2.6	70.7	82.2	86.6	86.7	85.9
Cyprus	-5.8	-4.9	-8.8	-1.1	-0.3	79.3	102.2	107.1	107.5	107.0
Czech Republic	-3.9	-1.2	-1.9	-0.6	-0.2	44.5	44.9	42.2	40.3	38.6
Denmark	-3.5	-1.1	1.5	-1.7	-0.9	45.2	44.7	44.8	40.4	38.7
Estonia	-0.3	-0.2	0.7	0.1	0.4	9.7	10.2	10.7	10.1	9.4
Finland	-2.2	-2.6	-3.2	-2.8	-2.4	53.9	56.5	60.2	63.6	65.3
France	-4.8	-4.0	-4.0	-3.5	-3.3	89.5	92.3	95.3	96.2	96.1
Germany	0.0	-0.2	0.3	0.7	0.6	79.9	77.5	74.9	71.2	68.2
Greece	-8.8	-13.2	-3.6	-7.5	-2.8	159.6	177.4	179.7	177.4	178.9
Hungary	-2.3	-2.6	-2.1	-1.6	-1.7	78.2	76.6	75.7	74.7	73.9
Ireland	-8.0	-5.7	-3.7	-1.9	-0.9	119.5	119.5	105.2	78.6	76.1
Italy	-2.9	-2.7	-3.0	-2.6	-2.4	123.3	129.0	131.9	132.3	.
Latvia	-0.8	-0.9	-1.6	-1.3	-1.0	41.3	39.0	40.7	36.3	40.4
Lithuania	-3.1	-2.6	-0.7	-0.2	-0.7	39.8	38.7	40.5	42.7	40.9
Luxembourg	0.3	1.0	1.5	1.6	1.2	21.8	23.5	22.7	22.1	23.2
Malta	-3.6	-2.6	-2.1	-1.4	-0.7	67.6	68.4	67.0	64.0	63.3
Netherlands	-3.9	-2.4	-2.3	-1.9	-1.1	66.4	67.7	67.9	65.1	63.4
Poland	-3.7	-4.1	-3.4	-2.6	-2.6	53.7	55.7	50.2	51.1	53.7
Portugal	-5.7	-4.8	-7.2	-4.4	-2.2	126.2	129.0	130.2	129.0	127.7
Romania	-3.7	-2.1	-0.8	-0.8	-2.8	37.3	37.8	39.4	37.9	38.6
Slovakia	-4.3	-2.7	-2.7	-2.7	-2.0	52.2	54.7	53.6	52.5	53.1
Slovenia	-4.1	-15.0	-5.0	-2.7	-2.2	53.9	71.0	80.9	83.2	80.2
Spain	-10.5	-7.0	-6.0	-5.1	-4.6	85.7	95.4	100.4	99.8	99.6
Sweden	-1.0	-1.4	-1.6	0.2	-0.2	37.8	40.4	45.2	43.9	42.0
United Kingdom	-8.3	-5.7	-5.7	-4.3	-3.2	85.1	86.2	88.1	89.1	88.4

Note: [1)] 19 current member states – Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, Spain.

Source: Eurostat (2016b). Nominal GDP for the Czech Republic in 2016 MF CR (2016b).

Table A.16: Transactions of General Government of EU Countries in 2015

(in % of GDP)

	Revenue	Expenditure	Wages Paid	Cash social benefits	Collective consumption	Individual consumption	Investments[1]	Interest expenditure
EU28	44.9	47.3	10.1	16.2	7.6	12.9	2.9	2.3
EA19 [2)]	46.5	48.5	10.1	17.2	7.7	13.0	2.7	2.4
Austria	50.6	51.6	10.8	19.2	7.5	12.6	2.9	2.4
Belgium	51.3	53.9	12.5	17.2	8.5	15.4	2.4	3.0
Bulgaria	39.0	40.7	9.4	12.0	8.0	8.1	6.6	0.9
Croatia	43.6	46.9	11.4	14.2	9.6	10.1	3.2	3.6
Cyprus	39.0	40.1	12.6	14.0	9.0	6.7	1.9	2.8
Czech Republic	41.3	42.0	8.7	12.5	9.2	10.3	5.1	1.1
Denmark	53.9	55.7	16.4	17.5	7.5	18.6	3.8	1.6
Estonia	40.5	40.3	11.5	11.6	9.1	11.1	5.4	0.1
Finland	54.9	57.7	13.9	19.9	8.0	16.4	3.9	1.2
France	53.5	57.0	12.9	20.0	8.4	15.5	3.5	2.0
Germany	44.7	44.0	7.5	15.5	6.8	12.5	2.1	1.6
Greece	47.9	55.4	12.3	19.9	11.5	8.7	3.9	3.6
Hungary	48.5	50.0	10.6	13.2	9.9	10.1	6.6	3.5
Ireland	27.6	29.4	7.4	9.0	4.1	8.5	1.7	2.6
Italy	47.8	50.4	9.8	20.3	7.7	11.3	2.2	4.2
Latvia	35.8	37.1	9.9	10.0	9.5	8.5	4.6	1.3
Lithuania	34.9	35.1	9.6	10.7	7.7	9.9	3.6	1.5
Luxembourg	43.7	42.1	8.8	15.4	6.4	10.1	4.0	0.4
Malta	42.0	43.4	12.7	11.2	8.6	10.7	4.5	2.6
Netherlands	43.2	45.1	8.8	11.6	8.5	16.9	3.5	1.3
Poland	38.9	41.5	10.2	14.2	8.1	9.9	4.4	1.8
Portugal	44.0	48.4	11.3	17.4	8.5	9.7	2.3	4.6
Romania	34.9	35.7	7.7	10.6	7.3	6.4	5.1	1.6
Slovakia	42.9	45.6	9.0	13.9	8.8	10.7	6.3	1.8
Slovenia	45.1	47.8	11.2	16.2	7.8	10.9	4.7	2.9
Spain	38.6	43.8	11.1	15.8	8.4	11.0	2.5	3.1
Sweden	50.5	50.3	12.5	13.4	7.2	18.7	4.2	0.5
United Kingdom	38.5	42.8	9.3	14.0	7.0	12.4	2.7	2.3

Note: [1)] *Gross fixed capital formation.*

[2)] *19 current member states – Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, Spain.*

Source: Eurostat (2016a).

B Annex of Tables – GFS 2014 Methodology

The data on general government sector aggregates are consolidated at the relevant levels.

Table B.1: General Government Revenue

(in CZK billion)

	2012	2013	2014	2015
Revenue from operating activities	**1491**	**1549**	**1577**	**1733**
Taxes	**733**	**759**	**790**	**826**
Taxes on income, profits, and capital gains	271	271	289	309
Payable by individuals	137	142	148	155
Payable by corporations and other enterprises	134	129	141	154
Taxes on property	13	10	10	6
Taxes on goods and services	449	478	491	511
Value added tax	278	307	322	330
Excises	147	143	141	151
Social contributions	**541**	**545**	**563**	**595**
Social security contributions	526	531	548	579
Employee contributions	122	124	127	135
Employer contributions	365	369	381	402
Self-employed or nonemployed contributions	37	36	39	41
Other social contributions	14	14	15	16
Grants	**112**	**125**	**117**	**191**
From international organizations	111	125	116	191
Current	41	61	57	66
Capital	70	64	59	125
Other revenue	**106**	**120**	**108**	**122**
Property income	**29**	**32**	**30**	**33**
Interest	4	2	1	1
Dividends	5	6	6	7
Withdrawals from income of quasi-corporations	3	3	3	3
Rent	17	21	20	22
Sales of goods and services	**49**	**49**	**49**	**52**
Sales of market establishments	21	21	21	22
Administrative fees	27	28	27	29
Fines, penalties, and forfeits	**4**	**5**	**5**	**7**
Transfers not elsewhere classified	**24**	**34**	**23**	**30**
Current	22	33	22	30
Capital	2	1	1	1

Source: MF CR.

Table B.2: General Government Revenue (in % of GDP)

(in % of GDP)

	2012	2013	2014	2015
Revenue from operating activities	**36.7**	**37.8**	**36.6**	**38.1**
Taxes	**18.0**	**18.5**	**18.3**	**18.1**
Taxes on income, profits, and capital gains	6.7	6.6	6.7	6.8
Payable by individuals	3.4	3.5	3.4	3.4
Payable by corporations and other enterprises	3.3	3.1	3.3	3.4
Taxes on property	0.3	0.2	0.2	0.1
Taxes on goods and services	11.1	11.7	11.4	11.2
Value added tax	6.8	7.5	7.5	7.3
Excises	3.6	3.5	3.3	3.3
Social contributions	**13.3**	**13.3**	**13.0**	**13.1**
Social security contributions	13.0	13.0	12.7	12.7
Employee contributions	3.0	3.0	3.0	3.0
Employer contributions	9.0	9.0	8.8	8.8
Self-employed or nonemployed contributions	0.9	0.9	0.9	0.9
Other social contributions	0.3	0.3	0.3	0.3
Grants	**2.7**	**3.0**	**2.7**	**4.2**
From international organizations	2.7	3.0	2.7	4.2
Current	1.0	1.5	1.3	1.4
Capital	1.7	1.6	1.4	2.7
Other revenue	**2.6**	**2.9**	**2.5**	**2.7**
Property income	**0.7**	**0.8**	**0.7**	**0.7**
Interest	0.1	0.0	0.0	0.0
Dividends	0.1	0.1	0.1	0.1
Withdrawals from income of quasi-corporations	0.1	0.1	0.1	0.1
Rent	0.4	0.5	0.5	0.5
Sales of goods and services	**1.2**	**1.2**	**1.1**	**1.1**
Sales of market establishments	0.5	0.5	0.5	0.5
Administrative fees	0.7	0.7	0.6	0.6
Fines, penalties, and forfeits	**0.1**	**0.1**	**0.1**	**0.2**
Transfers not elsewhere classified	**0.6**	**0.8**	**0.5**	**0.7**
Current	0.5	0.8	0.5	0.6
Capital	0.1	0.0	0.0	0.0

Source: MF CR.

Table B.3: General Government Expenditure

(in CZK billion)

	2012	2013	2014	2015
Expense for operating activities	**1 507**	**1 528**	**1 569**	**1 665**
Compensation of employees	**136**	**139**	**146**	**155**
Wages and salaries	103	105	110	117
Social contributions	34	34	36	39
Use of goods and services	**118**	**122**	**121**	**122**
Interest	**45**	**54**	**50**	**47**
To nonresidents	0	0	0	0
To residents other than general government	45	54	50	47
To other general government units	0	0	0	0
Subsidies	**314**	**319**	**341**	**353**
To public corporations	207	212	219	228
To private enterprises	107	107	122	125
Grants	**38**	**41**	**43**	**39**
To international organizations	38	41	43	39
Current	38	41	43	39
Social benefits	**704**	**713**	**728**	**752**
Social security benefits	704	713	728	751
Other expense	**152**	**141**	**141**	**197**
Property expense other than interest	0	0	0	0
Transfers not elsewhere classified	152	141	141	197
Current	35	35	37	41
Capital	117	105	104	156
Net cash outflow in non-financial assets	**76**	**71**	**83**	**100**
Expenditure cash flow	**1 584**	**1 599**	**1 652**	**1 766**

Source: MF CR.

Table B.4: General Government Expenditure (in % of GDP)

(in % of GDP)

	2012	2013	2014	2015
Expense for operating activities	**37.1**	**37.3**	**36.4**	**36.6**
Compensation of employees	**3.4**	**3.4**	**3.4**	**3.4**
Wages and salaries	2.5	2.6	2.5	2.6
Social contributions	0.8	0.8	0.8	0.8
Use of goods and services	**2.9**	**3.0**	**2.8**	**2.7**
Interest	**1.1**	**1.3**	**1.2**	**1.0**
To nonresidents	-	-	-	-
To residents other than general government	1.1	1.3	1.2	1.0
To other general government units	-	-	-	-
Subsidies	**7.7**	**7.8**	**7.9**	**7.8**
To public corporations	5.1	5.2	5.1	5.0
To private enterprises	2.6	2.6	2.8	2.7
Grants	**0.9**	**1.0**	**1.0**	**0.9**
To international organizations	0.9	1.0	1.0	0.9
Current	0.9	1.0	1.0	0.9
Social benefits	**17.3**	**17.4**	**16.9**	**16.5**
Social security benefits	17.3	17.4	16.9	16.5
Other expense	**3.8**	**3.4**	**3.3**	**4.3**
Property expense other than interest	0.0	0.0	0.0	0.0
Transfers not elsewhere classified	3.8	3.4	3.3	4.3
Current	0.9	0.9	0.8	0.9
Capital	2.9	2.6	2.4	3.4
Net cash outflow in non-financial assets	**1.9**	**1.7**	**1.9**	**2.2**
Expenditure cash flow	**39.0**	**39.0**	**38.3**	**38.8**

Source: MF CR.

Table B.5: General Government Balance

(in CZK billion, in % of GDP)

	2012	2013	2014	2015
CZK bn				
Cash deficit/surplus	**-93**	**-50**	**-75**	**-32**
Deficit / surplus of operating balance	-16	21	8	68
Deficit / surplus of primary balance	-48	4	-25	15
% of GDP				
Cash deficit/surplus	**-2.3**	**-1.2**	**-1.7**	**-0.7**
Deficit / surplus of operating balance	-0.4	0.5	0.2	1.5
Deficit / surplus of primary balance	-1.2	0.1	-0.6	0.3

Source: MF CR.

Table B.6: Structure of General Government Balance

(in CZK billion)

	2012	2013	2014	2015
State budget [1)]	-85	-69	-92	-50
Extrabudgetary funds total	-3	2	2	-4
Social security funds	-6	-1	2	1
Local governments	1	19	12	21
Cash deficit/surplus	**-93**	**-50**	**-75**	**-32**

Note: 1) incl. National Fund and ex-National Property Fund's transactions.
Source: MF CR.

Table B.7: Sources and Uses of General Government

(in CZK billion)

	2012	2013	2014	2015
Cash flows from operating activities:				
Cash receipts from operating activities	**1 491**	**1 549**	**1 577**	**1 733**
Taxes	733	759	790	826
Social contributions	541	545	563	595
Grants	112	125	117	191
Other receipts	106	120	108	122
Cash payments for operating activities	**1 507**	**1 528**	**1 569**	**1 665**
Compensation of employees	136	139	146	155
Purchases of goods and services	118	122	121	122
Interest	45	54	50	47
Subsidies	314	319	341	353
Grants	38	41	43	39
Social benefits	704	713	728	752
Other payments	152	141	141	197
Net cash inflow from operating activities	**-16**	**21**	**8**	**68**
Cash flows from investments in non-financial assets:				
Purchases of nonfinancial assets	**89**	**83**	**101**	**112**
Fixed assets	87	81	100	111
Strategic stocks	0	0	0	0
Valuables	0	0	0	0
Nonproduced assets	2	2	2	2
Sales of nonfinancial assets	**12**	**12**	**18**	**12**
Fixed assets	6	5	4	4
Strategic stocks	0	0	0	0
Valuables	0	0	0	0
Nonproduced assets	6	7	15	8
Net cash outflow: investments in nonfinancial assets	**76**	**71**	**83**	**100**
Expenditure cash flows	**1 584**	**1 599**	**1 652**	**1 766**
Cash surplus / deficit	**-93**	**-50**	**-75**	**-32**

Source: MF CR.

Table B.8: General Government Debt

(in CZK billion, in % of GDP)

	2012	2013	2014	2015
CZK bn				
Consolidated general government debt	**1 753**	**1 772**	**1 753**	**1 776**
State debt consolidated	1 649	1 665	1 648	1 673
Extrabudgetary funds	1	0	0	1
Social security funds	0	2	1	1
Local governments	108	112	109	106
% of GDP				
Consolidated general government debt	**43.2**	**43.2**	**40.6**	**39.0**
Consolidated state debt	40.6	40.6	38.2	36.7
Extrabudgetary funds	0.0	0.0	0.0	0.0
Social security funds	0.0	0.0	0.0	0.0
Local governments	2.7	2.7	2.5	2.3

Source: MF CR.

C Glossary

Accrual methodology means that economic transactions are recorded at the time an economic value is created, transformed or cancelled or when amounts due or claims increase or decrease, regardless of when the transaction will be paid (unlike the cash principle employed in the budgeting process of the state budget).

Capital transfers include acquisition or loss of an asset without equivalent consideration. They may be made in cash or in kind. **Capital transfer in cash** is defined as cash transfer without expected consideration from the unit which received the transfer. **Capital transfer in kind** is based on the transfer of ownership of an asset, other than inventory and cash, or decommitment by a creditor for which no consideration was received, eventually assumption of debt, etc.

Cyclically adjusted balance of the general government sector is used to identify the fiscal policy stance because it does not include impact of those parts of revenues and expenditures which are generated by the position of the economy in the business cycle.

Discretionary measures are direct interventions of the government in the structure of general government revenue and expenditure.

Government **final consumption expenditure** includes government payments which are subsequently used for consumption of individuals in the household sector (mainly reimbursement of health care by health insurance companies for services provided by medical facilities) or they are consumed by the entire society (such as expenditure on army, police, judiciary, state administration, etc.). General government services, provided for consumption to the entire society, are usually valued at the level of one's own costs for a given service because they do not pass through a market which would value them. For the above reasons, consumption consists mainly of intermediate consumption (i.e. goods and services, except fixed assets, consumed in the process of production of another good or service), compensation of employees (gross wages and salaries including social contributions paid by employer), social transfers in kind for households or fixed capital consumption. The value calculated is not the entire value of these transactions but only the value associated with the production valued as one's own costs. The costs of creation of activities which pass a market fully or partly and for which the sector receives payment are excluded from general government consumption expenditure.

Fiscal effort is an annual change in the structural balance indicating expansive of restrictive fiscal policy in a given year.

Fiscal impulse is used to assess the impact of the government's fiscal policy on economic growth. It is usually expressed in annual terms, where a decrease in certain government revenues or an increase in certain government expenditures represents a positive impulse, and an increase in certain revenues or a decrease in certain expenditures represents a negative impulse.

The **general government sector** is defined by internationally harmonized rules at the EU level. In the CR, the general government sector includes, in the ESA 2010 methodology, three main subsectors: central government, local government and social security funds.

GFS 2014 (Government Finance Statistics 2014) presented in the Fiscal Outlook of the CR is a government financial statistics representing the sum of individual components of public budgets on a cash basis, taking into account consolidation of revenues and expenditures in the general government sector.

Government Deficit and Debt Notification is quantification of fiscal indicators submitted by each EU Member State twice a year to the European Commission. It is compiled for the general government sector using the accrual methodology. The Czech Statistical Office processes data for the past four years *t−4* to *t−1*; MF CR supplies prediction for the current year *t*. Notification includes a basic set of notification tables, which include mainly key indicators such as balance and debt, including explanations of the link to balance in the national methodology as well as a number of additional questionnaires such as a table of state guarantees, etc.

Gross fixed capital formation expresses net acquisition of fixed capital, i.e. its acquisitions less disposals, achieved by production activities of production and institutional units. It represents investment activities of units.

Medium-Term Objective (MTO) is expressed in the structural balance and implies long-term sustainability of public finance of the country. For the CR it currently corresponds to the level of structural balance of −1% of GDP.

One-off and other temporary operations are measures on the expenditure or revenue side which only have a temporary impact on general government balance, and they often stem from events outside the direct control of the government (e.g. expenditures on removing the consequences of floods).

Output gap is the difference between real and potential product (often expressed as a ratio to potential product). It determines the position of the economy in the business cycle.

Public budgets are, for the purposes of this publication and government statistics, understood as general government sector performance under the GFS 2014 methodology. Coverage of the general government sector under the GSF methodology is currently narrower in the CR than as stipulated for full coverage prescribed in GFS (consistent with the ESA methodology). Unlike ESA, GFS includes EU resources of the National Fund and resources of the Privatisation Fund. Similarly to ESA 2010, GFS is an accrual methodology; however, in the Czech Republic, it is currently compiled on a cash basis.

Social security benefits in cash are social security benefits (e.g. pensions, social benefits) paid out from the government to households.

Structural balance is the difference between cyclically adjusted balance, and one-off and temporary operations (for both components see above).

D Lists of Thematic Chapters and Boxes of Previous Fiscal Outlooks of the Czech Republic

List of Thematic Chapters of Previous Fiscal Outlooks of the Czech Republic

Published	Topic
October 2010	Selected Principles of Public–Private Partnership and its Impacts on General Government Operations
November 2011	Causes of the European Debt Crisis and its Consequences for Czech Public Finances
November 2012	Pension Reform – Introducing an Opt-Out
November 2013	Excessive Deficit Procedure in EU Member States
November 2014	Long-term Pension Projections
November 2015	Fiscal Impulse Fiscal Framework Reform in the Czech Republic
November 2016	Long-term Projections of Public Expenditure on Health Care

List of Thematic Boxes of Previous Fiscal Outlooks of the Czech Republic

Published	Box Topic
October 2010	Box 1: Methodology (Transition from the GFS 1986 to GFS 2001) Box 2: Measures to reduce General Government Deficits in the ESA 95 Methodology, related to the Medium-Term Outlook from 2009 Box 3: Proposed Pension Reform
May 2011	Box 1: Ruling of the Constitutional Court of the Czech Republic and Public Finances
November 2011	Box 1: Selected Changes in Methodology for General Government Statistics Box 2: Settlement of the Property Relations of the State and the Churches
May 2012	Box 1: Accident Insurance – Current State of Affairs Box 2: Stability and Growth Pact versus the Treaty on Stability Coordination and Governance in the EMU
November 2012	Box 1:Drawing of EU Funds and Impact on the Public Finances Balances Box 2:European System of Trading in Greenhouse Gas Emission Allowances
May 2013	Box 1: Satellite Account of Public Sector Box 2: The Seventh Enlargement of the European Union – Croatia
November 2013	Box 1: Government Sector Investment in 2009–2012 Box 2: EU Funds and their Uptake Box 3: Floods in 2013
May 2014	Box 1: Drawing of EU Structural Funds in the 2007–2013 Programming Period Box 2: Financial Resources from the 2014–2020 Programming Period
November 2014	Box 1: Basic Changes in General Government Sector Statistics in relation with Transition to ESA 2010 Methodology Box 2: Changes in General Government Sector Statistics in the System of National Accounts Box 3: Planned Measures against Tax Evasion Box 4: Impact of New Estimates of Elasticities of Cyclically Sensitive Revenue and Expenditure on the Cyclical Component of Balance
May 2015	Box 1: Expansion of the General Government Sector
November 2015	Box 1: Expansion of the General Government Sector Box 2: Czech Economy Growth and the Tax Revenue Development in 2015 Box 3: Expenditure Rule Technique
November 2016	Box 1: Effect of Supply Factors on Health-Care Expenditure

Ministry of Finance of the Czech Republic
Economic Policy Department
Letenská 15
118 10 Prague 1

http://www.mfcr.cz