Ministry of Finance
of the Czech Republic

Fiscal Outlook
of the Czech Republic

November 2019

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ISSN 2570-5695 (on-line)

Issued annually, free distribution

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

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Table of Contents

Introduction and Summary **1**

1 Macroeconomic Framework of the Fiscal Forecast **2**

2 Short-term Development of General Government Sector Finances **4**
2.1 General Government Sector Finances in the CR in 2018 4
2.2 General Government Sector Finances in the CR in 2019 4
2.3 International Comparison 7

3 Medium-term Fiscal Outlook **11**
3.1 Fiscal Policy Objectives 11
3.2 General Government Medium-term Outlook 12
3.3 Sensitivity Analysis 19

4 Long-term Sustainability of Pension System **22**
4.1 Development of Parametric Changes in the Pension System 22
4.2 Projections of the Pension System 25

5 Proposal for the New EU Fiscal Rule **30**
5.1 Fiscal Rule 31
5.2 Structure of Derived Expenditure 32
5.3 Escape Clauses 33
5.4 Non-Compliance and Sanctions 34
5.5 Illustrative Examples and Implications 35

References **40**

A Annex of Tables – ESA 2010 Methodology **43**

B Glossary **54**

C Lists of Thematic Chapters and Boxes of Previous Fiscal Outlooks of the Czech Republic **55**

List of Boxes

Box 1: Healthy Ageing **23**

Box 2: Pension Expenditure in the CR and EU Member States **28**

Box 3: Excluding Specific Items from Expenditure Rules **31**

The Fiscal Outlook of the Czech Republic is published by the Economic Policy Department of the MF CR, since 2016 annually in November. It contains forecast of the current and next year (i.e. up to 2020) and also the outlook of some economic indicators to the following 2 years (i.e. up to 2022). The Outlook is available on internet pages of MF CR at:

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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:

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List of Tables

Table 1.1: Main Macroeconomic Indicators 3
Table 3.1.1: Fiscal Policy Stance 11
Table 3.2.1: Adjustments of the Original Medium-Term Expenditure Framework 12
Table 3.2.2: General Government Development 12
Table 3.2.3: General Government Revenue 14
Table 3.2.4: Structure of Discretionary Measures 14
Table 3.2.5: General Government Expenditure 16
Table 3.2.6: Gross Consolidated Government Debt 17
Table 3.2.7: Structural Balance of the General Government (OECD Method) 18
Table 3.2.8: Fiscal Effort and Fiscal Impulse 18
Table 3.3.1: Model Scenarios of Macroeconomic Simulations 20
Table 4.1: Gains in Healthy Life Expectancy of Persons in the CR at the Age of 65 according to Various Statistics 25
Table 4.2: Demographic and Macroeconomic Assumptions of Projections 26
Table 4.3: Pension Expenditure Projections 27
Table 4.4: Pension Expenditure Projection under Different Scenarios 28
Table 4.5: Comparison of 2015 and 2018 Pension Expenditure Projections 28
Table A.1: General Government Revenue 43
Table A.2: General Government Tax Revenue and Social Contributions 44
Table A.3: General Government Tax Revenue and Social Contributions (in % of GDP) 45
Table A.4: Central Government Revenue 45
Table A.5: Local Government Revenue 46
Table A.6: Social Security Funds Revenue 46
Table A.7: General Government Expenditure 47
Table A.8: General Government Expenditure (in % of GDP) 48
Table A.9: Central Government Expenditure 48
Table A.10: Local Government Expenditure 49
Table A.11: Social Security Fund Expenditure 49
Table A.12: General Government Net Lending/Borrowing by Subsectors 50
Table A.13: General Government Debt by Instruments 50
Table A.14: General Government Debt by Instruments (in % of GDP) 51
Table A.15: General Government Balance and Debt of EU Countries 52
Table A.16: Transactions of General Government of EU Countries in 2018 53

List of Graphs

Graph 1.1: Contributions to Real GDP Growth 3
Graph 1.2: Output Gap 3
Graph 2.2.1: General Government Tax Revenue 6
Graph 2.2.2: Tax Quota 6
Graph 2.2.3: General Government Expenditure 6
Graph 2.2.4: Composition of Government Expenditure 6
Graph 2.2.5: General Government Balance 7
Graph 2.2.6: Contributions to Change in Gross Debt 7
Graph 2.3.1: General Government Balance in EU Countries 8
Graph 2.3.2: Structural Balance of the General Government in EU Countries 8
Graph 2.3.3: General Government Debt in EU Countries 9
Graph 2.3.4: Yields of Government Bonds of Selected EU Countries 10

Graph 3.2.1: Fiscal Impulse of Revenue 19
Graph 3.2.2: Fiscal Impulse of Expenditure 19
Graph 3.2.3: Overall Fiscal Impulse 19
Graph 3.2.4: Fiscal Effort and Fiscal Impulse 19
Graph 4.1: Healthy Life Expectancy at the Age of 65, Females 23
Graph 4.2: Healthy Life Expectancy at the Age of 65, Males 23
Graph 4.3: Healthy Life Expectancy at the Age of 65 based on Estimates of Prevalences 24
Graph 4.4: Age-specific Profiles of Disease Adjusted Life Years (DALY), Females 24
Graph 4.5: Age-specific Profiles of Disease Adjusted Life Years (DALY), Males 24
Graph 4.6: Years of Life Lost (YLL) and Years Lived with Disease (YLD), CR, 65–69 Years 25
Graph 4.7: Disease Adjusted Life Years (DALY), 65–69 Years 25
Graph 4.8: Dependency Ratio and 85+/65+ Ratio 25
Graph 4.9: Projection of Pension Account Balance 26
Graph 4.10: Impact of Newly Approved Measures on Pension System Expenditure 27
Graph 4.11: Effect of Different Level of Compensation of Employees on Total Pension Expenditure in EU Countries 29
Graph 4.12: Aggregate Impact of Selected Factors on the Share of Pension Expenditure on GDP 29
Graph 5.5.1: Comparison of Expenditure According to the Rule and Actual Expenditure 35
Graph 5.5.2: Comparison of Expenditure According to the Rule and Simulated Expenditure 36
Graph 5.5.3: Comparison of Actual Expenditure and Simulated Expenditure 37
Graph 5.5.4: Comparison of Simulated Expenditure Growth and Output Gap 38
Graph 5.5.5: Impact of Difference of Estimated and Actual Development on Growth of Expenditure According to the Rule. 39

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
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
IMF ..... International Monetary Fund
MF CR ..... Ministry of Finance of the Czech Republic
OECD ..... Organisation for Economic Co-operation and Development
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 10 October 2019 release, fiscal data to the 1 November 2019 release, data for international comparison to the 30 October 2019 release and government bond yields to the 11 October 2019 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 and Summary

The autumn general government Deficit and Debt Notification raised the April forecast for 2018 to a surplus of 1.1% of GDP, confirming the fact that the Czech public finances were one of the best performing in the European Union that year. The increase in investments was also positive, with acceleration in the second half of 2018 resulting in an overall year-on-year increase of more than 30%. Strong growth continued into the first half of 2019. Last year's increase in investment expenditure co-financed from EU funds amounted to an impressive 60%. The allocations from 2014 and 2015 were fully utilised and additional funds of almost CZK 37 billion were secured.

We expect public finances to remain in surplus both this year and next. However, these surpluses are following a downward trend. One of the reasons for this development is the gradual cooling of economic activity, associated with external influences. The forecast for real GDP growth for this year is 2.5%, while in 2020 it should slow to 2.0%. The significant slowdown in Germany, followed by the euro area as a whole, which may be further exacerbated by the emergence of risks to international trade, is an important factor and must be fully taken into account public finances setting for a small, open economy.

However, external economic risks stand beside internal factors, associated with an ageing population and the transition to an economy based on higher value added. The ageing of the population has not only reflected in the current labour market situation, but it also relates to future pressures on public revenue and expenditure. The considerable increase in spending on pensions, health and long-term care in the coming decades is already affecting fiscal policy through the medium-term budgetary objective and the resulting adjustment of the expenditure ceilings for the state budget and state funds. For the 2020–2022 period, this value has been set 0.25 percentage points lower than previously. This tightening down to −0.75% of GDP results from the absence of reforms of social systems ensuring their long-term financial sustainability.

The values and derivation of expenditure ceilings for 2020 to 2022 are contained in the Budgetary Strategy for the General Government Sector of the Czech Republic, approved by the Government on 29 April 2019. Updated ceilings are the basis for a draft state budget and state fund budgets for 2020 and their medium-term outlooks. The present Fiscal Outlook of the Czech Republic relies on them in particular in public expenditure set-up. Moreover, it is based on the November Macroeconomic Forecast for the Czech Republic.

This year, the Czech Republic's fiscal outlook expects a general government sector surplus of 0.3% of GDP. For the year 2020, we estimate the surplus at 0.1% of GDP, reflecting the fulfilment of the Government's programme priorities in the social area, as well as in the investment expenditures in both physical and human capital and a slowdown in the growth dynamics of the Czech economy. Over the coming years, we expect the general government balance to be slightly negative. The structural balance should reach moderate deficits of 0.3% of GDP for most years covered by the forecast and outlook, implying a neutral fiscal stance. The Czech Republic should therefore continue to meet its medium-term budgetary objective under the preventive arm of the Stability and Growth Pact during all the years covered by the outlook. General government debt should continue to decrease throughout the outlook, reaching below 30% of GDP in 2022, in line with expected developments in the balance and nominal gross domestic product. The state of public finances, both at present and in the near future, was also one of the factors that decided Moody's to increase in the Czech Republic's rating at the beginning of October this year.

The quantified future expenditure of the pension system in the Czech Republic gives an idea of the causes and magnitude of the risks for its long-term sustainability. The current Eurostat demographic projection foresees a relatively large decline in the population of the Czech Republic over the long term. The ratio of people over the age of 65 to the working age population (15 to 64) is projected to almost double by 2070 and reaching around 50%. By 2070, expenditure on pensions should increase by 2.8 percentage points from 8.2% of GDP to 10.9% of GDP. The real cost of ageing will also be significantly dependent on possible revisions of the retirement age, in line with expected life expectancy. During the first retirement age revision, the Government decided not to change the current set-up. A further evaluation will take place no later than in 2024. However, during the debate on the pension system, a number of arguments have emerged that merit further investigation. This is why this year's Fiscal outlook, as part of the traditional analysis into long-term sustainability, provides additional information on the rise in healthy life expectancy and on determinants of pension expenditure, including an international comparison.

The thematic chapter deals with the issue of fiscal rules. The entire European Union is currently facing the question of how to reform its fiscal framework, including the established fiscal rules. It is clear that the existing framework is very complex, largely opaque and thus gradually losing credibility. The Ministry of Finance actively engaged in this debate and proposed a new design for European rules, based on an automatic structural balance system, accompanied by a corrective account to eliminate past errors.

1 Macroeconomic Framework of the Fiscal Forecast

Economic growth has been gradually increasing since mid-2018 – YoY real GDP growth accelerated from 2.4% in Q2 2018 to 2.8% in Q2 2019. Despite less favourable developments abroad, domestic fundamentals remain strong, although not even the Czech economy will probably avoid a slow-down. We expect real GDP to increase by 2.5% in 2019, while in the coming years the rate of growth should hover close to 2%.

Over the entire horizon of 2019–2022, economic growth should be driven by domestic demand, in particular expenditure by households and the general government sector on final consumption. However, gross fixed capital formation should also increase. The change in inventories should have a neutral effect on economic growth, while the contribution of the external trade balance is expected to be slightly positive, but gradually diminish. With a slight decline in export performance, export dynamics should be driven by growth in export markets, but over the entire horizon of the macroeconomic framework it should be significantly lower than in previous years. The expected development of gross fixed capital formation, which, like exports, is highly import-intensive, should also be reflected in imports of goods and services.

Household consumption was up 3% in the first half of this year, its dynamics being slightly higher compared to the end of 2018. The increase in household consumption resulted from a rise in disposable income and, in a long-run perspective, high consumer confidence. By contrast, the YoY increase in the savings rate weighed on the growth of household expenditure on final consumption. Household consumption will continue to be supported by growth in real disposable income, which should be significantly slower than in 2018 due to lower growth in wage and business income and higher inflation. At the same time, its dynamics this year and next year will positively reflect a number of discretionary changes in the social area. Growth in final consumption expenditure by households should be further hampered by a continuing increase in the savings rate, although this should not be as pronounced as in 2018. Growth in real household consumption could thus decrease to 2.7% in 2019 and 2.4% in 2020. In following years, growth in household consumption could slightly decline further to 2.1% in 2022, due to slower growth in disposable income.

Growth in gross fixed capital formation, which slightly exceeded 7% in 2018, halted in Q2 2019 under the weight of external risks and economic slowdown in the CR's main trading partners. With a slight decline in private investment, investment activity was driven by expenditure of the general government sector. Monetary conditions should have a broadly neutral effect on private investment, while growth in gross operating surplus should tend to stimulate investment, alongside persisting labour shortages and the declining relative cost of capital against labour costs. Overall, private investment activity is expected to stagnate between 2019 and 2020. In the case of investment of the general government sector, we expect an increase in investment expenditures financed both from national sources and continued implementation of projects co-financed by EU funds (see Chapters 2 and 3). Gross fixed capital formation could thus grow by 0.9% in 2019 and by 0.7% in 2020. Consequently, in the context of approaching end of the 2014–2020 financial perspective, there should be a slight recovery in investment, which could increase by 2.0% and 2.4% in 2021 and 2022.

Since the beginning of 2017, the YoY growth of consumer prices has hovered mostly in the upper half of the tolerance band of the CNB's 2% inflation target. With a few exceptions, it should remain there for the rest of this year and in 2020, when inflationary effects of rising unit labour costs and positive output gap should be compounded by administrative measures. The average inflation rate could reach 2.8% in 2019 and 2.6% next year. In 2021 and 2022, consumer prices should rise more slowly and the inflation rate should be 2.0%.

The labour market has been showing symptoms of overheating for several years. According to all available statistics, employment growth is tending to slow down, and, using the Labour Force Survey methodology, it has already virtually stopped. While internationally comparable unemployment rate has probably reached the bottom at around 2%, registered unemployment continues to decline, albeit at a slower pace. The number of job vacancies is around 350,000, which is more than double the previous highs of 2008. This is in line with continuing strong growth in wages and salaries.

Growth in demand for labour should weaken in the context of a gradual slowdown in the economy, as well as due to previous productivity enhancing investment. However, labour supply should grow faster than demand, mainly due to demographic factors and the increase in the retirement age. We expect unemployment to remain very low and to slowly rise to its equilibrium level – from 2.0% in 2019 to 2.5% in 2022. Employment could increase by 0.3% this year, but in subsequent years it should be almost stagnant. Apart from the demand for labour, there will be two contradictory forces: shrinking working age population and an increase in the participation rate, which will also be supported, in addition to the rising 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). Dynamics of wages and salaries should decline moderately as a result of the expected gradual reduction in the labour market

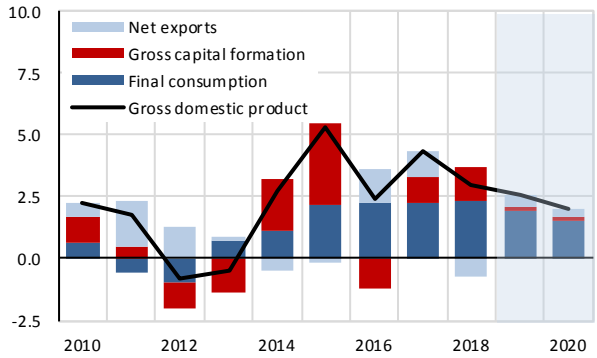
imbalances. The growth in the wage bill could therefore slow from 7.4% in 2019 to 4.7% in 2022.

The current account of the balance of payments has achieved a surplus since 2014. The current account should show a positive balance during the entire 2019–2022 period, with a high surplus on the balance of goods and services and, on the contrary, a significant deficit on the primary income balance.

The forecast is subject to a number of risks, which we consider to be significantly skewed in the direction of lower economic growth. The main external risks are uncertainty about and conditions of the United Kingdom's withdrawal from the European Union, the increase in protectionism in international trade, a more pronounced slowdown in economic growth in Germany and China and, possibly, an escalation of problems in the Italian banking sector. Internal risks include, in particular, overheating in domestic labour and real estate markets, and expectations of major structural changes in the automotive industry, relating to the emission standards that have been adopted.

Graph 1.1: Contributions to Real GDP Growth

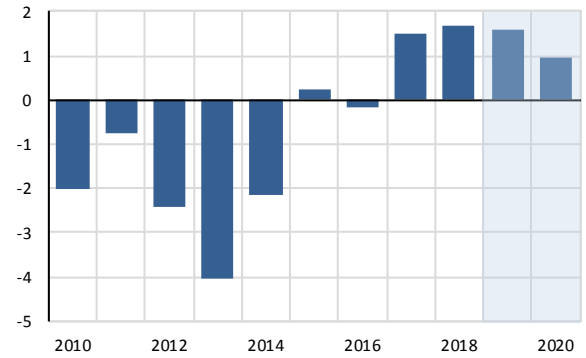
real GDP growth in %, contributions in pp



Source: MF CR (2019b).

Graph 1.2: Output Gap

% of potential product



Source: MF CR (2019b).

Table 1.1: Main Macroeconomic Indicators

		2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
		Current Forecast and Outlook					April 2019 Convergence Programme				
Gross domestic product, nominal	*bn CZK, c.p.*	**5 329**	**5 645**	**5 894**	**6 146**	**6 404**	5 304	5 595	5 839	6 090	6 344
	% growth, c.p.	5.6	5.9	4.4	4.3	4.2	5.1	5.5	4.4	4.3	4.2
Private consumption	*% growth, c.p.*	5.7	5.7	5.1	4.3	4.1	5.8	5.6	4.5	4.3	3.9
Government consumption	*% growth, c.p.*	9.4	8.1	4.3	4.3	4.3	8.9	6.5	4.3	4.3	4.3
Gross domestic product, real	*% growth, s.p.*	**3.0**	**2.5**	**2.0**	**2.2**	**2.1**	2.9	2.4	2.4	2.3	2.2
Private consumption	*% growth, s.p.*	3.4	2.7	2.4	2.3	2.1	3.2	2.9	2.8	2.5	2.1
Government consumption	*% growth, s.p.*	3.9	3.0	1.8	1.9	1.9	3.7	2.2	1.9	1.9	1.9
Gross fixed capital formation	*% growth, s.p.*	7.2	0.9	0.7	2.0	2.4	10.5	3.1	2.7	2.6	2.9
Contr. of net exp. to GDP growth	*pp, s.p.*	-0.8	0.4	0.3	0.2	0.1	-0.7	-0.3	0.0	0.1	0.0
GDP deflator	*% growth*	**2.5**	**3.3**	**2.4**	**2.0**	**2.1**	2.1	3.0	1.9	1.9	2.0
Inflation	*in %*	**2.1**	**2.8**	**2.6**	**2.0**	**2.0**	2.1	2.3	1.6	1.8	1.8
Employment	*% growth*	**1.4**	**0.3**	**0.1**	**0.1**	**0.0**	1.6	0.4	0.2	0.1	0.0
Unemployment rate	*average in %*	**2.2**	**2.0**	**2.2**	**2.4**	**2.5**	2.2	2.2	2.2	2.3	2.3
Wages and salaries	*% growth, c.p.*	**9.5**	**7.4**	**5.9**	**5.2**	**4.7**	9.3	7.5	5.9	5.5	5.0
Current account balance	*in % of GDP*	**0.3**	**0.9**	**1.4**	**1.6**	**1.7**	0.3	0.2	0.3	0.4	0.5
Assumptions:											
Exchange rate CZK/EUR		**25.6**	**25.7**	**25.5**	**25.2**	**24.9**	25.6	25.5	25.1	24.6	24.2
Long-term interest rates	*% p.a.*	**2.0**	**1.5**	**1.2**	**1.2**	**1.2**	2.0	2.2	2.4	2.4	2.4
Crude oil Brent	*USD/barrel*	**71.4**	**64.2**	**59.2**	**57.2**	**56.8**	71.4	66.0	64.7	62.9	61.6
GDP in Eurozone EA19	*% growth, s.p.*	**1.9**	**1.0**	**0.7**	**1.2**	**1.3**	1.8	1.0	1.4	1.7	1.8

Note: Figures for employment and unemployment are based on the Labour Force Survey.
Source: MF CR (2019a, 2019b).

2 Short-term Development of General Government Sector Finances

The general government sector reached a surplus of 1.1% of GDP in 2018, while the debt-to-GDP ratio declined by more than 2 pp to 32.6% of GDP. The CR maintains its position as one of the best performing EU countries in recent years and reported the fourth lowest indebtedness in 2018. We forecast the decrease of the surplus to 0.3% of GDP for 2019. Also the results for first two quarters indicate this development. Total surplus reached CZK 25.3 bn in total, in YoY comparison by CZK 21.8 bn less. In terms of composition, the results point to a negative balance of central government compensated by surpluses of local governments and social security funds.

2.1 General Government Sector Finances in the CR in 2018

According to data published by the CZSO (2019b), the general government sector reached a surplus of CZK 58.4 bn, i.e. 1.1% of GDP in 2018. The surplus was achieved for the third consecutive year and all sub-sectors contributed to it. The balance adjusted for the impact of the business cycle and one-off or other temporary measures amounted to 0.6% of GDP.

In comparison with the 2019 Convergence Programme of the CR (MFCR, 2019a) and the April Government Deficit and Debt Notification, the CZSO revised the 2018 data with a positive impact on the overall balance of CZK 11.0 bn (0.2 pp). The higher surplus was due to revenues from a positive adjustment to income taxes, primarily corporate income tax (CZK +10.8 bn). This revision relates to updated data available from tax returns and tax equalisation (overpayment or underpayment), which always accrues from the previous year. In terms of non-tax income, the most notable was the amount of capital transfers (CZK +2.5 bn). The general government expenditure increased by CZK 2.8 bn as a result of adjustments to investment expenditure (CZK +5.8 bn) and capital transfers (CZK +1.6 bn), although this increase was rectified by lower social transfers in kind (CZK −3.1 bn) and subsidies (CZK −1.3 bn).

The general government debt reached CZK 1,734.7 bn at the end of 2018, accounting for 32.6% of GDP. The decrease in the debt ratio of 0.2 pp compared to the April notification is related mainly to the revision of nominal GDP.

2.2 General Government Sector Finances in the CR in 2019

For 2019, we expect the general government sector to achieve a surplus of 0.3% of GDP, while the negative balance of the central government should be outweighed by the positive performance of the local governments and social security funds (health insurance companies). The estimated financial performance this year is also supported by the current cash performance of state budget, budgets of local governments and budgets of health insurance companies. In terms of the structural balance, we estimate that a negative fiscal effort should lead to a slight deficit of 0.3% of GDP.

In comparison with the 2019 Convergence Programme of the CR (MFCR, 2019a), the forecast for the overall balance remains unchanged in relative terms. In absolute terms, only a slight deterioration of CZK 0.2 bn has occurred, as the expected lower local government surplus (of CZK 1.6 bn) should be almost offset by a better central government balance (of CZK 1.3 bn) and slightly higher surplus from social security funds. The current revenue forecast is based on the revised 2018 base, where, according to CZSO data, total revenue grew faster by 0.7 pp, particularly as a result of a revision of corporate income tax revenue (see sub-chapter 2.1). Compared to the April forecast, we expect greater growth, especially in social security contributions (+0.4 pp) and capital transfers (+13.1 pp). On the other hand, we estimate lower dynamics for income tax revenues (−0.2 pp) and current transfers (−4.2 pp). Faster revenue growth should be accompanied by 1 pp higher than originally expected expenditure dynamics. This reflects both higher investment expenditures (+2.6 pp), and more significant growth in current expenditures on purchases of goods and services and social transfers in kind (in both cases +1.9 pp). Expenditure on subsidies should also grow faster (+5.9 pp). On the other hand, the current forecast for expenditure interest (−1.2 pp) and capital transfers (−1.3 pp) envisages a lower growth rate than in the Convergence Programme. The following part of this sub-chapter explains these differences.

General government revenues should increase by 5.4% YoY in 2019, to 41.6% of GDP. Just as in 2018, tax revenue, including social security contributions, is expected to be the dominant factor, with an increase of 5.9%. The overall tax-to-GDP ratio should remain the same YoY at 36.0% of GDP.

The forecast assumes a high dynamics of income taxes (7.4%). As in the previous year, the main source of their growth should be the personal income tax. Its expected increase of more than 10% is also indicated by the development of cash performance since the beginning of the year, which is growing at a double-digit rate (13.4%). The predicted growth in the volume of the wage bill by 7.4% and the change in its distribution after the increase in

the minimum and guaranteed wages, taking into account the method of tax calculation, are positively reflected here. The adoption of Act No. 80/2019 Coll. meant the limit of lump-sum deductibles for sole traders increased again to double the previous amount. The measure, which will be applicable for the first time in 2019, i.e. in tax returns declared in 2020, should mean a YoY decline in tax revenue by CZK 1.5 bn. A negative impact of CZK 0.2 bn is also expected in connection with the abolition of the no-payment period in the first three days of incapacity for work from 1 July 2019, which should be associated with a reduction in the tax base through a lower rate of sickness insurance of 0.2 pp. Of the other discretionary measures, the only impact expected is approximately −0.2 bn CZK from the introduction of the long-term care allowance, which came into force in mid-2018.

The increasing share of compensation of employees in the gross domestic product is negatively reflected in corporate profitability. The dynamics of corporate income tax should therefore slow down YoY by 1.6 pp to 4.4%. The tax prediction is based primarily on the development of gross operating surplus; from the discretionary measures it only envisages an extension of the exemption of dividends belonging to the state and local governments from corporate income tax with an impact of CZK −1.8 bn (Chamber of Deputies Print No. 509). However, this reduction in tax revenues is offset by an increase in the cash non-tax revenues of the state budget and local government budgets by the hitherto taxed portion of the newly exempt income. The overall impact of the proposed adjustment on public budgets is therefore neutral.

The development of social security contributions should be determined by similar factors as the personal income tax. In addition, a planned increase in payments for state insured persons is expected to amount to approximately CZK 3.4 bn. On the other hand, a negative discretionary impact of CZK 1.8 bn is associated with a 0.2 pp reduction in the sickness insurance rate. This involves compensation for costs incurred by employers in connection with the obligation to pay employees for the first three days of their incapacity for work, effective from 1 July 2019 (Act No. 32/2019 Coll.). The decrease in the dynamics of social and health insurance will also be associated with the payment of long-term care allowance (Act No. 310/2017 Coll.), which is expected to have an impact of approximately CZK 0.4 bn in 2019. All these factors are behind the projected growth in social security contributions of 7.2%. The forecast also corresponds to the up-to-date cash performance, with health and social insurance contributions rising by around 8% YoY, similar to the accrual revenue for the first two quarters of this year.

We forecast growth of 4.8% in value added tax revenues, which corresponds to the development of cash performance on public budgets level for the first 9 months of this year. The YoY dynamics should decelerate slightly, owing to slower growth in nominal household consumption and the relevant part of general government expenditure. With effect from 1 February 2019, the amendment to the Value Added Tax Act (Act No. 6/2019 Coll.) reduced the tax rate on public land and water transport from 15% to 10%, with an expected impact of CZK −0.9 bn.

Excise tax revenues (excluding subsidies for renewable energy sources) should increase by 0.8%. The commencement of the third period of excise tax refund on diesel fuel and its unification for all agricultural primary production activities (Act No. 453/2016 Coll.) should have an impact of −0.3 bn CZK. By contrast, the newly introduced taxation of heated tobacco products (Act No. 80/2019 Coll.) brings a positive impact of CZK 0.7 bn on excise tax revenues.

In connection with the projected flows from EU funds, the forecast expects higher than 14% dynamics for capital transfers, which is also supported by national accounts data for the first two quarters of this year, showing a growth rate of 14.7%.

General government expenditure should increase by 7.5% and reach 41.2% of GDP, which is 0.6 pp higher YoY.

Despite an expected slowdown of 1.2 pp, general government expenditure on final consumption should maintain strong dynamics of 8.1%. As was the case last year, we expect the fastest growth in compensation of employees (10.0%), which is confirmed by data from quarterly national accounts for the first half of the year (10.1%). The increase in salaries concerns practically all employees of the general government sector, in particular teachers, while higher salaries in education are the result of both increasing salary scales and implementing regional education funding reforms.

In addition to compensation of employees, final consumption expenditure should also be driven by social transfers in kind. The primary reason for their expected more than 9% increase is the setup and execution of expenditure in the health care system. A 75% discount on fares in buses and trains for pupils, students up to 26 years and seniors over 65 years of age (Government Resolution No. 206/2018) , which already affected 2018 results (it was introduced in September 2018), is also included in social transfers in kind with an additional cost of about CZK 4 bn. This is also the reason for higher YoY dynamics of social transfers in kind in the first half of this year according to quarterly national accounts (9.8%), which should however decelerate over time.

Compared to the almost double-digit growth in intermediate consumption in 2018, expenditure on goods and services should significantly slow down. Quarterly national accounts suggest that their growth rate 4.3% will be primarily determined by the local governments. In terms of sources of financing, the recent high growth rate of purchases co-financed by EU funds is not expected to continue.

A significant increase (of 7.3%) is expected in the area of cash social benefits in 2019, which reflects both social measures already approved (especially in the area of

pensions) and economic development. With effect from 1 January 2019, the assessment for the flat rate component of pensions increased from 9% to 10% of the average wage. At the same time, the earnings-related part of pensions for recipients aged 85 and more increased by CZK 1,000 (Act No. 191/2018 Coll.). The impact of these discretionary measures exceeds CZK 14 bn. Along with autonomous inflation-related developments and real wage growth, pensions rose by 7.3% in January 2019. Other measures that increase social expenditures are long-term care allowances with an impact of CZK 0.6 bn (Act No. 310/2017 Coll.) and an increase in care allowance for the dependence grades 3 and 4 with an expected additional expenditure of CZK 2.8 bn. (Act No. 47/2019 Coll.).

After the high growth of investments in 2018, we expect their dynamics to decelerate towards 8.1% this year. This growth should be mainly driven by investments financed from purely national sources.

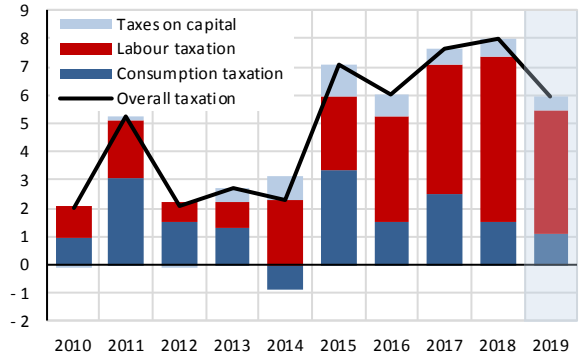
The pace of interest expenditure is expected to slow to 4.3% YoY, which would mean decline in their ratio to GDP to the 2017 level (0.7% of GDP). This projected development reflects the state's ability to generate net interest income from issuance activities at negative interest rates, as well as effective treasury liquidity management.

As regards other expenditure, the dynamics of capital transfers should slow significantly to 2.6% YoY.

At the end of 2019, the general government debt could amount to 31.2% of GDP, which represents a YoY decline of 1.3 pp in relative terms, due to expected nominal GDP growth of almost 6%.

Graph 2.2.1: General Government Tax Revenue

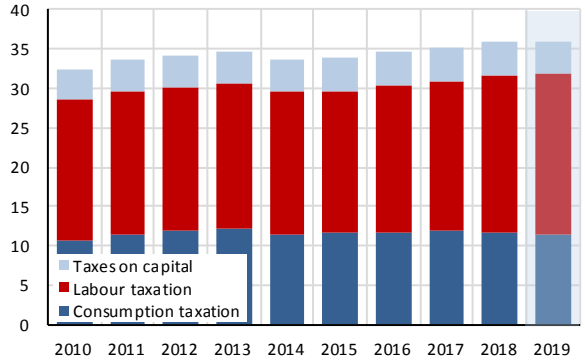
growth in %, contributions in pp



Source: CZSO (2019a, 2019b). Year 2019 MF CR.

Graph 2.2.2: Tax Quota

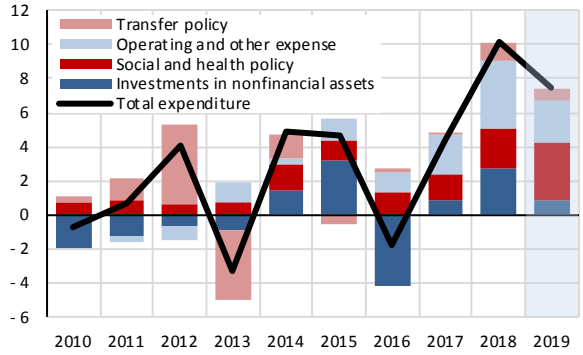
in % of GDP



Source: CZSO (2019a, 2019b). Year 2019 MF CR.

Graph 2.2.3: General Government Expenditure

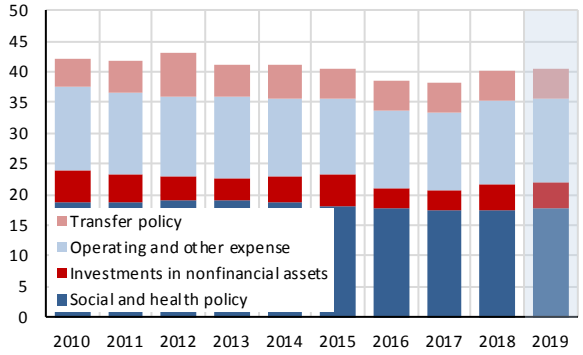
growth in %, contributions in pp



Source: CZSO (2019a, 2019b). Year 2019 MF CR.

Graph 2.2.4: Composition of Government Expenditure

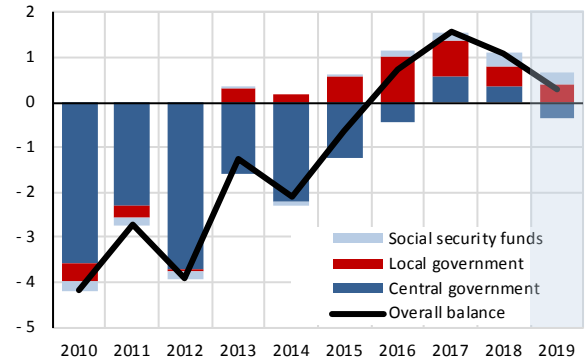
in % of GDP



Source: CZSO (2019a, 2019b). Year 2019 MF CR.

Graph 2.2.5: General Government Balance

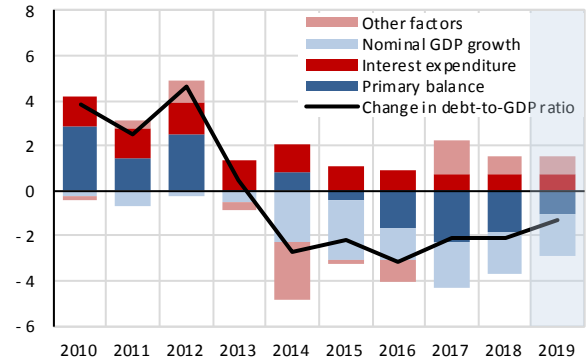
in % of GDP



Source: CZSO (2019a, 2019b). Year 2019 MF CR.

Graph 2.2.6: Contributions to Change in Gross Debt

in pp



Source: CZSO (2019a, 2019b). Year 2019 MF CR and Eurostat (2019b).

2.3 International Comparison

2.3.1 General Government Balance

The general government deficit of EU countries reached 0.7% of GDP in 2018. In comparison with 2017, it was 0.3 pp lower. Over the long term there has been a trend of diminishing deficits – since 2009 the deficit has decreased by almost 6 pp. Only Cyprus exceeded the reference value of the Stability and Growth Pact (4.4% of GDP, although with a positive structural balance), Romania has managed a deficit of exactly 3.0% of GDP. The other 12 EU countries with a deficit did not exceed the reference threshold.

Luxembourg (with 2.7% of GDP), followed by Malta with Germany, Bulgaria and the Netherlands (in descending order), posted a higher surplus than the CR last year. At the same time, all sub-sectors achieved surpluses in all of these countries, CR included, with the exception of local governments in the Netherlands. In 2018, exactly half of the EU countries reported positive economic results, including Greece (1.0% of GDP), which achieved the highest structural surplus in the EU (5.0% of GDP).

In 2019, 14 EU Member States expects a general government deficit, although the expected relative balance for Belgium and France is based on the methodology of the International Monetary Fund. Remaining 14 EU Member States are expecting a surplus, the highest in Cyprus (3.8% of GDP) and Denmark and Luxembourg (both 2.0% of GDP[1]). Italy and Slovenia have reported the same general government balance values as in 2018. Compared to 2018, a worse general government performance in relative terms to GDP is expected in 13 EU Member States, while in 8 of them this entails a decrease in the surplus. A transition from surplus to deficit is predicted in Croatia, while the opposite trend is expected in Cyprus.

Regarding the impact of individual sub-sectors on the general government balance, in the southern countries, including France, central governments contribute to the deterioration. By contrast, in the Nordic countries (Sweden, Finland), the local governments are the main contributor to a decline in the balance, owing to additional accrual adjustments in gross fixed capital formation.

As regards the quality of the reported data, Eurostat (2019b) no longer applies reservations to Hungary for its failure to include Hydrocarbon Stockpiling Association and some entities set up by the Hungarian Central Bank in the general government sector and to Slovakia for misrepresenting some government expenditure.

2.3.2 General Government Debt

Across the EU, general government debt reached a consolidated value of 80.4% of GDP in 2018, i.e. 1.7 pp less than in 2017. Total of 14 EU member states did not meet the fiscal debt criterion of 60% of GDP in 2018; in 2019 debts of Ireland and Germany should fall below this threshold.

Greece remains the most indebted EU country. Although part of general government debt was forgiven by private creditors in 2012, the relative general government debt ratio, due to several years of significant economic slump, had not been decreasing significantly and finally increased to 181.2% of GDP in 2018. The amount of Greek debt, both in absolute and relative terms, is rising despite the reported surpluses due to the unbalanced performance of the various parts of the general government sector. Other EU countries with debt higher than or equal to 100% of GDP in 2018 were Italy, Portugal, Belgium and Cyprus; besides these, France approached this threshold.

On the other hand, most EU countries have been reducing or stabilising the relative general government debt in recent years, although in some cases this is mainly due to the impact of economic growth. For example Romania's debt is expected to increase by more than 36% in absolute terms between 2015 and 2009, but its relative level

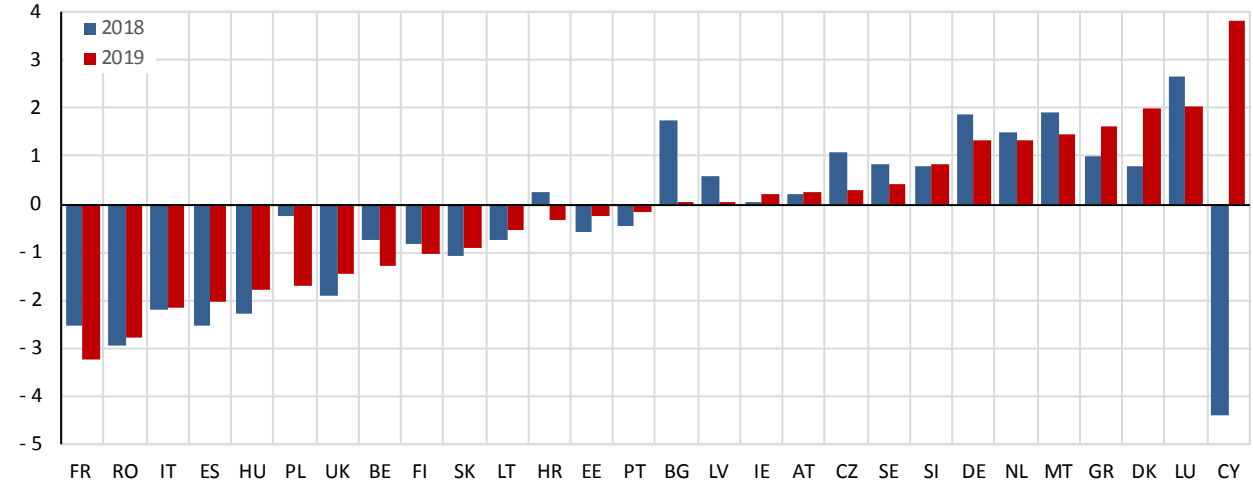
[1] In the case of Denmark this figure may be misrepresented, because its national reporting for 2019 includes exactly the same figure for GDP in Danish crowns as for the previous year, 2018.

remains virtually constant at around 35% of GDP. For the same reason, Ireland, with debt of around 120% of GDP in 2012 and 2013, managed to cut its indebtedness by almost half and forecasts 59.3% of GDP for 2019 (Eurostat, 2019b), although its absolute level is practically unchanged. The relative level of general government debt is also decreasing in another 9 EU countries (Croatia, Hungary, Malta, Germany, the Netherlands, Austria, Slovenia, Sweden and Slovakia, whose relative value is based on the International Momentary Fund's methodology).

Based on the national Government Deficit and Debt Notification submitted, higher debt in relative terms is expected in Italy, Romania and the Baltic countries, including the least indebted Estonia (8.7% of GDP in 2019).

Graph 2.3.1: General Government Balance in EU Countries

in % of GDP

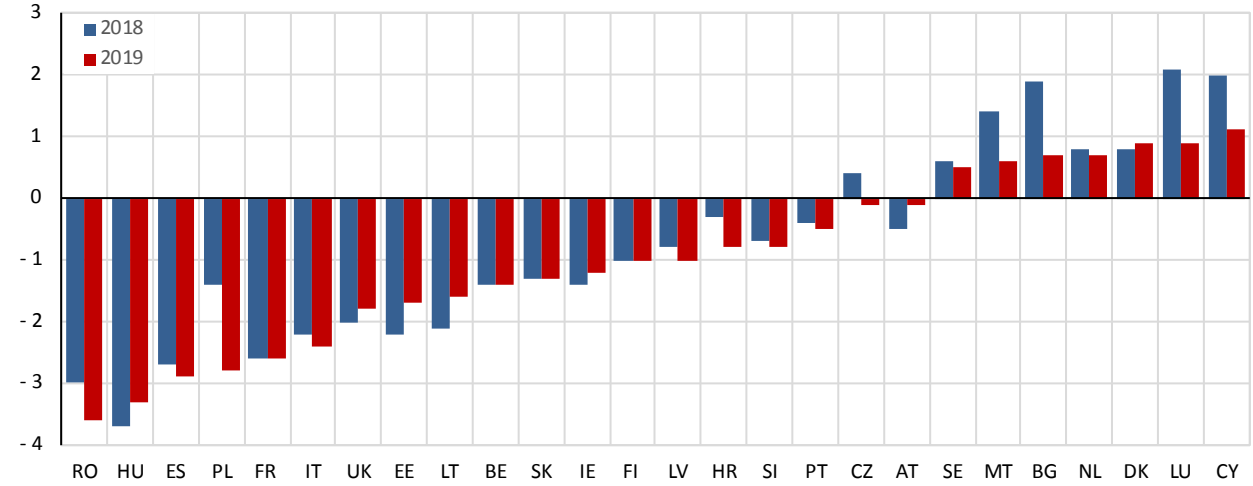


Note: Data of the United Kingdom are for the financial year (1 April of year T to 31 March of year T+1). Data for 2019 of Belgium and France from the IMF Database.

Source: Eurostat (2019b), IMF (2019).

Graph 2.3.2: Structural Balance of the General Government in EU Countries

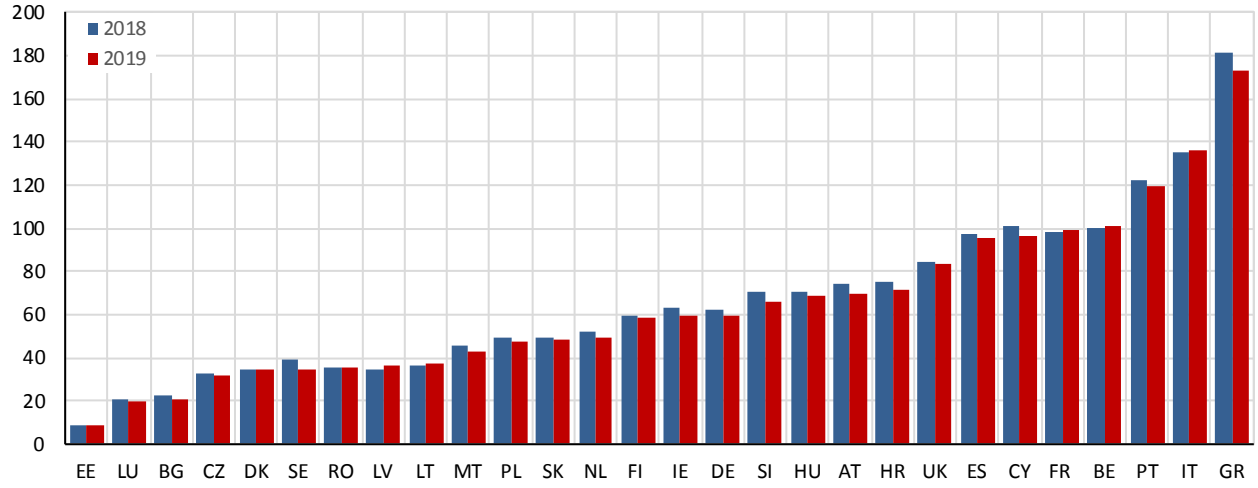
in % of GDP



Source: EC (2019a).

Graph 2.3.3: General Government Debt in EU Countries

in % of GDP



Note: Data of the United Kingdom are for the financial year (1 April of year T to 31 March of year T+1). Data for 2019 of Belgium, France and Slovakia from the IMF Database.
Source: Eurostat (2019b), IMF (2019).

2.3.3 General Government Debt Financing

In 2019, interest yields on government bonds declined in all the EU countries (see Graph 2.3.4). At the end of September, 14 EU countries recorded negative yields on maturity of 10-year bonds for convergence purposes. The evolution of debt securities yields in individual EU countries was driven by increased demand for government bonds and the European Central Bank's expansive monetary policy. It lowered the deposit rate by 0.1 pp to a new minimum of –0.5% in September and decided to resume its purchases of assets of EUR 20 bn per month from November 2019. It is responding to a more significant than expected slowdown in the euro area economy. The European Central Bank's decision then translates into demand on the EU government bond market. Fears of an escalation of trade disputes with the United States also increases demand for bonds as safe assets. On the supply side, there is a lower volume of government bonds on the market due to fiscal consolidation in some states.

German and Danish government bonds have the lowest yields among EU Member States. At the end of 2018, German government bonds with a maturity of 10 years traded with a yield of 0.19% and at the end of September 2019 the yield was already −0.59%. Even government bonds with a maturity of 30 years were subscribed with a negative yield. Germany is therefore an example of a country where the bond market situation does not reflect the evolution of its economic indicators. Danish government bonds also reflect the easing of the central bank's monetary policy, which lowered the deposit rate to −0.75% in September 2019. This is its response to the European Central Bank's monetary policy due to the Danish koruna's link to the euro.

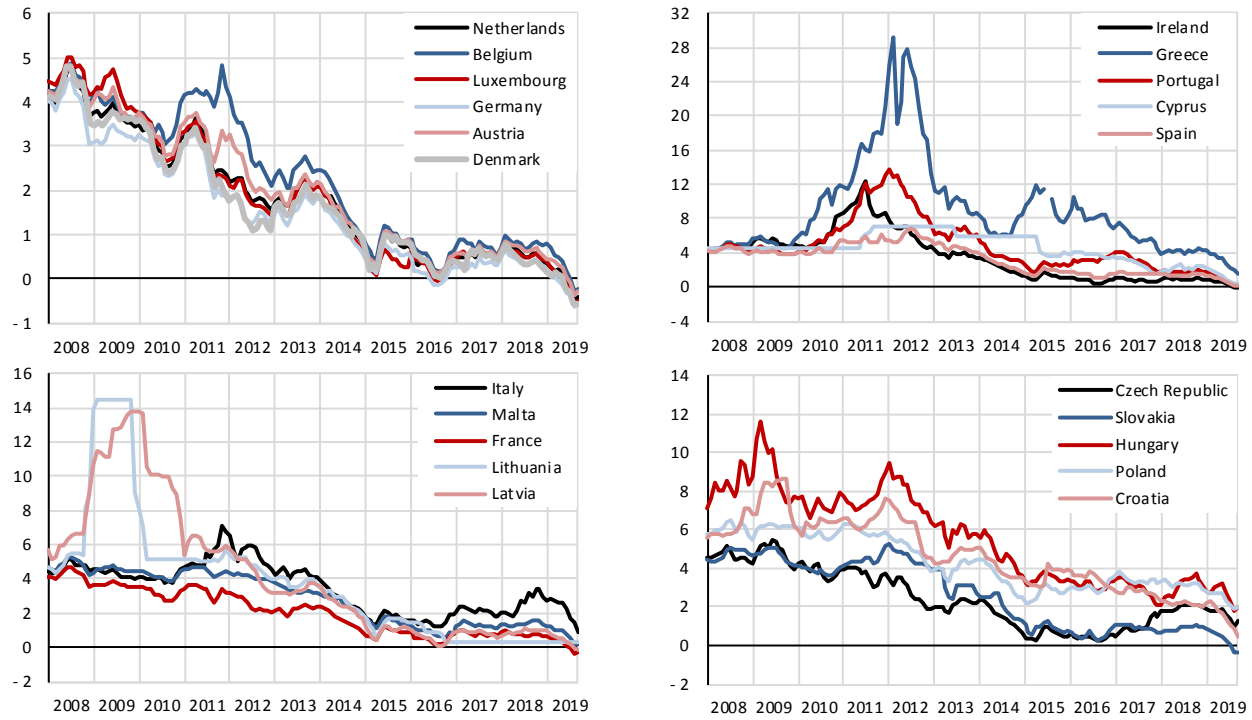
Of the countries that have received assistance from the EU and IMF in the past, only Ireland has achieved negative interest yields for government bonds for convergence purposes (see Graph 2.3.4, top right panel). Following the crisis, Ireland has, thanks to the structure of its economy, quickly recovered economic growth and improved public finances. In the long term, therefore, it has the lowest interest yield on government bonds in this group of countries. Nevertheless, other countries also saw a significant reduction in yields. Greek government bond yields with a maturity of ten years fell to 1.5%. In October 2019, Greek Treasury bills with a three-month maturity were even traded with a negative yield. However, the decline in Greek government bond yields does not reflect the country's economic and fiscal situation, but the overall situation on the European bond market.

Among the Central European countries, Slovakia has the lowest yield rates, and profits most from the euro area's eased monetary policy when issuing bonds. It is also the only country in this group to achieve negative yields to maturity of 10-year bonds for convergence purposes. Interest yields on Czech government bonds are also gradually declining, but less compared to euro area countries and Nordic countries. This is mainly due to the CNB's tighter monetary policy.

Government bond issues are not the only way to cover the general government debt. There are countries with a significant share of loans in the EU. National Autumn Government Deficit and Debt Notifications indicate that in 2018 loans accounted for a significant proportion of the general government debt in Estonia (87.2% of total debt), Greece (82.3%) and Cyprus (48.5%). Whereas in Estonia this share is stable due to long-term loans from the European Investment Bank and the low level of general government debt, in Greece and Cyprus there has been a significant increase in the weighting of this financing method from around 30% in 2011 due to loans from the International Monetary Fund and EU stabilisation mechanisms.

Graph 2.3.4: Yields of Government Bonds of Selected EU Countries

% p. a., monthly average



Note: These are yields of ten-year bonds for convergence means of the specific country. 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 (2019).

3 Medium-term Fiscal Outlook

In spring 2019, there was an ex-post evaluation of fiscal rules introduced into the Czech institutional framework through the adoption of the Act on Fiscal Responsibility Rules. The evaluation concerned both the structural balance rules ensuring the achievement of the medium-term budgetary objective and the debt rule for local governments. The results confirmed a creditable setting of the public finances in the CR, with these, according to current results, ranking among the healthiest in the EU. The question of long-term sustainability remains problematic. The medium-term budgetary objective was tightened by 0.25 pp to −0.75% of GDP, reflecting future pressures on general government expenditures mainly connected with the ageing population, especially after 2030.

3.1 Fiscal Policy Objectives

The medium-term budgetary outlook expects constant planned state budget deficits of CZK 40 bn. As a result of the closing output gap, the optimal fiscal policy stance seems neutral or slightly expansionary. In general, greater expansion in a small open economy is questionable considering the size of the multipliers and hence its effectiveness. A more appropriate strategy would appear to be one in which the operation of automatic stabilizers is not restricted. In terms of debt development, this type of approach is also more rational in terms of long-term sustainability and the creation of fiscal reserves in the event of deeper economic downturns. Between 2020 and 2022, the general government balance should decrease from practically balanced values to −0.4% of GDP. However, the structural balance should be broadly constant at around −0.3% of GDP. (see Table 3.1.1). The fiscal policy of the CR can be described as essentially neutral for the following years and therefore economically appropriate at present. A detailed view of the predicted development of general government revenue and expenditure is discussed in subchapter 3.2.

The concept of the structural balance is closely related to the institute of the medium-term budgetary objective, which corresponds to −0.75% of GDP for the CR for the following years. Although it should be fulfilled with a margin in the years of the outlook, this should not affect the effort to spread economic management within the general government sector itself. The problem with the general government sector in the CR is an imbalance in the performance of its parts. The sub-sector of social security funds (primarily health insurance companies) has balanced or slightly surplus budgets over the long run and has almost no debt. Its possible imbalances are then financed by the state budget. The sub-sector of local governments has consistently been in surplus in recent years. Although surpluses have decreased (from a record level of 1.0% of GDP in 2016 to 0.4% of GDP in 2018), this was due to higher capital investment growth.

However, both sub-sectors also achieve their results due to transfers from the state budget and changes in the tax assignment, which have always been implemented with the detriment of the central government, respectively the state budget in recent years. However, since 2002, when detailed information from national accounts became available, the state budget was in surplus only twice as measured by accrual methodology, in 2017 and very slightly in 2018. However, since 2019, the central government balance, with the dominant influence of the state budget, is again expected to be negative. However, in case of need of an active fiscal policy in times of economic downturn or redistribution of income in the society, virtually the entire burden lies on the state budget. It is therefore essential that public finances be managed prudently and reserves are built-up in times of economic prosperity not only as a whole, but also in a balanced manner with respect to the individual parts and their functions.

Table 3.1.1: Fiscal Policy Stance

in % of GDP, fiscal effort in percentage points

	2013	2014	2015	2016	2017	2018	2019 Forecast	2020 Forecast	2021 Outlook	2022 Outlook
General government balance	**-1.2**	**-2.1**	**-0.6**	**0.7**	**1.6**	**1.1**	**0.3**	**0.1**	**-0.1**	**-0.4**
Cyclical component according to OECD method	-1.5	-0.8	0.1	-0.1	0.5	0.6	0.6	0.4	0.2	0.1
One-off and other temporary measures	-0.1	-0.5	-0.1	-0.1	0.0	-0.1	0.0	0.0	0.0	0.0
Structural balance according to OECD method	0.4	-0.8	-0.6	0.9	1.0	0.6	-0.3	-0.3	-0.3	-0.5
Fiscal effort according to OECD method	**1.5**	**-1.2**	**0.2**	**1.5**	**0.1**	**-0.5**	**-0.8**	**0.0**	**0.0**	**-0.2**
Cyclical component according to ECB method	-1.1	-0.7	-0.2	-0.1	0.2	0.3	0.3	0.2	0.0	-0.2
Structural balance according to ECB method	0.0	-0.8	-0.3	0.9	1.3	0.9	0.0	-0.1	-0.1	-0.2
Fiscal effort according to ECB method	**1.4**	**-0.8**	**0.5**	**1.2**	**0.4**	**-0.5**	**-0.9**	**-0.1**	**0.0**	**-0.1**

Note: The method of Organisation of Economic Co-operation and Development calculates the cyclical component directly from output gap, whereas the European Central Bank models 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 (2019a, 2019b). Forecast and calculations by MF CR.

3.2 General Government Medium-term Outlook

The state budget is the dominant element in Czech public finance. The overall expenditure framework of the state budget and state funds is determined by the fiscal rule derived from the CR's medium-term budgetary objective.

The Government of the CR approved, through its Resolution No. 278 of 29 April 2019 on the Budgetary Strategy for the General Government Sector of the CR, a cash-based consolidated expenditure framework of the CR's state budget and state funds of CZK 1,598 bn for 2020, CZK 1,661 bn for 2021 and CZK 1,730 bn for 2022. Based on the new forecast of state budget and state funds revenues it was possible to increase the expenditure framework for 2020 by CZK 54.7 bn, with almost three quarters of this increase being tax revenue, including social security contributions (primarily due to newly approved measures), and about one quarter being an increase in other revenues (in particular the sale of licences in the Czech Telecommunication Office chapter, bringing in excess of CZK 7 bn). The impact of the business cycle on revenue change was then estimated at CZK 0.2 bn in 2020 and subsequently declined to virtually zero in the years of the outlook. The updated amount of the consolidated expenditure framework of the state budget and state funds for 2020, after rounding to the nearest bn crowns, amounts to CZK 1,658 bn. Expenditure frameworks for 2021 and 2022 were adjusted in a similar way to 2020 and then the new frameworks amounted to CZK 1,706 bn for 2021 and CZK 1,779 bn for 2022 (Table 3.2.1).

The planned state budget deficits of CZK 40 bn are compatible with current expenditure frameworks, which should, under the expected conditions, lead to meeting the medium-term budgetary objective over the entire outlook.

For social security funds, we expect – due to their past performance and predicted revenues - modest surpluses to be maintained, but with a downward trend. In addition to the approved increase of payments for the state insured person by approx. CZK 3.5 bn for 2020 we expect stronger dynamics of the wage bill, which should gradually decrease. This should, also with regard to the stable development of the expenditure, fully meet the needs of the health care system in 2020–2022.

Surplus of local governments should continue in the years of the outlook. Surpluses should no longer be as high as in previous years, but their current decreasing trend should continue. This is due to both a slowdown in revenues and increasing expenditures, especially capital expenditures (Table 3.2.2).

Table 3.2.1: Adjustments of the Original Medium-Term Expenditure Framework
in CZK bn.

			2019	2020	2021
			Framework	*Framework*	*Framework*
Consolidated expenditure framework according to Government Resolution 278/2019		*CZK bn*	**1 598**	**1 661**	**1 730**
Adjustment in state budget and state funds cash revenues *	+	*CZK bn*	54.7	45.0	49.2
Cyclical component in adjusted state budget and state funds revenues	-	*CZK bn*	0.2	0.1	0.0
Effect od one-off measures	-	*CZK bn*	16.2	-	-
Change in EU and financial mechanisms revenues forecast	+	*CZK bn*	21.5	-	-
Adjusted consolidated expenditure framework of state budget and state funds (rounded)		*CZK bn*	**1 658**	**1 706**	**1 779**

** EU and financial mechanisms revenues excluded.*
Source: MF CR.

Table 3.2.2: General Government Development

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
								Forecast	*Forecast*	*Outlook*	*Outlook*
General government balance	*% of GDP*	**-1.2**	**-2.1**	**-0.6**	**0.7**	**1.6**	**1.1**	**0.3**	**0.1**	**-0.1**	**-0.4**
Central government	*% of GDP*	-1.6	-2.2	-1.2	-0.4	0.6	0.4	-0.4	-0.4	-0.4	-0.6
Local governments	*% of GDP*	0.3	0.2	0.6	1.0	0.8	0.4	0.4	0.3	0.2	0.1
Social security funds	*% of GDP*	0.0	-0.1	0.0	0.1	0.2	0.3	0.3	0.1	0.1	0.0
Total revenue	*% of GDP*	**41.4**	**40.3**	**41.1**	**40.2**	**40.5**	**41.7**	**41.6**	**41.7**	**41.7**	**41.6**
	growth in %	2.9	2.7	8.5	1.5	6.7	8.8	5.4	4.7	4.4	3.9
Total expenditure	*% of GDP*	**42.6**	**42.4**	**41.7**	**39.5**	**38.9**	**40.7**	**41.2**	**41.6**	**41.8**	**42.0**
	growth in %	-3.3	4.8	4.7	-1.8	4.4	10.2	7.5	5.4	4.8	4.7

Source: CZSO (2019a, 2019b). Forecast and calculations by MF CR.

3.2.1 General Government Revenue

We expect an average increase in general government revenues of 4.3%, of which tax revenues, including social security contributions, are 4.7%. Dynamics should have a downward trend due to slower growth in macroeconomic bases, as well as due to the distribution of discretionary measures

We predict that personal income tax revenue will grow at an average rate of almost 7% in the years of the outlook. If we take into account wage distribution and the method of tax calculation, the growth rates in individual years are influenced by the forecast of wage bill developments in the economy and, to a certain extent, also by the distribution of discretionary measures, including an increase in minimum and guaranteed wages. In 2020 and 2021, tax revenues should be increased by around CZK 2 bn by starting further phases of electronic registration of sales (Act No. 112/2016 Coll.). Starting in May 2020, all remaining sectors (e.g. liberal professions, transport, agriculture, crafts and manufacturing activities, etc.) initially included in phases 3 and 4 (Act No. 256/2019 Coll.), will join. The forecast is further influenced by several measures that reduce the scope of tax exemptions, such as the abolition of the exemption of gambling winnings above CZK 100,000 with an impact of CZK 0.6 bn in 2020 or proposed measures to reduce tax exemptions for selected financial transactions, which are expected to come into force in 2021.

Similar factors to those applicable to personal income tax will influence the development of social security contributions, where the increase in payments for state insured persons will amount to approximately CZK 3.5 bn in 2020. The average social security contributions growth is predicted at 5.1% in the years of the outlook after taking into account discretionary measures. It should also grow due to an increase in the tax assessment base for entrepreneurs as a result of electronic registration of sales. We expect discretionary measures for social and health insurance, in connection with the amendment to the Act on Registration of Sales coming into effect, to be only slightly positive in 2020. The decrease in the contribution rate of sickness insurance as a compensation for the abolition of the no-payment period in the first three days of sickness insurance (Act No. 32/2019 Coll.) will have the opposite effect on the revenue of the social insurance system, with an impact of CZK −1.8 bn in 2020.

Corporate income tax revenue should grow by 3.7% on average. The dynamics of this tax are primarily driven by the development of a gross operating surplus, but a change in the method of creation and tax deductibility of technical reserves of insurance companies (Parliamentary Print No. 509) will have a significant impact on this tax. This measure will increase revenues by more than CZK 10 bn in 2020 and 2021, with the impact being divided by half of this amount each year. The expected increase in revenues for this tax title due to the expansion of electronic registration of sales is expected to amount to almost CZK 1 bn, spread over the years 2020 and 2021 according to the time the law comes into force.

As regards value added tax revenue, we expect an average growth of 4.3% in the years of the outlook. Autonomous development simply corresponds to growth in nominal household consumption, part of final consumption expenditure and gross fixed capital formation of the general government sector, which we predict at an average rate of 4.5% in the years of the outlook. The amendment to the Act on Registration of Sales will also bring a positive impact through the launch of the remaining phases of the electronic registration of sales, but it also reassigns some services and commodities to lower tax rates (labour-intensive services, water and sewerage services, catering and beverage services and lending and rental of printed materials), which should have the overall effect of reducing revenue by about CZK 1 bn. With effect from 1 January 2020, the tax rate has been changed from 15% to 10% for heat and cold supplies (Act No. 80/2019 Coll.). The measure compensating for increased costs resulting from the increase in emission allowance prices reduces revenues by CZK 2 bn. The regulation of excessive deductions in the draft law amending some tax laws and some other laws (Act No. 80/2019 Coll.) should have a positive impact on value added tax revenue, amounting to CZK 0.6 bn by the end of the outlook.

The excise taxes revenue (excluding subsidies for renewable energy sources) should grow by an average of 3.4% over the entire horizon. The highest growth should be 6.6% in 2020, mainly due to a change in tax rates on tobacco products and alcohol, totalling approximately CZK 10 bn (Parliamentary Print No. 509). Excise taxes should also be positively impacted by the introduction of a digital tax. This tax should only start to apply during the course of 2020 and bring in a total of CZK 5 bn a year. The presentation of a new three-year plan (for the years 2021 to 2023) to increase the excise duty on tobacco products is planned for the next period, which should further increase tax rates by 5% with an impact of approximately CZK 2.5 bn in 2021 and 2022.

As regards other revenues, for 2020–2022 we expect growth in investment subsidies in line with the gradual increase in the implementation of projects from EU funds within the 2014–2020 programming period.

In terms of the division of revenue into taxes on consumption (taxes on products, in particular value added tax and excise taxes), on labour (personal income tax and social security contributions) and on profits (corporate income tax) the share of taxes on the production factor of labour should continue to increase slightly at the expense of taxation of consumption during the outlook horizon. The share of taxation of profits basically remains stable. Given the rates and tax bases, the main determinant is the development of macroeconomic bases, which is the case of taxation of labour. By contrast, the change in tax rates applies both to value added tax (a reduction for selected services) and excise duties (in particular an increase in tax rates on tobacco and alcohol). Taxes on the labour factor increase by an average of 5.5% over the outlook horizon, both as a result of wage bill increases and a certain change in income distribution as a result of the increase in minimum and guaranteed wages at the start of the outlook. The average growth in consumption taxes at just below 4% is determined by household consumption,

together with intermediate consumption and general government investment in value added tax and discretionary measures in excise duties. The government's active measures on value added tax tend to slow the dynamics.

Table 3.2.3: General Government Revenue

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
								Forecast	*Forecast*	*Outlook*	*Outlook*
Total revenue	*bn CZK*	**1 695**	**1 740**	**1 888**	**1 917**	**2 044**	**2 225**	**2 346**	**2 457**	**2 565**	**2 664**
	growth in %	2.9	2.7	8.5	1.5	6.7	8.8	5.4	4.7	4.4	3.9
Tax revenue	*bn CZK*	**816**	**826**	**894**	**948**	**1 018**	**1 085**	**1 139**	**1 196**	**1 251**	**1 295**
	growth in %	4.0	1.3	8.3	6.0	7.4	6.6	5.0	5.0	4.6	3.5
Taxes on production and imports	*bn CZK*	522	511	562	587	628	657	679	707	732	756
	growth in %	4.0	-2.1	10.1	4.4	7.1	4.6	3.4	4.1	3.5	3.3
Value added tax	*bn CZK*	304	319	333	354	388	409	428	447	465	486
	growth in %	6.2	5.2	4.3	6.2	9.5	5.4	4.8	4.3	4.2	4.4
Excise taxes	*bn CZK*	150	125	154	158	164	165	167	178	181	184
	growth in %	-1.3	-16.6	23.2	3.0	3.6	0.8	0.8	6.6	1.9	1.8
Current taxes on income, wealth, et	*bn CZK*	294	315	332	361	390	428	460	489	519	539
	growth in %	4.0	7.4	5.3	8.8	7.8	9.9	7.4	6.4	6.1	3.8
Personal income tax	*bn CZK*	151	161	165	183	202	231	254	273	294	311
	growth in %	4.5	6.9	2.2	11.3	10.4	14.2	10.1	7.3	7.5	5.9
Corporate income tax	*bn CZK*	133	144	157	167	176	186	194	205	214	217
	growth in %	4.0	8.5	8.8	6.8	5.2	6.0	4.4	5.4	4.4	1.2
Capital taxes	*bn CZK*	0	0	0	0	0	0	0	0	0	0
	growth in %	-33.3	-93.5	10.0	54.5	70.6	-24.1	19.0	-45.1	1.3	1.2
Social contributions	*bn CZK*	**607**	**629**	**663**	**703**	**760**	**834**	**894**	**944**	**992**	**1 038**
	growth in %	1.1	3.6	5.5	6.1	8.0	9.8	7.2	5.7	5.1	4.6
Property income	*bn CZK*	**38**	**37**	**37**	**37**	**31**	**35**	**32**	**31**	**31**	**31**
	growth in %	7.0	-0.9	-1.3	0.8	-17.7	13.2	-6.8	-3.9	0.3	0.1
Other	*bn CZK*	**235**	**248**	**294**	**228**	**236**	**271**	**280**	**285**	**291**	**300**
	growth in %	3.6	5.6	18.5	-22.3	3.4	14.6	3.5	1.6	2.1	3.0
Tax burden	*% of GDP*	**34.7**	**33.7**	**33.9**	**34.6**	**35.2**	**36.0**	**36.0**	**36.3**	**36.5**	**36.4**

Note: Excise taxes are adjusted for subsidies on renewable energy resources.
Source: CZSO (2019b). Forecast and calculations by MF CR.

Table 3.2.4: Structure of Discretionary Measures

in CZK bn.

	2020	2021	2022
	Forecast	*Outlook*	*Outlook*
Total revenue measures	**29.2**	**14.4**	**-2.5**
Direct taxes	**17.3**	**10.3**	**-5.3**
Personal income tax	4.2	4.8	0.0
Corporate income tax	6.1	0.3	-5.3
Social security contributions	7.0	5.2	0.0
Indirect taxes	**10.0**	**5.2**	**3.2**
Value added tax	-2.9	-0.4	0.6
Excises	12.9	5.6	2.6
Other revenues	**1.9**	**-1.1**	**-0.4**
Total expenditure measures	**-41.3**	**-11.5**	**2.4**
Social benefits	-16.4	0.0	0.0
Compensation of employees*	-18.8	-11.5	0.0
Healthcare	-6.1	0.0	0.0
Other expenditures	0.0	0.0	2.4
Total impact on balance	**-12.1**	**2.9**	**-0.1**
% GDP	-0.2	0.0	0.0

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. Positive values mean YoY improvement of balance.
** Compensation of employees are updated not earlier than the final agreement in the state budget proposal for year t+1 is reached.*
Source: MF CR.

3.2.2 General Government Expenditure

In 2020–2022, we estimate an average increase in general government expenditure to 5%. In relation to GDP, expenditure should be broadly stable over the entire forecast horizon, ranging between 41 and 42% of GDP.

We are expecting a substantial increase in 2020 in the area of cash social benefits, reflecting both the approved measures, especially in the field of pensions and state social security benefits, and the economic development. With effect from 1 January 2020, Act No. 244/2019 Coll. will increase the average old-age pension by 900 CZK. The average pension will therefore increase by approx. 1.3 pp faster than it would have increased directly from the statutory indexation formula. The impact of the discretion itself over the statutory indexation formula is about CZK 6 bn.

Another measure that increases cash social benefits by CZK 8.6 bn is the increase in the parental allowance for all households with a child up to 4 years of age and at the same time actively receiving this benefit (Parliamentary Press No. 224). The impact of the increase in the care allowance for dependence levels 3 and 4is almost CZK 2 bn in 2020. Thus, cash social benefits in total will increase by more than 7% in 2020. In the years of the outlook, we expect growth of around 4.3% due to autonomous development, including the government's commitment to increase the average old-age pension to CZK 15,000 in 2021.

In the years of the outlook, general government final consumption will be driven primarily by compensation of employees and social transfers in kind, and to a lesser degree by intermediate consumption. However, we expect stable general government final consumption dynamics slightly exceeding 4%. The approved increase in salaries is in principle distributed among workers in educational system, where an increase of 10% is anticipated for 2020, and the rest of the government sector employees, who will get an increase of a fixed amount of CZK 1,500 per person. In 2021, the total volume of salaries in the budget sphere will again be driven by the education sector and the government's commitment to achieve an average salary of teacher by 50% higher than in 2017. Finally, claims arising from the Czech Presidency of the EU Council will have to be covered in 2022. For these reasons, we expect a steady increase in compensation of employees of around 6%.

The growth of social transfers in kind is expected to be around 4%, which is close to their long-term average growth rate. The gradual slowdown in the dynamics of wage bill in the economy, leading to a slowdown in health insurance growth, should support the efforts of health insurance companies to increase their expenditure more steadily and gradually return to balanced budgets.

The intermediate consumption growth rate should slightly exceed 3% in the years of the outlook. The pace of involving European Structural and Investment Funds should slow down from 2020 onwards, due to a higher increase in 2018 and 2019 to the level usual for this phase of the financial perspective. Moreover, with the closing output gap the effect of lower price dynamics should be seen (for more details see Chapter 1).

Fixed capital investments should grow by around 7% on average between 2020 and 2022. The trajectory is influenced by a certain acceleration of project implementation towards the end of the current financial perspective, i.e. in line with the "n+3" rule from 2021 to 2023. However, the pattern seen in past perspectives should only be repeated to a limited extent. After a slow start in 2016 and, to some extent, 2017, the realization of European projects has improved and the use of the assigned allocation should be more even. For 2020, we expect investment activity to reach 6.5%, increased to 6.8% in 2021 and 8% at the end of the horizon. Financial resources from EU funds should complement national resources mainly in the areas of investment in infrastructure, science and research, and employment.

On the other hand, we expect a lower increase in subsidies than was apparent last year and this year. Our forecast is based on a certain synchronisation of subsidies from national resources and the financial resources from EU funds co-financing projects of a similar kind. We do not expect to maintain the current dynamics of around 10%, on the contrary the dynamics should slow down to 3.7% on average in the outlook horizon.

Also with respect to the expected developments of monetary policies in the CR and euro area, we expect interest rates to decrease in 2020 and to remain relatively stable thereafter. The second factor is the refinancing of issues at the short end of the yield curve, which have benefited from negative or zero yields in recent years, with issues of longer time to maturity and higher yields. In absolute terms, interest expenditure could therefore increase slightly, in relative terms; however, interest expenditure should remain at 0.7% of GDP throughout the outlook. For more details, see subchapter 3.2.3.

Table 3.2.5: General Government Expenditure

		2013	2014	2015	2016	2017	2018	2019 Forecast	2020 Forecast	2021 Outlook	2022 Outlook
Total expenditure	*CZK bn*	**1 746**	**1 831**	**1 916**	**1 883**	**1 966**	**2 166**	**2 328**	**2 453**	**2 570**	**2 691**
	growth in %	-3.3	4.8	4.7	-1.8	4.4	10.2	7.5	5.4	4.8	4.7
Final consumption expenditure	*CZK bn*	**826**	**849**	**883**	**919**	**968**	**1 059**	**1 145**	**1 195**	**1 246**	**1 300**
	growth in %	2.7	2.8	4.0	4.0	5.4	9.4	8.1	4.3	4.3	4.3
Collective consumption	*CZK bn*	388	395	415	434	453	494	479	559	573	585
	growth in %	3.5	1.7	5.2	4.4	4.5	9.1	-3.0	16.7	2.4	2.1
Individual consumption	*CZK bn*	438	454	468	485	516	565	666	635	673	716
	growth in %	2.0	3.8	3.0	3.7	6.3	9.6	17.9	-4.6	6.0	6.3
Social transfers in kind	*CZK bn*	133	140	142	148	152	160	174	182	189	197
	growth in %	2.6	4.8	1.4	4.3	3.1	4.7	9.1	4.5	4.1	4.1
Transfers of individual non-market goods and services	*CZK bn*	305	315	326	337	363	405	492	453	484	518
	growth in %	1.7	3.3	3.6	3.4	7.7	11.6	21.4	-7.8	6.8	7.1
Social benefits other than in kind	*CZK bn*	**545**	**556**	**568**	**581**	**597**	**628**	**674**	**724**	**756**	**788**
	growth in %	2.1	2.0	2.3	2.3	2.7	5.2	7.3	7.3	4.5	4.2
Interest	*CZK bn*	**55**	**56**	**49**	**44**	**38**	**40**	**42**	**42**	**42**	**43**
	growth in %	-4.9	2.0	-12.7	-10.6	-13.7	5.8	4.3	1.5	0.2	2.3
Subsidies	*CZK bn*	**96**	**99**	**105**	**108**	**110**	**119**	**131**	**136**	**142**	**146**
	growth in %	5.1	3.8	5.6	2.7	1.7	8.9	9.8	4.0	4.0	3.0
Gross fixed capital formation	*CZK bn*	**152**	**178**	**236**	**155**	**171**	**224**	**242**	**258**	**276**	**298**
	growth in %	-10.0	16.8	32.8	-34.3	10.3	31.0	8.1	6.5	6.8	8.0
Other	*CZK bn*	**72**	**92**	**75**	**76**	**81**	**95**	**93**	**98**	**108**	**116**
	growth in %	-52.0	28.2	-19.2	1.4	7.6	17.0	-1.7	5.4	10.0	7.3
Compensation of employees	*CZK bn*	**367**	**380**	**398**	**419**	**462**	**521**	**573**	**607**	**644**	**682**
	growth in %	2.0	3.5	4.8	5.4	10.1	12.8	10.0	6.0	6.0	6.0
Total social transfers	*CZK bn*	**678**	**695**	**710**	**729**	**750**	**788**	**848**	**905**	**945**	**985**
	growth in %	2.2	2.5	2.1	2.7	2.8	5.1	7.7	6.7	4.4	4.2

Source: CZSO (2019b). Forecast and calculations by MF CR.

3.2.3 General Government Debt

By the end of 2019, we expect a general government debt of 31.2% of GDP. The YoY decline in debt by 1.3 pp is the result of the forecasted performance of the general government sector, an absolute decrease in local governments' debt in relation to its expected surplus performance and nominal GDP dynamics. The relative debt ratio of the general government sector has been significantly decreasing in recent years. Since 2013, it should fall by almost 14 pp, which today ranks the CR's public finances among the least indebted in the EU (see subchapter 2.3.2) and safely fulfils the Maastricht debt criterion and the Stability and Growth Pact criterion (60% of GDP). This creates a fiscal space in the event of major negative shocks. The level of the debt quota also complies with the national rule laid down in the Act on Fiscal Responsibility Rules, which assesses the level of general government debt, adjusted for the cash reserve created by state debt financing against the 55% of GDP threshold. For 2018, the value of this adjusted debt reached 32.6% of GDP (NBC, 2019), and in 2019 we expect it to reach 31.2% of GDP.

We also predict a further decline in the debt-to-GDP ratio in 2020–2022, by a total of 1.7 pp to below 30% of GDP at the end of the outlook (see Table 3.2.6). The absolute amount of the general government debt for 2020–2022 derives mainly from the planned state budget performance and the expected state debt development, as well as from the expected economic performance of local governments.

Interest expenditure should be stabilised at 0.7% of GDP over the forecast horizon. The long-term interest rates for assessing convergence should decrease from 1.5% in 2019 to 1.2% in 2020. MF CR responded to the situation on the European bond market (see subchapter 2.3.3) and issued CR eurobonds with the time to maturity of 2.5 years, for which it achieved negative yields. The positive perception of the CR's fiscal discipline on the financial markets is emphasised by both international institutions and credit rating agencies. The Moody's rating agency improved rating of long-term obligations to Aa3 (the fourth highest level) with a stable outlook and highlighted the positive evolution of fiscal indicators (Moody's, 2019). In July 2019, Fitch Ratings (2019) confirmed its assessment of the CR and praised the CR for its creditworthiness, sound public finances, low indebtedness and stable banking sector. The European Rating Agency and S&P Global Ratings also confirmed their ratings. Compared to EU countries, the CR has for several years had better ratings than is the Euro-area average.

The current forecast does not anticipate any significant privatisation revenue under Act No. 92/1991 Coll., on

conditions of transfer of state property to other persons, as amended.

The highest share in the general government debt is represented by the central government sub-sector (see Table 3.2.6). In 2019, the value of the debt is expected to be close to CZK 1,783 bn, which is approx. a 96% share of total general government debt. The local governments' debt represents the remaining approx. 4% of the total debt. We expect it to reach CZK 82bn in 2019 and to decrease very slowly in 2020–2022, mainly due to predicted surplus performance. The sub-sector of social security funds has been showing negligible debt for a long period of time.

Table 3.2.6: Gross Consolidated Government Debt

		2013	2014	2015	2016	2017	2018	2019 Forecast	2020 Forecast	2021 Outlook	2022 Outlook
General government	*CZK bn*	**1 840**	**1 819**	**1 836**	**1 755**	**1 750**	**1 735**	**1 763**	**1 803**	**1 847**	**1 890**
Central government	*CZK bn*	1 734	1 714	1 740	1 714	1 734	1 752	1 783	1 827	1 871	1 916
Local government	*CZK bn*	116	116	111	89	85	84	82	78	77	76
Social security funds	*CZK bn*	2	1	1	0	0	0	0	0	0	0
General government debt to GDP ratio	*% of GDP*	**44.9**	**42.2**	**40.0**	**36.8**	**34.7**	**32.6**	**31.2**	**30.6**	**30.0**	**29.5**
Contributions to change in debt-to-GDP ratio											
Change in debt	*p.p.*	0.4	-2.7	-2.2	-3.1	-2.1	-2.1	-1.3	-0.6	-0.5	-0.5
Primary balance	*p.p.*	**-0.1**	**0.8**	**-0.5**	**-1.6**	**-2.3**	**-1.8**	**-1.1**	**-0.8**	**-0.6**	**-0.3**
Interest	*p.p.*	**1.3**	**1.3**	**1.1**	**0.9**	**0.7**	**0.8**	**0.7**	**0.7**	**0.7**	**0.7**
Nominal GDP growth	*p.p.*	**-0.4**	**-2.2**	**-2.6**	**-1.4**	**-2.0**	**-1.8**	**-1.8**	**-1.3**	**-1.3**	**-1.2**
Stock-flow adjustment	*p.p.*	**-0.4**	**-2.6**	**-0.2**	**-1.0**	**1.5**	**0.8**	**0.8**	**0.7**	**0.6**	**0.3**
Diff. between cash and accruals	*p.p.*	-0.2	-0.1	-0.4	0.2	-0.5	0.3	0.0	0.0	0.0	0.0
Net acquisition of fin. assets	*p.p.*	-0.5	-2.4	0.3	-1.2	2.2	0.4	0.8	0.7	0.6	0.3
Revaluation effects and other	*p.p.*	0.3	0.0	-0.1	0.1	-0.3	0.1	0.0	0.0	0.0	0.0

Source: CZSO (2019b). Forecast and calculations by MF CR.

3.2.4 Cyclical Development and Fiscal Impulse

The output gap reached 1.7% of potential output in 2018, and we expect it to close gradually over the entire forecast horizon. As a result, the cyclical component of the general government balance should also decrease, i.e. the cyclically-adjusted balance development should come close to that of the general government sector balance.

When calculating the structural balance, we also take account of one-off and other temporary measures. In 2018, a one-off expenditure transfer was made to finance the Czech Export Bank's claim receivable from Adularya Company for the construction of a power plant in Turkey in the amount of CZK 4.3 bn. We do not expect any one-off and temporary measures this year or in the years of the outlook.

The impact of fiscal policy on economic development is most often judged by the change in the structural balance (fiscal effort). However, this concept interprets the real impact of fiscal policy in a simplified and incomplete manner. That is why the fiscal effort is adjusted for relations between the Czech general government budgets and the EU budget, interest payments and certain other items (Table 3.2.8). The fiscal impulse thus calculated captures the primary effects of public finance settings on macroeconomic aggregates.

The fiscal impulse, which was positive in 2018 and which we expect to be positive this year as well, is due not only to an increase in expenditure on salaries in public administration and pension benefits, but also to an increase in government investment. The above-mentioned salaries growth is also reflected on the revenue side by higher personal income tax and social security contributions, thus dampening the expansionary effect of this measure. In 2020–2021, we expect fiscal policy to be broadly neutral. The continuing increase in social expenditure (pensions and parental allowance) and regional education salaries should be offset by an increase in tax revenues – in particular excise duties on tobacco and spirits, or by an increase in corporate income tax due to a change in the method of creation and the tax deductibility of technical reserves of insurance companies. Both the gradual slowdown in income taxes and the projected pick-up in government investment growth associated with the phasing out of EU projects under the 2014–2020 programming period are key factors in the prediction of a slightly positive fiscal impulse in 2022.

Table 3.2.7: Structural Balance of the General Government (OECD Method)

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
								Forecast	*Forecast*	*Outlook*	*Outlook*
Real GDP growth	*%*	-0.5	2.7	5.3	2.5	4.4	3.0	2.5	2.0	2.2	2.1
Potential gross value added growth	*%*	1.2	1.4	2.3	2.7	2.7	2.9	2.7	2.6	2.6	2.5
Output gap	*% of PP*	-4.0	-2.2	0.2	-0.2	1.5	1.7	1.6	1.0	0.6	0.2
General government balance	*% of GDP*	**-1.2**	**-2.1**	**-0.6**	**0.7**	**1.6**	**1.1**	**0.3**	**0.1**	**-0.1**	**-0.4**
Cyclical budgetary component	*% of GDP*	-1.5	-0.8	0.1	-0.1	0.5	0.6	0.6	0.4	0.2	0.1
Cyclically adjusted balance	*% of GDP*	**0.2**	**-1.3**	**-0.7**	**0.8**	**1.0**	**0.5**	**-0.3**	**-0.3**	**-0.3**	**-0.5**
One-off and temporary measures	*% of GDP*	-0.1	-0.5	-0.1	-0.1	0.0	-0.1	0.0	0.0	0.0	0.0
Structural balance	*% of GDP*	**0.4**	**-0.8**	**-0.6**	**0.9**	**1.0**	**0.6**	**-0.3**	**-0.3**	**-0.3**	**-0.5**
Change in structural balance (Fiscal effort)	*pp*	**1.5**	**-1.2**	**0.2**	**1.5**	**0.1**	**-0.5**	**-0.8**	**0.0**	**0.0**	**-0.2**
Interest	*% of GDP*	1.3	1.3	1.1	0.9	0.7	0.8	0.7	0.7	0.7	0.7
Structural primary balance	*% of GDP*	**1.7**	**0.5**	**0.4**	**1.8**	**1.8**	**1.3**	**0.5**	**0.4**	**0.4**	**0.2**
Change in structural primary balance	*pp*	**1.4**	**-1.2**	**-0.1**	**1.4**	**0.0**	**-0.5**	**-0.8**	**-0.1**	**0.0**	**-0.2**

Source: MF CR.

Table 3.2.8: Fiscal Effort and Fiscal Impulse

in percentage points

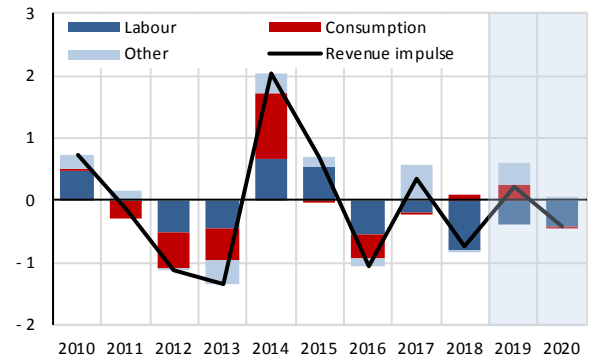
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
							Forecast	*Forecast*	*Outlook*	*Outlook*
Fiscal effort with opposite sign (exp. – rev.)	**-1.5**	**1.2**	**-0.2**	**-1.5**	**-0.1**	**0.5**	**0.8**	**0.0**	**0.0**	**0.2**
Difference of fiscal effort and fiscal impulse	**-0.1**	**-0.3**	**-0.9**	**1.4**	**-0.3**	**-0.4**	**-0.1**	**0.0**	**0.0**	**0.0**
Difference in revenue	**0.0**	**-0.2**	**-0.7**	**1.6**	**-0.1**	**-0.4**	**-0.1**	**0.0**	**0.0**	**0.0**
Revenue from EU funds	0.0	-0.2	-0.7	1.6	-0.1	-0.4	-0.1	0.0	0.0	0.0
Differnce in expenditure	**-0.1**	**0.0**	**-0.2**	**-0.1**	**-0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Adjusted interest expenditure	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EU budget contributions	-0.1	0.0	-0.2	-0.1	-0.2	0.0	0.0	0.0	0.0	0.0
Fiscal impulse - input approach	**-1.4**	**1.4**	**0.8**	**-3.0**	**0.2**	**0.8**	**1.0**	**0.0**	**0.0**	**0.2**

Note: The basis for calculation of the fiscal impulse is the YoY change in the structural balance with the opposite sign, adjusted for: interest payments, income from EU Funds and financial mechanisms and contributions to the EU budget. Further adjustment of the impulse for activating science and research, excise taxes and subsidies on renewable energy resources 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.

Graph 3.2.1: Fiscal Impulse of Revenue

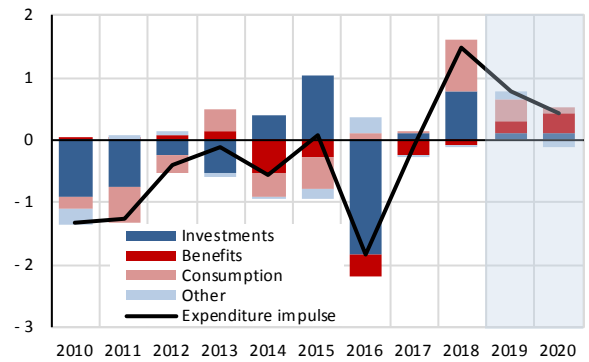
in pp



Source: MF CR.

Graph 3.2.2: Fiscal Impulse of Expenditure

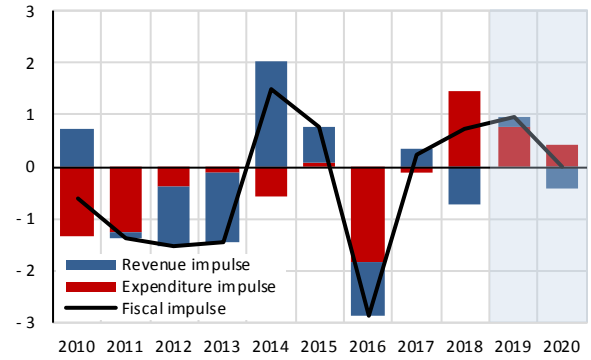
in pp



Source: MF CR.

Graph 3.2.3: Overall Fiscal Impulse

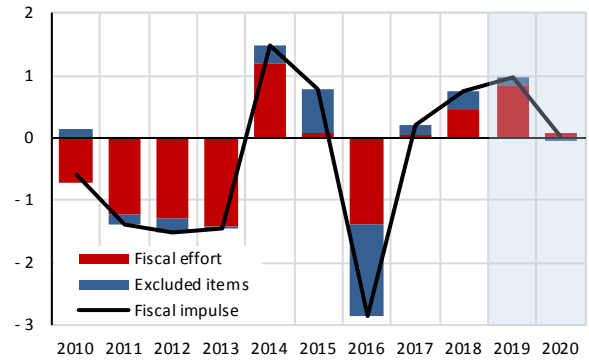
in pp



Source: MF CR.

Graph 3.2.4: Fiscal Effort and Fiscal Impulse

in pp



Note: Fiscal effort is with opposite sign. "Excluded items" out of the fiscal impulse definition are mentioned in the note under Table 3.2.8.
Source: MF CR.

3.3 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, open Czech economy, economic development is largely dependent on the development of the external environment, in particular within EU countries. We therefore focus on this aspect and illustrate the importance of the impacts of worse-than-expected growth dynamics in the EU. Another alternative scenario simulates the impacts of an unexpected sharp increase in the domestic interest rate. All alternative scenarios are derived from the framework of this Fiscal Outlook.

3.3.1 Lower GDP Growth in the EU in 2020

The first scenario is based on the assumption that GDP growth in the EU will be 2 pp lower in 2020 compared to the baseline scenario. This difference approximately corresponds to the standard deviation of growth for the period 2002 to 2018.

Considering the close link between the Czech economy and the EU, where more than four-fifths of Czech exports are directed to EU countries, the scenario would impact negatively on real growth in the CR, primarily through exports. Lower foreign demand would lead to a decrease in export activity and a deterioration of the current account balance, which would, however, be partly offset by lower imports. A worse result for foreign trade would be negatively reflected in real GDP growth, which would grow by 0.5 pp less in 2020. Unemployment would also be affected, especially in 2020, when the unemployment rate would rise to 2.7%. In this scenario, the effects on inflation would stem mainly from lower demand for domestic goods, both by domestic and foreign entities.

In the first year immediately after the shock, household consumption would record a decrease in the growth rate of 0.1 pp, mainly due to slower wage growth (and also a higher unemployment rate).

The general government balance would be affected by lower income tax revenue from both individuals and firms as well as by lower taxes on consumption. Together with the increase in social benefits paid out, the general government balance would deteriorate by 0.2 pp in 2020. A worsening of the general government budget would lead to a slower decrease in the debt, to 29.8% of GDP in the final year of the outlook.

During the subsequent recovery of foreign demand in 2021, the growth of the Czech economy would converge with the baseline scenario.

3.3.2 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. This means lower economic growth of 2 pp, but this time in all years of the outlook.

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 from the baseline scenario would occur from the second year of the forecast. The projected scenario of a steadily lower growth in the EU (or a slight decline in economic activity) would reduce the dynamics of the Czech economy by 0.5 pp compared to the baseline scenario in all years of the outlook. For the general government sector, the fall in the debt-to-GDP ratio would slow down by roughly 0.8 pp in 2022 compared to the baseline scenario.

Table 3.3.1: Model Scenarios of Macroeconomic Simulations

		2019	2020	2021	2022
		Forecast and simulation		*Outlook and simulation*	
Baseline Scenario					
Gross domestic product	*Y-o-Y in %*	**2.5**	**2.0**	**2.2**	**2.1**
Private consumption	*Y-o-Y in %*	2.7	2.4	2.3	2.1
Gross fixed capital formation	*Y-o-Y in %*	0.9	0.7	2.0	2.4
Exports	*Y-o-Y in %*	2.0	1.6	2.1	2.2
Imports	*Y-o-Y in %*	1.6	1.3	2.0	2.3
Inflation (CPI)	*Y-o-Y in %*	**2.8**	**2.6**	**2.0**	**2.0**
Unemployment rate	*in %*	**2.0**	**2.2**	**2.4**	**2.5**
General government balance	*% of GDP*	**0.3**	**0.1**	**-0.1**	**-0.4**
Gross government debt	*% of GDP*	**31.2**	**30.6**	**30.0**	**29.5**
Alternative Scenario I - Lower GDP Growth in EU in 2020					
Gross domestic product	*Y-o-Y in %*	**2.5**	**1.5**	**2.2**	**2.1**
Private consumption	*Y-o-Y in %*	2.7	2.3	2.2	2.1
Gross fixed capital formation	*Y-o-Y in %*	0.9	0.6	1.9	2.3
Exports	*Y-o-Y in %*	2.0	0.2	2.1	2.2
Imports	*Y-o-Y in %*	1.6	0.5	1.9	2.3
Inflation (CPI)	*Y-o-Y in %*	**2.8**	**2.6**	**1.9**	**2.0**
Unemployment rate	*in %*	**2.0**	**2.7**	**2.4**	**2.5**
General government balance	*% of GDP*	**0.3**	**-0.1**	**-0.2**	**-0.4**
Gross government debt	*% of GDP*	**31.2**	**30.8**	**30.3**	**29.8**
Alternative Scenario II - Permanently Lower GDP Growth in EU					
Gross domestic product	*Y-o-Y in %*	**2.5**	**1.5**	**1.7**	**1.6**
Private consumption	*Y-o-Y in %*	2.7	2.3	2.1	1.8
Gross fixed capital formation	*Y-o-Y in %*	0.9	0.6	1.9	2.2
Exports	*Y-o-Y in %*	2.0	0.2	0.7	0.8
Imports	*Y-o-Y in %*	1.6	0.5	1.1	1.4
Inflation (CPI)	*Y-o-Y in %*	**2.8**	**2.6**	**1.9**	**1.9**
Unemployment rate	*in %*	**2.0**	**2.7**	**2.8**	**2.9**
General government balance	*% of GDP*	**0.3**	**-0.1**	**-0.3**	**-0.6**
Gross government debt	*% of GDP*	**31.2**	**30.8**	**30.5**	**30.3**
Alternative Scenario III - Higher Interest Rate					
Gross domestic product	*Y-o-Y in %*	**2.5**	**1.7**	**2.0**	**2.0**
Private consumption	*Y-o-Y in %*	2.7	2.2	2.0	1.9
Gross fixed capital formation	*Y-o-Y in %*	0.9	0.6	1.8	2.3
Exports	*Y-o-Y in %*	2.0	1.3	2.0	2.2
Imports	*Y-o-Y in %*	1.6	1.2	1.8	2.2
Inflation (CPI)	*Y-o-Y in %*	**2.8**	**2.6**	**1.9**	**2.0**
Unemployment rate	*in %*	**2.0**	**2.4**	**2.5**	**2.6**
General government balance	*% of GDP*	**0.3**	**0.0**	**-0.2**	**-0.5**
Gross government debt	*% of GDP*	**31.2**	**30.8**	**30.4**	**30.0**

Source: Baseline scenario MF CR (2019b). MF CR calculations.

3.3.3 Rise in the Domestic Interest Rate

The last scenario considered is a projected sudden increase in the short-term domestic interest rate by 1.2 pp in 2020, which is the value of the standard deviation of its development from 2002 to 2018.

The higher interest rate would dampen domestic demand. This would be reflected in lower private investment in fixed capital (more expensive corporate loans), as well as a decline in current consumption and an increase in household savings. A slowdown in the growth rate of household consumption would be exacerbated by lower wage growth due to increased corporate costs. A slightly lower domestic price level would act against this as a beneficial effect, which would tend to support real consumption.

This scenario would also have negative consequences on foreign trade due to a gradual moderate appreciation of the koruna and a subsequent decrease in the export volume. A stronger koruna exchange rate would also help imports, which, on the other hand, would be negatively affected by lower domestic demand for consumer goods and investment. Overall, these effects would be reflected in slower GDP growth of around 0.1–0.3 pp over the outlook horizon, and concomitant higher unemployment against the baseline scenario.

As in the case of lower GDP growth in the EU, the general government balance would be affected by lower tax revenue and higher unemployment benefits. The deteriorated balance development as compared to the baseline scenario would again be reflected in the debt; the yield curve would also be shifted up by the interest rate increase itself.

4 Long-term Sustainability of Pension System

Long-term sustainability is a consistently discussed issue of Czech public finances. The highest risk is associated with the expected demographic development, which will, in the next decades, probably significantly increase the ratio of people of retirement age to the economically active population. However, the population ageing is not a matter of a distant future, but it is already evident nowadays. This creates pressure on future expenditure of social security systems, and hence a need to reform these systems. In the past, several professional groups were set up in the CR to reform the pension system, but so far no broad political consensus has been found for a comprehensive reform.

4.1 Development of Parametric Changes in the Pension System

In addition to the common macroeconomic and demographic assumptions and projections (Table 4.2), the factors affecting long-term EC projections (2018) are the approved pension reform measures known at the time of the projections.

First and foremost, as far as the pension system parameters are concerned, mention should be made of the **development of the statutory retirement age**. Historically, the retirement age ceiling was first shifted to 63 years and then to 65 years (with age being differentiated for women according to the number of children raised). In 2011 there was another adjustment, when it was agreed that the retirement age should rise above this level and after unification at about 67 years would grow by 2 months per year. However, the Act was amended again in 2017and with effect from 1 January 2018 (Act No. 203/2017 Coll.) the retirement age increases until unification at 65 years, which should occur around 2030. The law envisages periodical reporting on the pension system to the government by the Ministry of Labour and Social Affairs every five years. The aim of this Report is to evaluate the current retirement age and, where applicable, to determine any proposals for its adjustment based on developments in life expectancy so that insured persons spend on average a quarter of their lives in retirement. Moreover, changes to the retirement age should not apply to persons who are over 55 at the time of the revision. The Ministry of Labour and Social Affairs prepared the first Report in the first half of 2019 (MLSA, 2019). The Report indicated a need to adjust the retirement age for at least those aged 40 and younger to meet the condition of a quarter of life spent in retirement. However, the government rejected this proposal and decided to leave the statutory retirement age at the current level of 65 years, while one of the arguments was the claim in the Report that increase in life expectancy would not be accompanied by an increase in years spent in a good health (see Box 1).

The development of the statutory retirement age also affects the conditions for permanent widows and widowers pensions, where the age limit is tied to old-age pensions. As regards **early retirement**, the limit has been gradually shifted from three to five years before the statutory retirement age. This maximum five-year period may be used, at the cost of significant penalties, by persons whose statutory retirement age is 65 years or more.

The indexation of pensions is determined as the sum of the growth in the consumer price index, or the pensioner cost-of-living index (whichever is higher) and one-half of real wage growth. This rule also applies from 1 January 2018 as a result of the adoption of Act No. 203/2017 Coll. Previously, the indexation formula was the sum of the growth of the consumer price index and one third of real wage growth. Moreover, a change in the indexation of pensions was approved that, with effect from 2017, returned limited discretion to the government (Act No. 212/2016 Coll.). Should the increase in the average pension not reach 2.7% under the standard indexation formula, the government may order indexation of pensions up to that value. In other cases it proceeds strictly in accordance with the statutory indexation formula. Beyond this framework, however, further adjustments have been made, either by giving an additional CZK 1,000 to all pensioners over the age of 85, in force since 2019 (Act No. 191/2018 Coll.), or by an ad hoc increase above the statutory indexation, with an expected average pension increase of 900 CZK in 2020 (Act No. 244/2019 Coll.).

Since 2010, the number of disability pension types increased from two (full and partial) to three groups. Part of the previously full pensions thus moved to the second degree (with a lower rate of earlier partial pensions) and the group of previously partial disability pensions moved to the first degree, with a rate equalling two thirds of previously partial disability pensions. The effect of this change, which has proved to be significant, remains. If, in 2009, just before the start of the new system, total disability spending was 1.5% of GDP (relatively stable at 1.4% of GDP since 2000), a year later it dropped by 0.4 pp YoY. The last known value from 2018 was 0.8% of GDP.

Box 1: Healthy Ageing

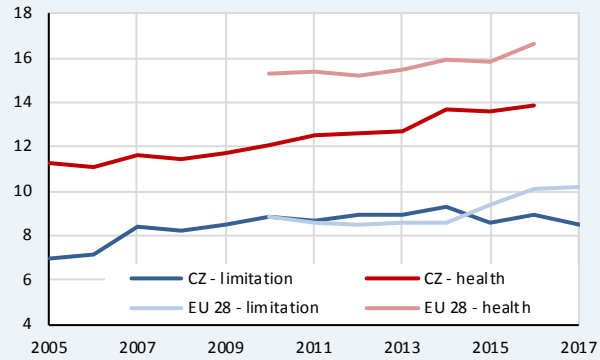
Increasing life expectancy is associated with uncertainty if it leads to more years spent in good or poor health.

Published studies are not entirely explicit on the issue of proportions of poor and good health in the additional years of life gained. Although the majority show ageing predominantly occurring in good health (e.g. Fries et al., 2011; Stallard, 2016), there are also studies that record a relatively higher proportion of extended life taking place in poor health (Beltrán-Sánchez et al., 2016). Other studies draw attention to the fact that current morbidity trends are due to lifestyle changes rather than life expectancy. In other words, healthy ageing can be expected if people take proper care of themselves (WHO, 2015).

Whereas, in terms of indicator methodology, life expectancy is a concept that is well-understood statistically, there are different approaches to collecting data on healthy life expectancy, the outcomes of which may vary significantly. Eurostat offers two estimates of the number of years spent in good health, both based on a public EU-SILC questionnaire survey (Household Income and Living Conditions Survey). The first is based on the question of constraints on activities people usually do at the appropriate age, where the respondents' answers indicate whether they are "severely limited", "limited but not severely" or "not limited at all". The first two responses are counted as poor health. The second estimate focuses directly on the overall self-perceived health of respondents, with five possible answers: "very good", "good", "fair", "bad" and "very bad". Only the responses "bad" and "very bad" are counted as poor health. The calculation is the same as for standard life expectancy, except that the expected number of years of life is multiplied by estimated prevalence. Given the way the questions are structured, it is not surprising that the two estimates result in different values for healthy life expectancy. Graph 4.1 and Graph 4.2 show that the data, surprisingly, differ not only in terms of level (which can be expected based on the types of questions and possible responses), but also in terms of trends. In the construction of the indicator reflecting the severity of limitations in activities people usually do, we can see a slight decrease over the past three years, which deviates from the trend of estimates based on questions on self-perceived general health, and from the trends shown in the EU 28. In addition to the EU-SILC survey, Eurostat also carries on a selective survey solely related to health, referred to as the EHIS (European Health Interview Survey), which also enables healthy life expectancy to be calculated (for the comparison in the CR see, for example, Vrabcová et al., 2017). As this survey is obviously not carried out every year, the EU-SILC is used almost exclusively to calculate healthy life expectancy.

Graph 4.1: Healthy Life Expectancy at the Age of 65, Females

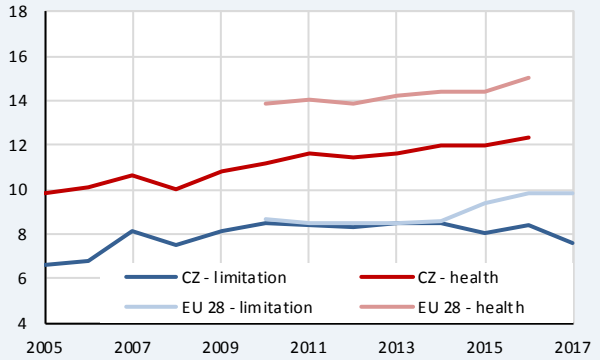
in years



Note: Lines "limitation" represent estimates based on the question on limitations in activities people usually do because of health problems, lines "health" are based on self-perceived general health.
Source: Eurostat (2019a).

Graph 4.2: Healthy Life Expectancy at the Age of 65, Males

in years

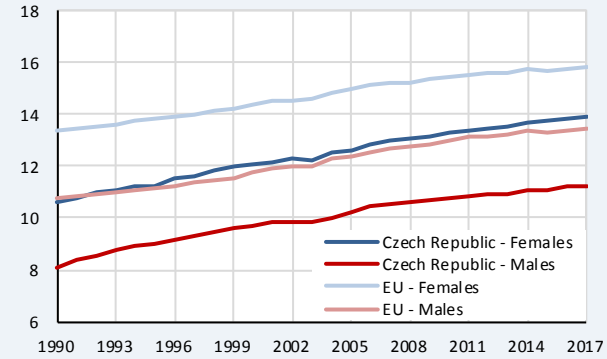


Note: Lines "limitation" represent estimates based on the question on limitations in activities people usually do because of health problems, lines "health" are based on self-perceived general health.
Source: Eurostat (2019a).

Graph 4.1 and Graph 4.2 also illustrate the constraints that estimates based on questionnaire surveys necessarily entail. On the one hand, these include psychological factors, because it depends on the actual structure of the question and the potential range of responses, which can to some extent explain the difference in the levels of the different curves (e.g. in the question on general health, the median answer is counted as good health, whereas in the question relating to limitations, it counts as poor health). It also depends on what the response obtained actually contains and whether it captures, among other things, social sentiments and other factors (e.g. in an international comparison, the questions may have slightly different meanings in different languages). This could indicate a difference in trends between the CR and the EU. The influence of personality characteristics and social and cultural differences between countries (especially regarding the division between post-communist and western Europe) on health surveys is discussed, for example, by Rychtaříková (2015).

Graph 4.3: Healthy Life Expectancy at the Age of 65 based on Estimates of Prevalences

in years



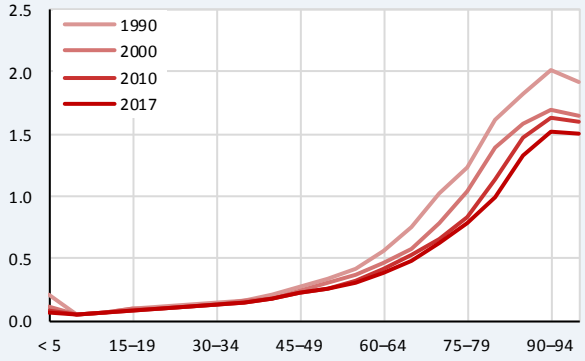
Source: IHME (2019).

The choice of respondents is a general and relatively frequent problem for questionnaire surveys. For these reasons, estimates based on actual morbidity data would appear to be more decisive, even if they also contain a certain level of uncertainty, for example because they do not distinguish the severity of the illness and therefore neither the degree of restriction of work activities. The database of the American Institute for Health Metrics and Evaluation, IHME, which contains information on the health of people of all age groups in various countries and distinguishes the medical diagnoses, can be used for this purpose. These healthcare data can subsequently be used to calculate healthy life expectancy. Graph 4.3 compares the development of additionally acquired years in good health in the CR with the EU average for the past almost 30 years for people of the age of 65 in any given calendar year.

In addition to the aforementioned forecasts, the Institute also offers detailed statistics on mortality and morbidity according to individual diagnoses at five-year age intervals. Using these as a base, it calculates aggregate statistics on Years of Life Lost, YLL, and Years Lived with Disability, YLD. This is a sum of lost years versus life expectancy: if a person dies when, according to average life expectancy he/she could have expected to live for an average of another 20 years, this is calculated as 20 years of life lost. If ten people in this category die, this means 200 years of life lost for the society. It is therefore a weighted sum, where deaths in earlier years have a higher weight. The highest sums, and therefore the highest proportion of lost years, appear at higher ages, despite their lower weights, due to higher mortality. These age-specific profiles evolve over time, as shown in Graph 4.4 and Graph 4.5, which show the sum of YLL and YLD, or the sum of lost years, either due to death or disease (Disease-Adjusted Life Years, DALY). The ability to compare these indicators over time is complicated by the uneven population in individual generations, which is why all the results are presented as a share of the population (in a given age cohort).

Graph 4.4: Age-specific Profiles of Disease Adjusted Life Years (DALY), Females

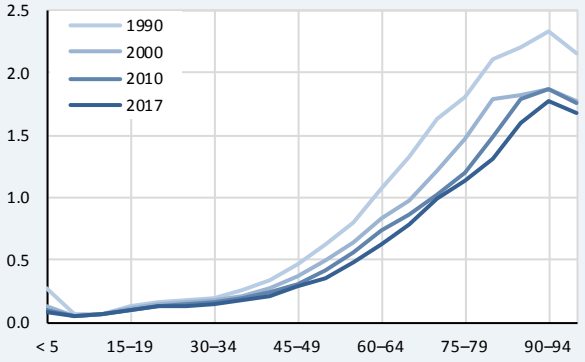
years per person



Source: IHME (2019). MF CR calculations.

Graph 4.5: Age-specific Profiles of Disease Adjusted Life Years (DALY), Males

years per person



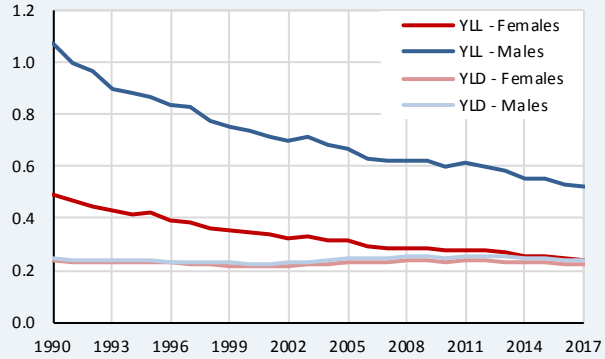
Source: IHME (2019). MF CR calculations.

On the one hand, the number of lost years of life is declining overall and, on the other, it is shifting to later ages. Graph 4.6 illustrates the evolution of these indicators over time for a cohort 65–69, normalised by the number of people in this age group. The sum of these two types of loss is shown in Graph 4.7 in the form of the DALY indicator. Graph 4.6 shows that premature deaths are shifting to a later age, decreasing the number of years lost in this cohort, and also that the number of years spent with disease has risen slightly for both men and women. This is obviously far from compensating for the additional years of life, as shown by Graph 4.7.

Both DALY curves, for men and women in the 65–69 age group are flattening out over time and moving towards levels all the EU member states converge for this age category. Assuming further convergence with EU levels, we can expect ageing in good health to predominate. However the constant course we can already see in western European countries also implies ageing predominantly in good health, provided life expectancy is also increasing.

Graph 4.6: Years of Life Lost (YLL) and Years Lived with Disease (YLD), CR, 65–69 Years

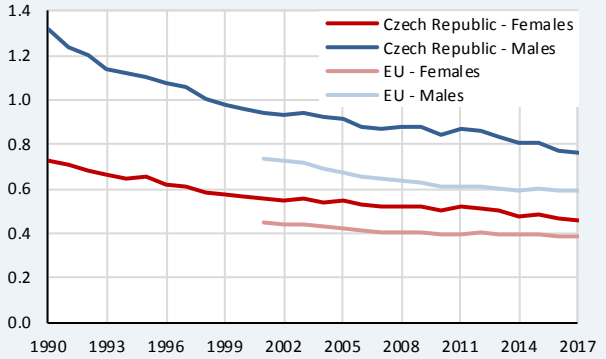
years per person



Source: IHME (2019). MF CR calculations.

Graph 4.7: Disease Adjusted Life Years (DALY), 65–69 Years

years per person



Source: IHME (2019). MF CR calculations.

We can also use IHME (2019) statistics to see which diagnoses contribute most to the developments described. In the case of years of life lost (YLL) the declining trend is mainly due to more successfully treatment of cardiovascular diseases and neoplasms. Pressure to raise the number of years spent in disease (YLD) is mainly related to the higher prevalence of diabetes and more frequent injuries for men. Overall, however, this has been offset by developments in other diagnoses.

Overall, however, these statistics suggest that gains in life expectancy go hand in hand with the prolongation of the period of good health of the population. The EU SILC survey, using questions on general health, offers the most optimistic estimate for the CR. It forecasts a doubling of the length of life in good health compared to the increase in life expectancy in the last 10 years. The IHME estimate is more conservative, but also assumes a significant prolongation of life in good health (Table 4.1).

Table 4.1: Gains in Healthy Life Expectancy of Persons in the CR at the Age of 65 according to Various Statistics

years per person

	last 10 years		last 20 years	
	females	males	females	males
Gain in life expectancy - Eurostat	1.0	0.9	2.8	2.7
Gain in life expectancy - IHME	1.2	1.1	3.0	2.9
Gain in healthy life expectancy - EU SILC - via question on general health	2.3	1.7	.	.
Gain in healthy life expectancy - EU SILC - via question on limitations in daily activities	0.3	0.1	.	.
Gain in healthy life expectancy - IHME	0.8	0.7	2.0	1.8

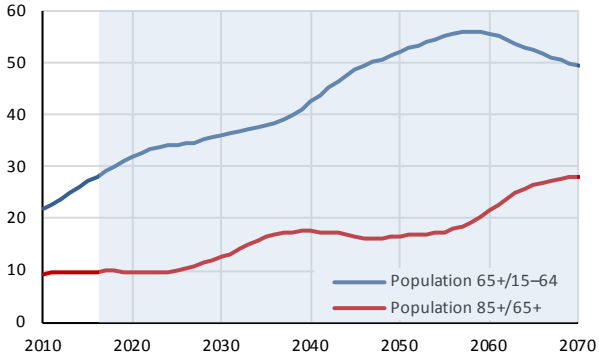
Source: IHME (2019), Eurostat (2019a). MF CR calculations.

4.2 Projections of the Pension System

The latest Eurostat population projection (2017) predicts a relatively large decline in the Czech population over the long term. The dependency ratio, measured as the ratio of people over 65 years of age to the working age population of 15–64, is expected to almost double by 2070 and reaches around 50%. That is, of course, not only a consequence of a decline in the working-age population, but also of increasing average life expectancy. The share of people aged 85 and over in the population of people aged 65 and over should more than double in the projection horizon. Both indicators are shown in Graph 4.8.

Graph 4.8: Dependency Ratio and 85+/65+ Ratio

in %



Source: Eurostat (2017). MF CR calculations.

Table 4.2: Demographic and Macroeconomic Assumptions of Projections

		2016	2020	2030	2040	2050	2060	2070
			Projection	*Projection*	*Projection*	*Projection*	*Projection*	*Projection*
Labour productivity growth	*per hour*	1.1	2.0	2.0	1.9	1.7	1.6	1.5
Real GDP growth	*%*	2.2	1.9	1.8	1.1	1.1	1.5	1.4
Participation rate males (aged 20–64)	*%*	87.7	87.9	87.0	85.6	86.8	87.5	86.4
Participation rates females (aged 20–64)	*%*	72.0	72.9	73.7	71.8	72.7	74.3	73.0
Total participation rate (aged 20–64)	*%*	80.0	80.5	80.4	78.8	79.8	81.0	79.8
Unemployment rate (aged 20–64)	*%*	3.9	3.1	4.0	4.0	4.0	4.0	4.0
Population aged 65+	*% of total population*	18.6	20.3	22.6	25.7	29.1	30.4	28.3

Source: EC (2017), Eurostat (2017).

The economic activity rates for age cohorts above 54 years are increasing in the projection until 2030 in line with the statutory retirement age increase. However, they remain approximately constant after 2030, which reflects the institutional set-up of the pension system. As described earlier, the pension system includes a revision mechanism that should evaluate every five years life expectancy changes and, where applicable, shift the statutory retirement age. However, the revision mechanism generally does not impose an obligation on the government, but is merely a recommendation to submit a change in the retirement age to Parliament for approval. For this reason, the EC rejected the proposal to apply this revision mechanism in long-term projections. The projection thus works with retirement age as a fixed ceiling at 65 years from 2030 onwards.

The development of pension expenditure has been relatively favourable in recent years, mainly due to the macroeconomic situation. The initial value of expenditure in preceding projections was 9.0% of GDP in 2013, whereas pension expenditure was 0.8 pp lower in the projection's base year of 2016. Conversely, higher wage bill growth in the economy led to dynamic growth on the revenue side of the system. This positively influenced the balance of the system, which in 2018 was 0.3% of GDP.

The trend of long-term pension projections is primarily determined by demographic trends and the statutory retirement age. For these reasons, pension expenditure until 2030 should be substantially stable in relation to GDP at the level of the base year 2016. After 2030 the increase in the retirement age will stop and people born in the boom years of the 1970s will gradually retire. That will lead to a relatively dramatic expenditure increase to 11.7% of GDP just before 2060, followed by a decline to 10.9% of GDP at the end of the forecast horizon in 2070. The decline in expenditure is due to demographic factors, where people born in weaker years during the 1990s will retire, replacing those born in stronger years.

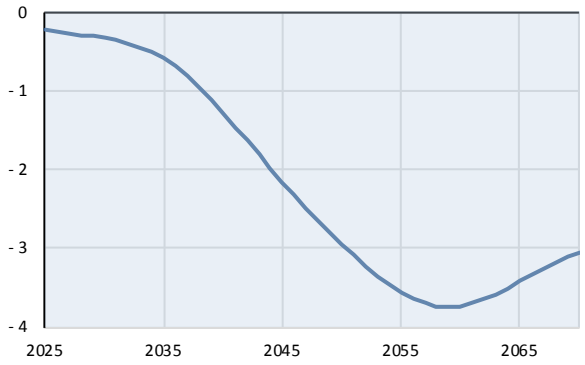
The revenue of the pension system is considered throughout the projection horizon as constant in relation to GDP. This is based on the assumption of development of the wage bill in the economy in line with labour productivity. As a result, the share of the labour factor of production in GDP, from which the fixed rate of pension insurance at 28% of gross wage or salary is deducted, remains constant. The system's revenue thus reaches the level of the base year 2016 at 7.9% of GDP over the entire horizon.

The resulting pension system balance projection (see Graph 4.9), in relation to the constant incomes, copies the course of pension expenditure. We expect that until 2030, this balance will be relatively stable at a level around the projection 2016 base year's −0.3% of GDP. Subsequently, the balance will deteriorate and fall to almost −4% of GDP around 2060. Finally, the deficit should start decreasing in the last decade of the projection.

For the sake of completeness, it should be noted that in autumn 2018 the CZSO published an updated demographic projection. However, it is similar in its basic parameters to the Eurostat projection (2017) and does not alter the conclusions of the analyses presented in the EC (2018).

Graph 4.9: Projection of Pension Account Balance

in % of GDP



Source: MF CR calculations.

Table 4.3: Pension Expenditure Projections

in % of GDP

	2016	2020	2030	2040	2050	2060	2070
		Projection	*Projection*	*Projection*	*Projection*	*Projection*	*Projection*
Total pensions	**8.2**	**8.1**	**8.2**	**9.2**	**10.8**	**11.6**	**10.9**
Old-age pensions	6.8	6.7	6.8	7.7	9.4	10.2	9.5
Disability pensions	0.9	0.8	0.8	0.8	0.8	0.7	0.8
Survivors' pensions	0.5	0.6	0.6	0.7	0.7	0.7	0.7

Note: The sum of values for each type of pension expenditure is not necessarily equal to the total expenditure due to rounding.
Source: MF CR calculations.

Compared to the EC projection (2015), where the balance fell to a minimum of less than −2% of GDP, the long-term sustainability of the system has deteriorated. The effects of the deterioration of the balance of the pension system can be divided into two groups: assumptions (e.g. different demographics) and changes in the pension system (different indexation formula and, in particular, the retirement age ceiling).

While updates to the assumptions play a role in the dynamics of expenditure over time, they are counteracted by more favourable developments in recent years. The initial value of pension expenditure of 8.2% of GDP is 0.8 pp lower than previously. Thus, although expenditure is growing more dynamically in the current 2018 projection, it is growing from a lower base and will end at virtually the same level in 2060 as it did in the previous 2015 projection (9.7% of GDP). The higher deficit is thus mainly due to system changes. The balance of the pension system in 2060 is worsened by approximately 1.6 pp due to the retirement age ceiling, and by about 0.3 pp due to the change in the indexation formula (Table 4.5). In other words, an absolute retirement age ceiling would increase pension expenditures by about CZK 75 bn in today's terms, and changing the indexation formula by an additional CZK 15 bn.

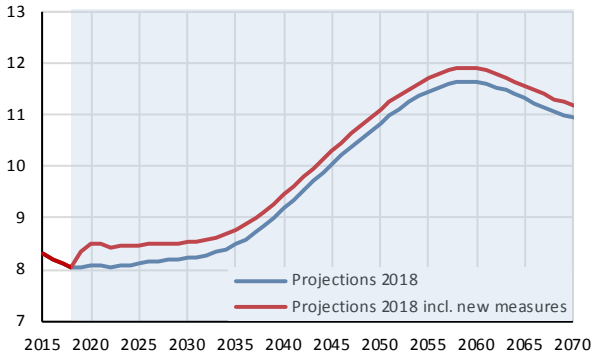
Table 4.4 shows, in addition to linking the retirement age to life expectancy scenario, the impact of the other alternative demographic assumptions (higher life expectancy, different migration, lower fertility rate) or macroeconomic developments (different total factor productivity growth, different total employment, higher employment of older workers).

Act No. 191/2018 Coll. made two major changes affecting pension expenditure through a higher replacement rate, which are no longer included in the EC projections (2018). These involve a change in the flat-rate component, which has increased from 9% of the average wage to 10% of the average wage from 2019, and also an increase in the monthly pension benefit of all recipients aged 85 and over by CZK 1,000. The impact of these measures compared to the EC projection (2018) is illustrated in Graph 4.10. In summary, these new measures sharply increase the expenditure by 0.2–0.3% of GDP over the projection horizon. Increasing the indexation above the legal entitlement (Act No. 244/2019 Coll.) will increase expenditure by 0.1% of GDP in 2020, but its impact disappears over time.

The total costs thus calculated give a fairly clear picture of the future risks to the long-term sustainability of the pension system. If, however, the retirement age increases adequately, linked to life expectancy, future expenditure for the pension system may be significantly reduced.

Graph 4.10: Impact of Newly Approved Measures on Pension System Expenditure

in % of GDP



Source: EC (2018). MF CR calculations.

Table 4.4: Pension Expenditure Projection under Different Scenarios

deviations in pp from the baseline in % of GDP

	2016	2020	2030	2040	2050	2060	2070
		Projection	*Projection*	*Projection*	*Projection*	*Projection*	*Projection*
Baseline	**8.2**	**8.1**	**8.2**	**9.2**	**10.8**	**11.6**	**10.9**
Higher life expectancy (2 extra years)	0.0	0.0	0.1	0.2	0.3	0.5	0.7
Higher total factor productivity growth (+0.4 pp.)	0.0	0.0	0.0	-0.1	-0.3	-0.5	-0.5
Lower total factor productivity growth (-0.4 pp.)	0.0	0.0	0.0	0.1	0.4	0.5	0.6
Higher employment rate (+2 pp.)	0.0	0.0	-0.2	-0.3	-0.3	-0.3	-0.3
Lower employment rate (-2 pp.)	0.0	0.0	0.2	0.3	0.3	0.4	0.4
Higher employment of older workers (+10 pp.)	0.0	-0.1	-0.6	-0.8	-0.4	0.2	0.3
Higher net migration (+33%)	0.0	0.0	-0.1	-0.2	-0.3	-0.4	-0.3
Lower net migration (-33%)	0.0	0.0	0.1	0.2	0.4	0.4	0.3
Lower fertility (-20%)	0.0	0.0	0.0	0.1	0.6	1.2	1.8
Linking retirement age to increases in life expectancy	0.0	0.0	-0.2	-0.7	-1.1	-1.4	-1.6

Source: MF CR calculations.

Table 4.5: Comparison of 2015 and 2018 Pension Expenditure Projections

in % of GDP

	2016	2020	2030	2040	2050	2060	2070
	2015 Pr.	*Projection*	*Projection*	*Projection*	*Projection*	*Projection*	*Projection*
2015 Projection	**8.9**	**9.0**	**9.0**	**9.0**	**9.6**	**9.7**	**-**
Level effect of initial position	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-
Effect of new assumptions (demography and macro)	0.0	-0.3	-0.2	0.2	0.5	0.7	-
Impact of retirement age ceiling at age 65	0.0	0.0	0.0	0.4	1.2	1.6	1.7
Impact of indexation formula adjustment	0.0	0.1	0.2	0.3	0.3	0.3	0.3
2018 Projection	**8.2**	**8.1**	**8.2**	**9.2**	**10.8**	**11.6**	**10.9**
Impact of Act no. 191/2018 Coll.	0.0	0.3	0.2	0.2	0.2	0.3	0.2
Impact of Act no. 244/2019 Coll.	0.0	0.1	0.1	0.0	0.0	0.0	0.0
2018 Projection incl. impact of Act no. 191/2018 Coll. And 244/2019 Cc	**8.2**	**8.5**	**8.5**	**9.4**	**11.1**	**11.9**	**11.2**

Note: The sum of partial effects is not necessarily equal to the total difference in projections due to rounding.
Source: EC (2015), EC (2018). MF CR calculations.

Box 2: Pension Expenditure in the CR and EU Member States

The CR currently spends 8.4% of GDP on pensions (value forecasted for 2019), of which more than 80% contributes to old age pensions. Discussions on possible adjustments to the system often argue that this level of expenditure is relatively low in the European context, because the EU member states spend on average around 11% of GDP on pensions. However, for a number of reasons, such a comparison is very simplified and misleading.

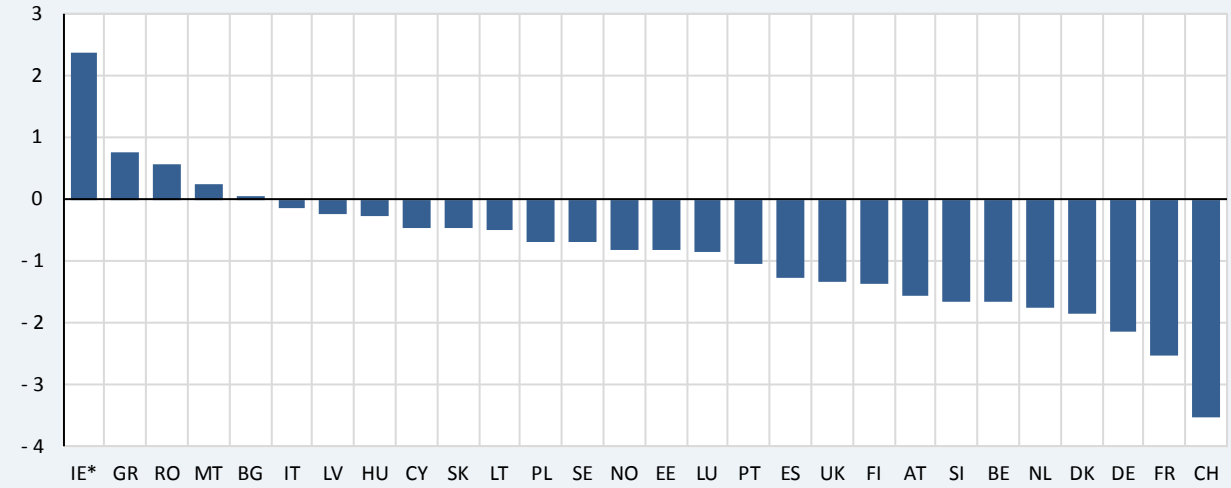
First, this value only applies to one moment in time, which makes it unsuitable for comparison of dynamic economic variables that are sensitive to the course of the business cycle. A comparison with average values over a number of years would have a higher informative value. For example, the unweighted average of pension expenditure in the EU was 8.1% of GDP, while in the CR it was 7.2% of GDP from 2011–2016. If we exclude Greece from the average, as a case where the pension expenditure-to-GDP ratio moved sharply higher due to a significant decline in GDP after a long-term recession, the EU average was essentially comparable to 7.9% of GDP over that period.

However, it is not only the time period used for the comparison that is important, fundamental factors are also crucial. The first is the fact that the Czech population is currently demographically relatively younger than the population in a number of EU countries, particularly in Western Europe. The number of pensions in relation to the working-age population is therefore still relatively lower here. If all EU countries had the same population structure as the CR, the average pension expenditure in the EU would be 0.5% of GDP lower. In future, practically all demographic projections forecast a relatively dramatic population ageing in the CR (see for example Graph 4.8), which in itself will increase the number of pensioners and, subsequently, overall expenditure on pensions.

The share of compensation of employees (wages and salaries, including social security contributions) in GDP is also crucial for an international comparison. The level of compensation of employees is decisive in terms of the amount of contributions to the scheme and the level of pension rights acquired. Czech compensation is significantly lower than in a number of countries. For example, the share of compensation of employees to GDP in Germany was 50.6% in 2016, whereas in the CR it was 40.4%. Thus, the higher share of compensation of employees to GDP implies a higher ratio of paid out old-age pensions to GDP. Graph 4.11 illustrates how pension expenditure would change in individual European countries if their ratio of compensation of employees to GDP were the same as in the CR. For the vast majority of countries, this would imply lower expenditure, for example, in the frequently discussed cases of Germany and France, it would amount to more than 2% of GDP. In other words, if, under otherwise identical conditions, wages and salaries in the CR (in relation to GDP) were at the level of Germany, we would already now be spending more than 10% of GDP on pensions. The impact of Czech compensation of employees would then be reflected in the EU average as lower expenditure by 0.7% of GDP.

Graph 4.11: Effect of Different Level of Compensation of Employees on Total Pension Expenditure in EU Countries

in % of GDP



** In this case, Ireland represents a biased value, due to a sudden increase in GDP as a result of transfer of technology companies to the country. Due to the high value of GDP, the share of compensation of employees is thus reduced to low values around 30%. Applying the Czech share of employees' compensation would, other things being equal, result in an increase of the share of pension expenditure on GDP.*

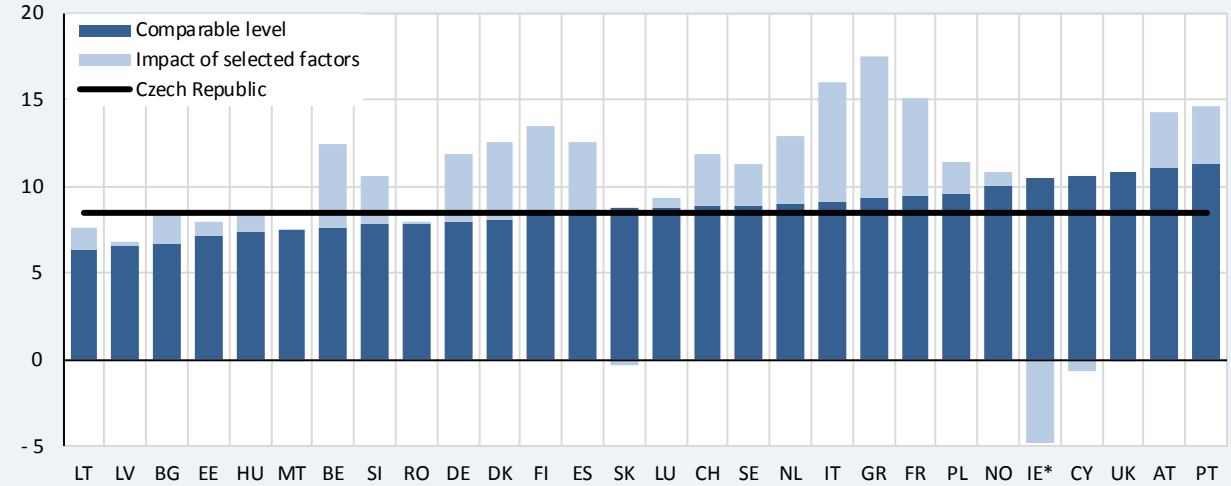
Source: Eurostat (2019a). MF CR calculations.

The benefit ratio, as a ratio of the average old age pension to the average gross wage, has a significant impact. In the case of the CR, the vast majority of pensions are not taxed, nor are they subject to social security contributions. This differentiates the Czech system from most other EU or OECD countries. If Czech pensions were also subject to taxation, and the average (net) pensions were maintained, expenditure would increase in relation to GDP. If we took into account net pensions in the EU member states, in other words eliminated the effect of taxation other things being equal, their expenditure on pensions would be approximately 1.3% of GDP lower.

Adjusted for all these effects, it is possible to obtain a consistent overview of a comparable level of pension expenditure in relation to GDP. This is illustrated by Graph 4.12. The dark columns represent pension expenditure in relation to GDP in individual countries with a comparable population structure, compensation of employees share and the same form of pension taxation as in the CR. The level of expenditure in the CR is indicated by a black line. The lighter columns illustrate the magnitude of the adjustment for structural factors, i.e. the extent to which the effects referred to above contribute to the different levels of pension spending in these countries.

Graph 4.12: Aggregate Impact of Selected Factors on the Share of Pension Expenditure on GDP

in % of GDP



** Ireland represents a biased value, due to a sudden increase in GDP as a result of transfer of technology companies to the country. Due to the denominator effect caused by high GDP values, ratios are difficult to compare.*

Source: Eurostat (2019a), OECD (2017). MF CR calculations.

The graph shows that the Czech pension system is not significantly less generous in relation to other European systems when it comes to settings of the system. With its 8.4% of GDP, it is very close to a comparable EU average, which (after adjustment) equals 8.6% of GDP. It is also worth noting that the Czech expenditure setting is 0.4% of GDP higher than in Germany or Denmark and is at a comparable level with, for example, Finland. It only lags behind Luxembourg, Switzerland and Sweden by around 0.5% of GDP.

5 Proposal for the New EU Fiscal Rule

European fiscal rules are an integral part of the EU institutional framework. By centralizing monetary policy in the euro area and leaving decentralized fiscal policies in the hands of the Member States, there was room for the uncoordinated and asymmetric functioning of the monetary union. In the absence of essentially automatic fiscal transfers, it is necessary (but not sufficient) to keep public finances sound and sustainable in each Member State in order to be able to respond to negative economic shocks when needed. The fiscal rules were supposed to help it. After almost twenty years of the single currency, it is clear that public finances have not been kept in good shape in many countries. Moreover, fiscal rules have become quite complicated, opaque and cumbersome. Therefore, efforts to reform the EU fiscal framework are gradually coming to the forefront. MF CR has been actively involved in this debate and introduced this year the first version of its proposal at meetings of like-minded countries and to the representatives of the EC.

Fiscal rules are no new arrangement in public finance management, although over the years their underlying concepts have undergone significant changes. In essence, the pursuit of a small and annually balanced budget using the so-called classical approach is a fiscal rule. Fiscal rules began to enter legislation approximately 150 years ago and as recently as 1990 only seven countries had a formally incorporated fiscal rule (Pirdal, 2017). The International Monetary Fund (IMF, 2017) currently registers fiscal rules in a total of 96 countries and five multinational monetary unions, including the Euro area. Today, more than a hundred rules operate in the European Union alone, of which about half place restraints on the budget balance.

Since its inception, the European fiscal framework, which is so important for the CR, has undergone many changes, responding to changes brought about by global needs, as well as by individual Member States and the interpretations of the EC. The European Fiscal Board, an advisory body to the EC on fiscal policy settings and fiscal rules, recently criticised many aspects of the framework in its current form (EFB, 2019). It has shown that many Member States have missed the opportunity to build up fiscal reserves in good times and, on the contrary, have been pro-cyclical. Although compliance with the rules is far more common today than before the crisis, the rules have been modified. Indeed, in consequence of the crisis, several flexible clauses have been adopted, without which countries were not able to stand the conditions of the rules before the Great Recession. The European Fiscal Board also points to the excessive complexity of the overall framework and proposes "to rely on simple medium-term debt targeting, supplemented by one operational rule, namely the growth of primary expenditure net of discretionary revenue measures with the possibility of escape clauses assessed by an independent institution." (EFB, 2019, p. 7). The growth of primary expenditures would then be determined by the dynamics of the potential output.

We are currently observing a general shift towards expenditure rules as an operational component of the fiscal framework, complemented by other one, such as the debt rule. Numerous studies, with certain reservations, by the International Monetary Fund (e.g. Andrle et al., 2015, Cordes et al., 2015 or Eyraud et al., 2018) and the Organization for Economic Co-operation and Development (OECD, 2016), which proposed in its euro area economic survey that a choice should be made of either the balance or expenditure as an operational component of the rule, leaving the choice to each country, recommend this type of institutions. Other studies that prefer expenditure rules include, for example, Claeys et al. (2016) Darvas et al. (2018) or Bénassy-Quéré et al. (2018).

In its own proposal, MF CR prefers to return to the simplest and most transparent form of the fiscal rule as possible, which at the same time will stand up to a complex economic environment. The simplicity of the rule must go hand in hand with its stability between fiscal policy settings and its retrospective assessment and countercyclical setting. A transparent rule should be one that is relatively easy to replicate and monitor. This requires that it is based ideally on observed and publicly available quantities or that the relevant basis of the rule can be easily derived from these quantities.

Moreover, the design of the rule in the European context is complicated by the fact that many Member States today have incorporated the rule of structural balance or convergence towards a certain level of the structural balance (the medium-term budgetary objective) too strictly in their legal systems. Despite all the shortcomings associated with the structural balance calculations, we still consider the institute of the medium-term budgetary objective to be a suitable countercyclical instrument, which also contains explicit and implicit liabilities by general government.

Efforts to meet all of these requirements have shaped our proposal. It also draws on the practical experience of MF CR, as it is, in some respects, reminiscent of the national Czech fiscal rule, which has been applied since February 2017. At the time of its inception, the rule drew inspiration from the Swiss federal rule, however this proposal brings several additions and is embedded in a European context.

5.1 Fiscal Rule

The basic idea of the proposed rule can be generally described as follows: general government expenditure over the business cycle must correspond to its revenue, taking into account one-off measures. It is essential to find "structural" revenue that can be easily and transparently derived and at the same time create a result that is as stable as possible over time. And as far as revenues are concerned, it is desirable that they were symmetrical throughout the business cycle and do not deviate in any direction.

We therefore analysed several approaches in various modifications, whether moving averages or simple statistical filters. Ultimately, the Hodrick-Prescott (HP) filter, using the predicted values for outlook years t + 2 and t + 3 as anchors, appeared the most promising. There are two reasons for this. The first is the nature of the years of the outlook in revenue prediction, which we see more as a trend where discretion usually plays a relatively minor role. The second reason was the known endpoint problem with HP filters, which is alleviated in the projection. The rule should therefore only be binding for year t + 1 and recalculated annually to the most up-to-date data, thus fulfilling the necessary flexibility element. The filter uses annual general government revenue (**AR**) with smoothing parameter λ (we work with a standard value of 100). This procedure leads to relatively stable results. As trend revenue values no longer include one-off measures, structural revenue (**SAR**) can be entered as:

$$SAR_{t+1} = HP(AR_{t+1}, \lambda)$$

However, total general government revenue incudes some items that must be excluded before applying the HP filter. In addition to the one-off measures (R^{OF}) on the revenue side, we strip EU budget funding from total revenues (R^{EU}), i.e. current and capital transfers. Transfers from EU funds have a mirror effect on the expenditure side. Thus, the adjusted total revenue (**AR**) intended to filter out the symmetric cyclical component is the total revenue of the general government sector (**TR**) less EU budget revenue and one-off revenue:

$$AR = TR - R^{EU} - R^{OF}$$

Expenditure is then determined by the revenue trend, but here too, one-off expenditure (E^{OF}) must be excluded, as it is not related to the trend, as well as expenditure financed from the EU budget (E^{EU}). In addition to consistency in the accrual methodology ($R^{EU} = E^{EU}$), co-financed expenditure from the EU budget is, on the principle of additionality, intended primarily to accelerate the convergence of EU member states and to complement national spending in this sense. Moreover, the financial perspective has its own cycle, to a certain extent determined by the administration of allocation conditions or individual operational programmes, including announced calls. In addition, there must be room for escape clauses (E^{EC}) within a very exceptional and clearly defined range of situations. Therefore the expenditure determined by the rule (**AE**) is adjusted total expenditure (**TE**):

$$AE = TE - E^{EU} - E^{OF} - E^{EC}$$

Thus, the expenditure given by the rule for year t + 1 may reach a maximum of the structural revenue in that year:

$$AE_{t+1} \leq SAR_{t+1}$$

Box 3: Excluding Specific Items from Expenditure Rules

Several other items can be found in the literature and in practice, which are excluded from the targeted aggregates for various reasons. It this box we discuss three of these and set out the reasons why we did not agree to their exclusion.

Unemployment benefits are excluded sometimes because they are cyclical in nature. However, only part of total unemployment is actually caused by the cyclical fluctuation of the economy, as the cyclical component is also largely influenced by the institutional set-up of the labour market (e.g. Nunziata, 2001, Gnocchi, 2012, Faccini et al., 2012). In other words, the institutional and structural characteristics of the labour market in a given country affect the sensitivity of the unemployment rate to the business cycle. Governments should therefore seek to reduce cyclical unemployment though structural reforms, which strengthens the argument for maintaining unemployment-related public expenditure in the rule.

Interest expenditure undoubtedly also has its cyclical component, which is beyond the government's current direct control. Nonetheless, it is also true that it is dependent on the total amount of interest expenditure paid. And total interest is again a function of the total stock of debt. The pursuit of fiscal consolidation and debt reduction in good times leads to a reduction in interest payments. Here too, the government can positively influence its fiscal space. In addition, there is a purely practical reason in this case – consistency with the medium-term budgetary objective. Given that it is expressed as a structural balance rather than a primary structural balance, maintaining the current concept of the medium-term budgetary objective while excluding interest expenditure from the managed aggregate is highly problematic.

The so called Golden Rule is a specific type of fiscal rule concerning mainly the budget balance. That is the rule of balanced values in the normal part of the balance, whereas capital expenditures are financed by deficits. The concept is based on the thesis that investments bring benefits over the longer term and therefore the sources of their financing should be spread over a longer period of time. Although this may be the correct approach in theory, from a practical point of view it would mean determining the specific financing for each investment project, the concept also assumes the efficiency and effectiveness of all investments, as well as finding available amounts of external resources. Given that these requirements are unattainable in the real world, the general government expenditure aggregate contains the total amount of investments funded from national sources.

On the other hand, the fiscal rule should not hinder sustainable and efficient investment activity. A frequent objection to fiscal rules is that, if consolidation is required, it is investment spending that is the first to be reduced, because it is a less politically sensitive solution than cuts in current expenditure. However, special treatment of investment expenditure may be a possible starting point (see below).

5.1.1 Medium-term Budgetary Objective

With derived structural revenue, it is already easy to include the Medium-term Budgetary Objective (MTO). It is not necessary to deal with its specific calculation at this point and it is possible to maintain the current methodology (EC, 2019b). For the purposes of the rule, it is sufficient that it is one specific value expressed as a percentage of GDP, as is currently the case.

If a Member State is allowed to achieve a structural deficit (e.g. a deficit of 0.5% of GDP set by the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union), then this must be taken into account in the maximum allowable expenditure. Including the medium-term budgetary objective, expenditure under the rule should therefore exceed structural revenue by a maximum of the MTO's nominal value in a given year:

$$\boldsymbol{AE_{t+1} \leq SAR_{t+1} - MTO_{t+1}Y_{t+1}}$$

5.1.2 Automatic Correction of Past Inconsistencies

Even where an unbalanced and independently assessed forecast has been made, there is no guarantee that expenditure or structural balance will be in line with the predicted value or ex-post compliance with the rule. Inconsistencies can have many causes; from accidental influences to a deliberate violation of the original plan. Either way, it is essential that public finances return to a sustainable path as soon as possible. On the other hand, it is not desirable for unbiased, i.e., purely random and symmetrically distributed errors, to place burdens and cause fluctuations to planned expenditure.

For these reasons, we propose the creation of a correction account that would record all the errors, omissions, inconsistencies or deliberate violations in any direction. Only if the sum of errors exceeds a certain threshold, the amount above that threshold is gradually dissolved - reducing the scope for maximum allowable expenditure. This means that if errors and omissions are completely random and have a normal distribution with a zero mean value, then there will be practically no dissolution of the excess part of the correction account. However, if the errors are biased and the MTO is more frequently violated, the correction account will increase until the government has to reduce expenditure to compensate for the excess part of the correction account. In other words, if the correction account is being dissolved, expenditure will be able to exceed structural revenue by an amount lower than the MTO. The correction account can be formally expressed as follows:

$$\boldsymbol{A_t = A_{t-1} + (AE_{t-1} - SAR_{t-1} + MTO_{t-1}Y_{t-1}) - k_t}$$

It is, in principle, an ex-post evaluation tool which compares actual expenditure with expenditure as it should have been under the rule applied ex-post. The term A_{t-1} determines the accumulated correction account balance from past errors; k_t represents the amount by which it was necessary to reduce expenditure in the current (on-going) year. If the actual (ex-post) expenditure was higher than what would correspond to the real structural revenue and the MTO, then the correction account will increase.

The correction account is dissolved if the cumulative amount of the account exceeds the set limit. This limit is set at 2% of GDP for the Czech fiscal rule. The correction account in the current year will obviously decrease by the same amount. Similarly to the Czech regulation, we propose the period for dissolving the excess part is three years.

The part of the correction account excess, which is being dissolved, can be entered in formal terms as:

$$\boldsymbol{k_{t+1} = max\left\{\left(\frac{A_t}{Y_t} - \alpha\right)/3; 0\right\}Y_{t+1}}$$

Finally, expenditure under the rule is determined by this final relationship:

$$\boldsymbol{AE_{t+1} \leq SAR_{t+1} - MTO_{t+1}Y_{t+1} - k_{t+1}}$$

5.2 Structure of Derived Expenditure

Investment expenditure is one of the first options for adjustment in times of fiscal consolidation. This type of attitude is shortsighted because it has a negative impact on economic growth over the long term. Therefore, the proposed fiscal rule does not end with an overall "envelope" for adjusted general government expenditures, but also ensures a more stable distribution of the ratio between current and investment expenditures over time. The sustainability of public finances is also linked to long-term potential growth, which is influenced by general government investment. However, the rule has no ambition to address the issue of the quality of public investment or its structure.

However, each country, in relation to its relative economic development and initial institutional setting, e.g. different weights between private and public investment, has different optimal size of government

investment. Similarly, the optimum changes over time in the long run, resulting from growing economic advance and changes in the structure of the economy.

If we assume that the investment is at risk especially during the period of fiscal consolidation, it is necessary to apply protection of investment expenditures at the time when the restriction is required. Such a situation occurs when the MTO is not met or after the application of the escape clause and the subsequent necessary consolidation towards the MTO despite the formal compliance of the rule (see the next section). Therefore, the rule to maintain the minimum proportion of capital expenditure should apply to situations where the MTO fails or returns to a specified MTO after the application of the escape clause.

The expenditure aggregate determined by the rule is therefore divided into current (**PE**) and capital (**CE**) expenditures, i.e. the relation **AE = PE + CE** applies. Compliance with the rule then requires that capital expenditure grow at least at the rate of total expenditure, while current expenditure grows at the maximum rate of total expenditure:

$$\frac{PE_{t+1}}{PE_t} \leq \frac{AE_{t+1}}{AE_t} \leq \frac{CE_{t+1}}{CE_t}$$

Although the government is constrained by the rule in terms of both total spending and the boundaries of its structure, it still has considerable choice in the settings. However, it cannot decide to increase current expenditure at the expense of investment. Within these constraints, setting current and capital expenditures is entirely the responsibility of the government and its programme priorities, without jeopardising long-term economic growth.

5.3 Escape Clauses

In a certain sense, the simpler and clearer the rule, the more inadequate it is in the event of an unforeseen, and in many cases unpredictable, event. If the rule is to succeed in practice, it must contain escape clauses that can incorporate anomalies into the rule. On the other hand, too many escape clauses make the rule complex and vulnerable to abuse. It is therefore important to strike a balance between flexibility and transparency.

Escape clauses should only be applied in exceptional situations. This is also supported by the fact that the automatic correction also provides some flexibility. If the government manages a surplus, which is greater than the MTO, it creates a buffer in the correction account, which can be reduced in less economically favourable times. However, the general rule is that most situations that occur on a one-off or permanent basis must be dealt with in a standard way, through revenue coverage. There is no sense in applying escape clauses to every possible anomaly. After all, the main objective of the rule is not only "to comply" with it, but to use it to attain sustainable public finances over the long term.

We propose only four escape clauses:
- State of war,
- National security threat,
- Large-scale natural disaster,
- Major economic recession (e.g. 3% decline in GDP).

By their nature, escape clauses are not automatic. This raises the question of who decides to launch them and to what extent. If we expect the economy to decline by 5%, there must be someone to assess this forecast. Similarly, for example, in the event of a natural disaster, there must be someone who decides that a minimum level has been exceeded, in order to avoid the application to cases of normal drought or rainfall. In the event that an escape clause is approved, the amount of expenditure that will be recognised under this measure must be decided and how much the expenditure can be increased (or the correction account adjusted). We believe that this task should be carried out by independent fiscal councils, both at national and EU level (existing or equivalent to the current European Fiscal Board). At the same time, two-stage decision-making should also help to ensure an internationally consistent approach, transparency and objectivity.

However, there is a problem with the return to MTOs in relation to the application of escape clauses. If the escape clauses expire, the rule leads to an immediate return to the MTO in the subsequent period. Such a development may not only be difficult to implement but also economically sub-optimal. For example, a country undergoing a severe economic recession and a permitted 2% of GDP escape clause, which is expected to meet the MTO at −0.75% of GDP in normal times, will meet the rule if it achieves a structural balance of −2.75% of GDP in a given year. However, the following year, with the escape clause no longer applying, the rule requires fiscal consolidation of up to 2 percentage points in order for the country to return to its MTO of −0.75% of GDP. At a time of economic recovery, such a restriction would be unbearably expensive in social terms and would likely lead to a further recession. On the other hand, gradual fiscal consolidation should take place during the recovery period. Therefore, the application of escape clauses should be accompanied by a provision that the minimum rate of fiscal consolidation is 0.5 percentage points per year. In this example, this would mean that a country reaches its MTO within four years at the latest. In the event of a slower recovery, the deviations would accumulate on the correction account with the potential risk of a reduction in the rule-based expenditure for the subsequent period.

The proposed minimum restriction rate may appear too slow, but there are several arguments for this. First, as

mentioned above, it is important to realise that escape clauses are intended to be exceptional. If applied rarely, the risk of a (relatively slow) return to MTO for long-term sustainability is also reasonably small. Secondly, there is a question of credibility. The higher levels of consolidation required may be seen to be unrealistic from the beginning, leading to the expectation that the rule will be violated in any case. Third and finally, if significant consolidation would hinder the economic recovery, this would also have negative impacts on the long-term sustainability of public finances and the potential consequences might be worse than slower consolidation.

5.4 Non-Compliance and Sanctions

The first stage of a review into compliance with the rule is conformity between revenue and expenditure trends as a whole, obviously taking account of the MTO and any adjustments to the relevant part of the correction account. The second stage involves an evaluation of the consistency of the expenditure structure, in cases this condition applies. In general, we can identify the following rule violations:

a) Total expenditure is growing faster than the revenue trend permits due to rapidly rising current expenditure.
b) Total expenditure is growing faster than the revenue trend permits, even though current expenditure is growing in line with the rule (i.e. capital expenditure is growing very fast, or the faster growth in capital expenditure has not been offset by a sufficient reduction in current expenditure).
c) Total expenditure is growing within the limits given revenue trend, but current expenditure is growing faster than allowed.

Evaluation of compliance with the rule is carried out both ex-ante and ex-post. The ex-ante evaluation should be carried out on the basis of the government plans described in the Stability/Convergence Programmes and, if there is a risk of breaking the rule, the Member State is obliged subsequently to adjust its budget for the following year to comply with the rule.

Ex-post evaluation is partially automatic through a correction account. If the structural balance deviates from the MTO (one way or the other), this deviation is directly credited to the correction account. However, changing the correction account is only the first step, since it only reflects a comparison of structural revenue and total expenditure, regardless of circumstances and structure.

However, it cannot be argued that failure to comply with the rule reflects intentionally excessive expenditure. Failure to comply with the rule may only be caused by an error in the revenue forecast. Changes in the correction account are therefore quite common. This is also the reason why a breach of the rule in one year cannot be followed automatically by the imposition of a sanction, although the country will be subject to more detailed investigation by the EC. However, in the event of a longer-term error, the correction account cannot be the only form of correction. If the error is registered for three consecutive years or four times in the previous six years and leads to a deterioration in the correction account, the EC will impose a sanction in the form of a financial fine.

The fine would be covered by a deposit which each Member State would pay on the account at the European Central Bank. The deposit would be remunerated at a rate equal to that country's nominal GDP growth for the previous year. This would keep the value of the deposit at the required level, which would be determined as a share of GDP. The deposit should be paid by each Member State, but on a pro rata basis from those sub-sectors that participate in tax revenue, according to the tax assignment. The replenishment would be provided by the Member State, again on a pro rata basis between its sub-sectors. In the case of repeated infringements, the obligatory deposit would increase (e.g. from 0.2 to 0.3% of GDP).

The shared responsibility mechanism for the deposit has two related benefits. First, it increases the internal pressure to comply with fiscal rules. Secondly, by applying internal pressure to compliance with the rule (internal controls within each Member State), lower-value deposits can be sufficient than otherwise. This makes the whole system cheaper. Finally, the interconnection of the general government expenditure side between sub-sectors makes cost sharing somewhat fairer and may lead to a revision of these financial links towards a more optimal setting.

5.5 Illustrative Examples and Implications

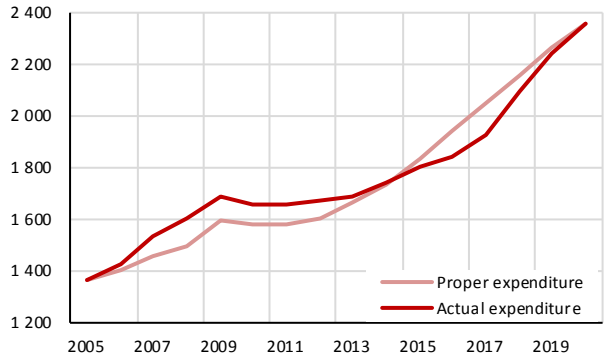
The functioning and resilience of each fiscal rule is tested over time. Creating any simulations on the actual data from the past is, of course, problematic. It cannot be assumed that the existence of a strict rule will force the government to behave in the same way as if it were not bound by anything.

It is of course true that the reform of the Stability and Growth Pact in 2005 introduced MTO into the European fiscal framework as part of its preventive arm. This meant that member states had (and obviously still have) obligations to fulfil the commitments that our proposal also expects. In many cases, this has not been the case, either due to inconsistent enforcement, the economic situation resulting from the economic crisis or the flexibility of the current European fiscal framework. In contrast, the flexibility of the proposed rule would only take place in the context of the escape clause applied as a result of the 2009 economic crisis.

Graph 5.5.1: Comparison of Expenditure According to the Rule and Actual Expenditure

Czech Republic

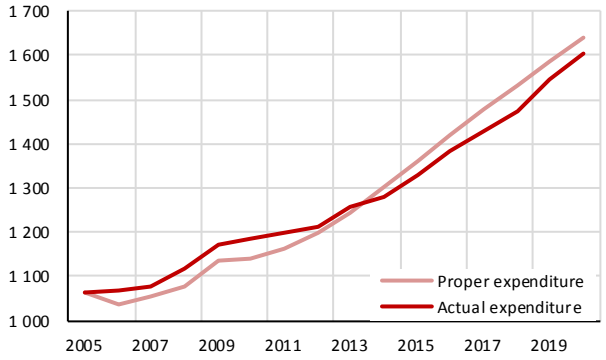
CZK bn



Source: MF CR Calculations.

Germany

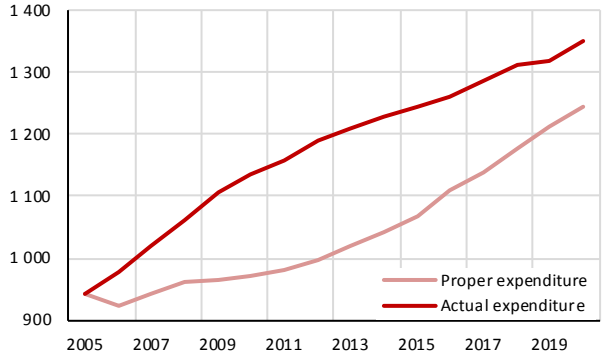
EUR bn



Source: AMECO (2019). MF CR Calculations.

France

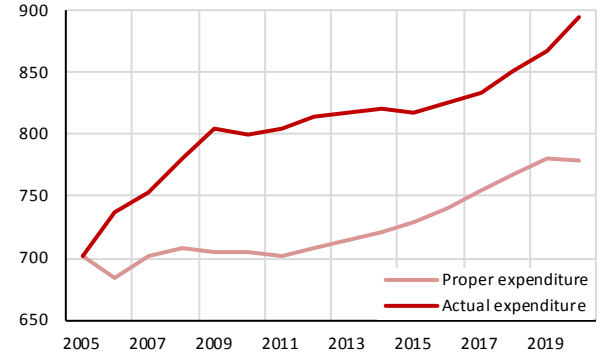
EUR bn



Source: AMECO (2019). MF CR Calculations.

Italy

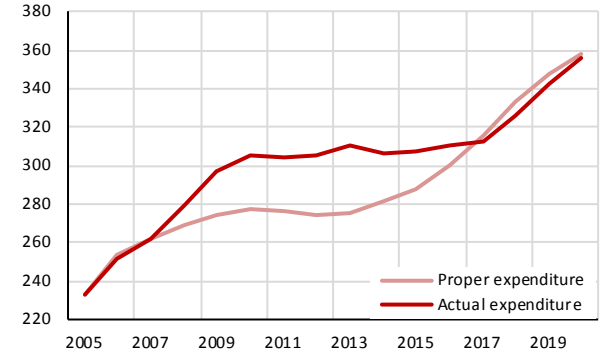
EUR bn



Source: AMECO (2019). MF CR Calculations.

Netherlands

EUR bn



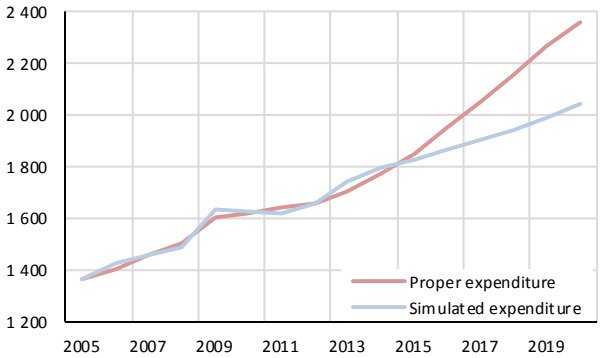
Source: AMECO (2019). MF CR Calculations.

Thus, we examine the rule in two scenarios. The first scenario is fully based on past values achieved by the member state surveyed (Graph 5.5.1). The second scenario, on the other hand, is based on the assumption that, although the country did not always comply with the rule, to some extent expenditure dynamics followed the countercyclical exchange rate and mitigated the effects of cyclical fluctuations (see Graph 5.5.2). In both scenarios, an escape clause is applied if the decline in GDP exceeds 3%. The extent of the escape clause depends on the size of the output gap, where the subsequent trajectory of return to this objective is 0.5 pp each year.

Graph 5.5.2: Comparison of Expenditure According to the Rule and Simulated Expenditure

Czech Republic

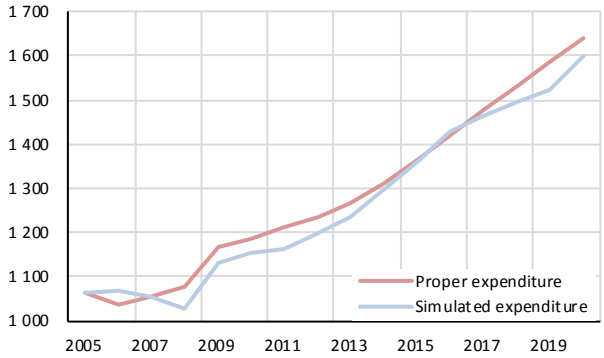
CZK bn



Source: MF CR Calculations.

Germany

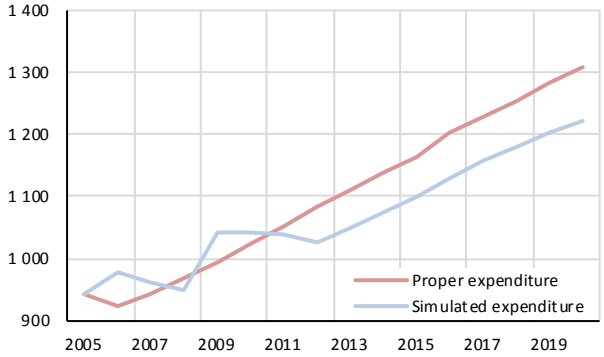
EUR bn



Source: AMECO (2019). MF CR Calculations.

France

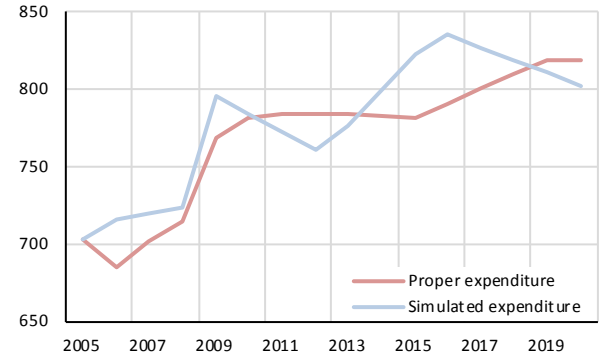
EUR bn



Source: AMECO (2019). MF CR Calculations.

Italy

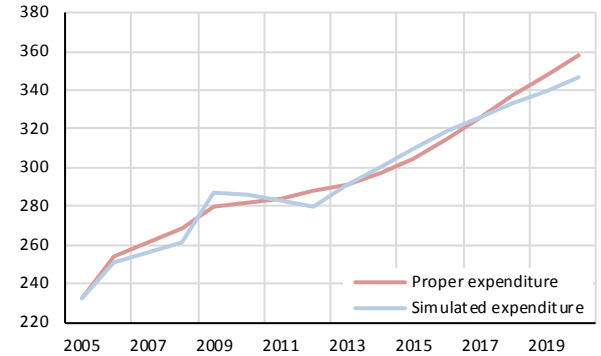
EUR bn



Source: AMECO (2019). MF CR Calculations.

Netherlands

EUR bn



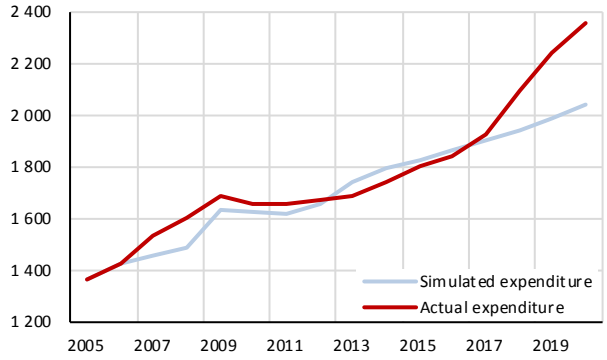
Source: AMECO (2019). MF CR Calculations.

Illustrative cases include the CR, Germany, France, Italy and the Netherlands. The escape clauses were applied in all cases except France, where economic performance during the entire horizon of the simulation never dropped by more than 3%. However, its long-term persistence in the negative output gap indicates structural problems that make implementation of the rule significantly more difficult. A similar case is Italy, where GDP volatility is relatively high. The whole situation is further accentuated by a correction account, which significantly reduces expenditure according to the rule, but the actual expenditure does not reflect this element. In both these cases it is absolutely obvious that the general government expenditure settings are not sustainable and there are major problems in achieving the MTO. On the other hand, the situation in the CR, Germany and the Netherlands is different. In all these cases, general government expenditure in 2020 is at a lower level than allowed by the rule itself. Expenditures are reduced by the correction account over the entire horizon of the simulation. However, this only shows that fiscal policy settings are generally more or less pro-cyclical (Graph 5.5.3).

Graph 5.5.3: Comparison of Actual Expenditure and Simulated Expenditure

Czech Republic

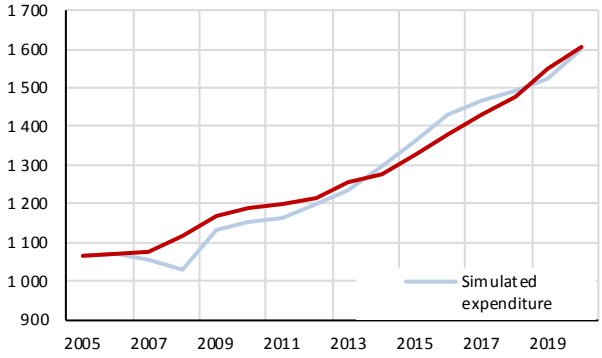
CZK bn



Source: MF CR Calculations.

Germany

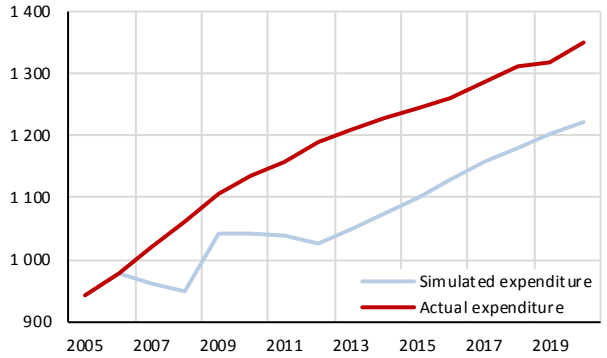
EUR bn



Source: AMECO (2019). MF CR Calculations.

France

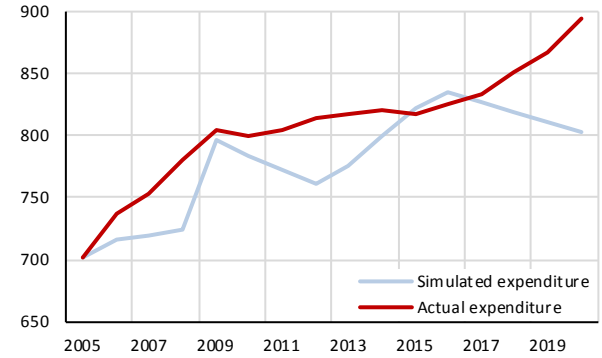
EUR bn



Source: AMECO (2019). MF CR Calculations.

Italy

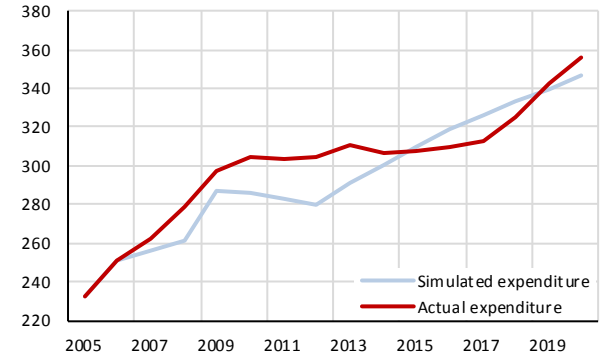
EUR bn



Source: AMECO (2019). MF CR Calculations.

Netherlands

EUR bn



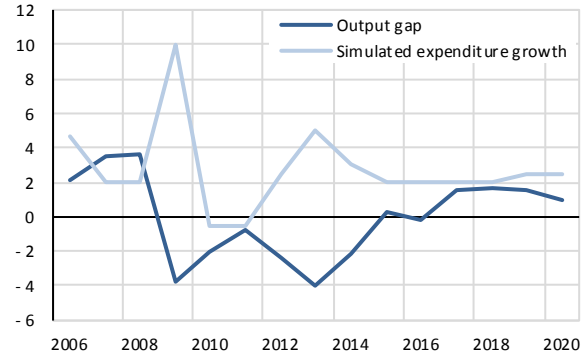
Source: AMECO (2019). MF CR Calculations.

The simulated scenario responds to the 2009 crisis in all countries by increasing spending by 10%. The follow-up is different as the output gap develops (Graph 5.5.4). YoY spending cuts are not unrealistic, given the strong increases in previous periods with the help of anti-crisis instruments, which are gradually being eradicated. In the case of the CR, Germany and the Netherlands, the course of expenditure over the entire horizon is not affected by the correction account, while for France and especially Italy, the correction account pushes down the prescribed expenditure over certain periods. In both countries, the primary setting of public finances is particularly important, as the correction account is beginning to accumulate large deviations in the structural balances from the MTO.

Graph 5.5.4: Comparison of Simulated Expenditure Growth and Output Gap

Czech Republic

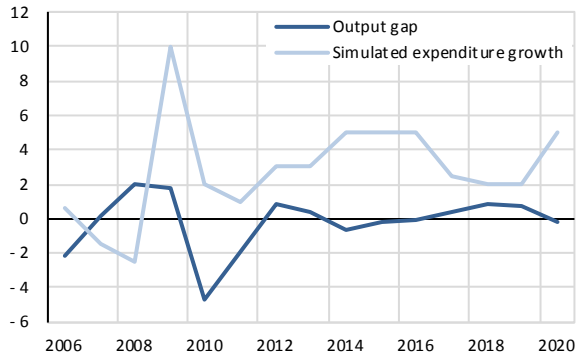
expenditure growth in %, output gap in % of potential product



Source: MF CR Calculations.

Germany

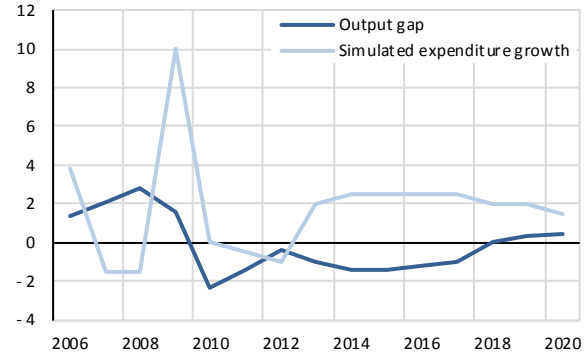
expenditure growth in %, output gap in % of potential product



Source: AMECO (2019). MF CR Calculations.

France

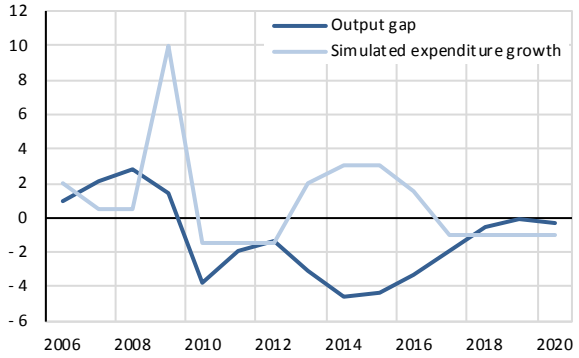
expenditure growth in %, output gap in % of potential product



Source: AMECO (2019). MF CR Calculations.

Italy

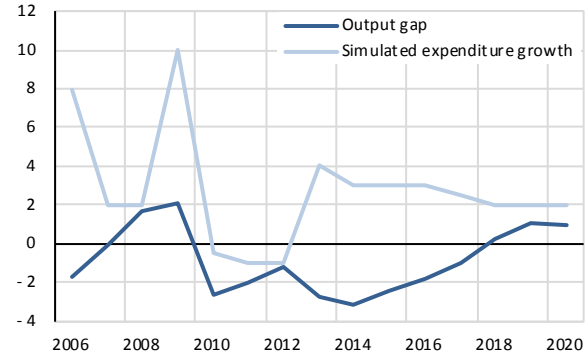
expenditure growth in %, output gap in % of potential product



Source: AMECO (2019). MF CR Calculations.

Netherlands

expenditure growth in %, output gap in % of potential product



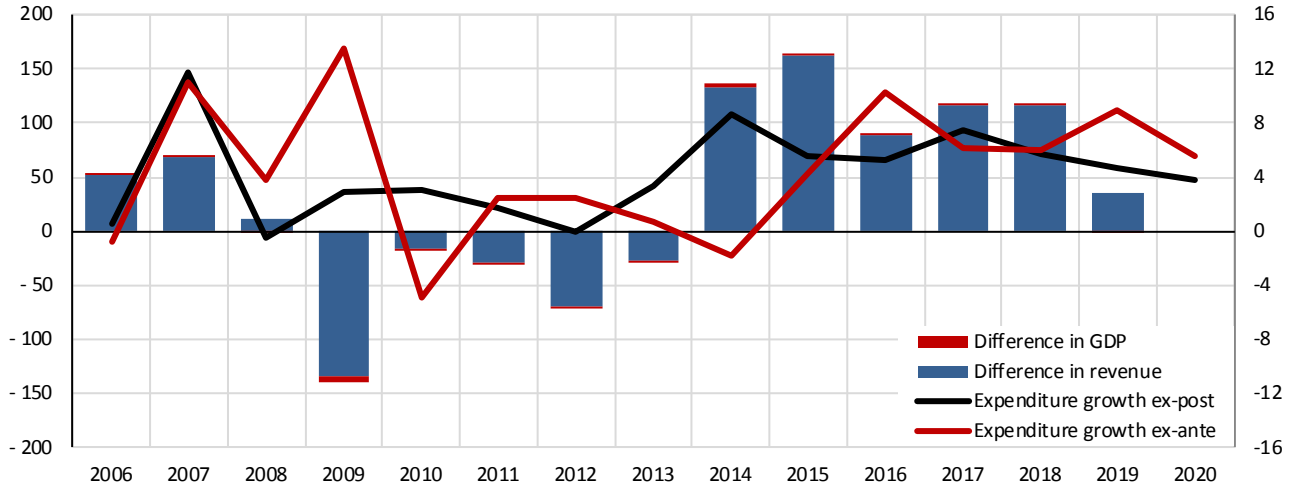
Source: AMECO (2019). MF CR Calculations.

The correction account not only captures the overrun of expenditure, but obviously also the effects of inaccurate income predictions, prolongation of the time period being filtered, or different forecasts of nominal GDP. We are only examining this aspect as it applies to the CR, where we have sufficient data. A comparison of the forecasts for year t+1 and a subsequent comparison with the situation in that same year shows the effects of unintended discrepancies (Graph 5.5.5).

Illustrative examples, although with arbitrarily selected parameters, produce certain implications for the operation of the proposed rule. Deviations from the MTO, especially in good times, are sanctioned relatively quickly by the correction account. Penalty reductions in expenditure may also occur in times of economic slowdown or recession, even if an escape clause is applied. A transitional period can be used at the time the rule is launched, as achieving a structural balance around the MTO is crucial for the start of operations and greatly facilitates its later application. Finally, reasonable fiscal behaviour of governments in good times allows the rule to respond fairly generously to deep recessions (backed by an escape clause), as well as milder recessions.

Graph 5.5.5: Impact of Difference of Estimated and Actual Development on Growth of Expenditure According to the Rule

difference in CZK bn, expenditure growth in % (right axis)



Source: MF CR Calculations.

References

Act No. 92/1991 Coll., on the Conditions for the Transfer of State Property to Other Persons, as Amended.

Act No. 112/2016 Coll., on Registration of Sales, as Amended.

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

Act No. 453/2016 Coll., amending Act No. 353/2003 Coll., on Excise Taxes, as Amended.

Act No 23/2017 Coll., on Fiscal Responsibility Rules.

Act No. 203/2017 Coll., amending Act No. 155/1995 Coll., on Pension Insurance, as Amended, and Other Related Acts.

Act No. 310/2017 Coll., Amendment of the Act on Sickness Insurance.

Act No. 191/2018 Coll., amending Act No. 155/1995 Coll., on Pension Insurance, as Amended.

Act No. 336/2018 Coll., on the State Budget of the Czech Republic for 2019.

Act No. 6/2019 Coll., amending Act No. 235/2004 Coll., on Value-Added Tax, as Amended.

Act No.32/2019 Coll., amending Act No. 262/2006 Coll., Labour Code, as Amended, and Other Related Acts.

Act No. 47/2019 Coll., amending Act No. 108/2006 Coll., on Social Services, as Amended.

Act No. 80/2019 Coll., amending Some Tax Acts and Other Related Acts.

Act No. 244/2019 Coll., amending Act No. 155/1995 Coll., on Pension Insurance, as Amended.

Act No.256/2019 Coll., amending Act No. 112/2016 Coll., on Registration of Sales, as Amended, a Act No. 235/2004 Coll., on Value-Added Tax, as Amended.

AMECO (2019): AMECO online. Brussels, European Commission, Directorate-General for Economic and Financial Affairs, May 2019, [cit. 10.10.2019], <https://ec.europa.eu/economy_finance/ameco/user/serie/SelectSerie.cfm>.

Andrle, M., Bluedorn, J. C., Eyraud, L., Kinda, T., Brooks, P. K., Schwartz, K., Weber, A. (2015): Reforming Fiscal Governance in the European Union. Washington, D. C., International Monetary Fund, IMF Staff Discussion Notes 15/9, May 2015, [cit. 15.10.2019], <http://www.imf.org/external/pubs/cat/longres.aspx?sk=42932>.

Beltrán-Sánchez, H., Jiménez, M. P., & Subramanian, S. V. (2016): Assessing morbidity compression in two cohorts from the Health and Retirement Study. Journal of Epidemiology and Community Health, 70(10), 1011-1016.

Bénassy-Quéré, A., Brunnermeier, M. K., Enderlein, H., Farhi, E., Fratzscher, M., Fuest, C., Gourinchas, P.-O., Martin, P., Pisani-Ferry, J., Rey, H., Schnabel, I., Véron, N., Weder di Mauro, B., and Zettelmeyer, J. (2018): Reconciling risk sharing with market discipline: A constructive approach to euro area reform. Brussels, Bruegel, Centre for Economic Policy Research, Policy Insight No. 91, January 2018, [cit. 15.10.2019], <https://bruegel.org/wp-content/uploads/2018/01/PolicyInsight_91.pdf>.

Chamber of Deputies Print No. 224/0, Draft of Deputies Aleš Juchelka and others of Act amending Act No. 117/1995 Sb., on State Social Support, as Amended.

Chamber of Deputies Print No. 509/0 Government Draft of Act amending Some Tax Acts in Relation with Increasing the Revenue of Public Budgets.

Claeys, G., Darvas, Z., Leandro, A. (2016): A proposal to revive the European Fiscal Framework. Brussels, Bruegel, Bruegel Policy Contribution 2016/07, March 2016, [cit. 15.10.2019], <https://bruegel.org/wp-content/uploads/2016/03/pc_2016_07.pdf>.

Cordes, T., Kinda, T., Muthoora, P., Weber, A. (2015): Expenditure Rules: Effective Tools for Sound Fiscal Policy? Washington, D. C., International Monetary Fund, IMF Working Papers 15/29, February 2015, [cit. 15.10.2019], <http://www.imf.org/external/pubs/cat/longres.aspx?sk=42706>.

CZSO (2019a): Quarterly National Accounts. Prague, Czech Statistical Office, 1.10.2019 [cit. 10.10.2019], <https://www.czso.cz/csu/czso/hdp_ts>.

CZSO (2019b): General Government Sector, Government Deficit and Debt. Prague, Czech Statistical Office, 2.10.2019 [cit. 14.10.2019], <http://apl.czso.cz/pll/rocenka/rocenka.indexnu_gov?mylang=EN>.

Darvas, Z., Martin, P., Ragot, X. (2018): European fiscal rules require a major overhaul. Brussels, Bruegel, Policy Contribution 2018/18, October 2018, [cit. 15.10.2019], <https://bruegel.org/wp-content/uploads/2018/10/PC-18_2018.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. 15.10.2019], <http://ec.europa.eu/economy_finance/publications/european_economy/2015/pdf/ee3_en.pdf>.

EC (2018): The 2018 Ageing Report: Economic and Budgetary Projections for the 28 EU Member States (2016–2070), Institutional Paper 079, May 2018. Brussels. 406pp. ISBN 978-92-79-77460-7 (online), [cit. 15.10.2019], <https://ec.europa.eu/info/sites/info/files/economy-finance/ip079_en.pdf>.

EC (2019a): European Economic Forecast, Spring 2019. Brussels, European Commission, Directorate-General for Economic and Financial Affairs, European Economy, Institutional Paper 102, May 2019, ISBN 978-92-79-98849-3 (on-line). [cit. 15.10.2019], <https://ec.europa.eu/info/sites/info/files/economy-finance/ip0102_en.pdf>.

EC (2019b): Vade Mecum on the Stability and Growth Pact – 2019 Edition. Brussels, European Commission, Directorate-General for Economic and Financial Affairs, European Economy, Institutional Paper 101, April 2019, ISBN 978-92-79-98848-6 (online). [cit. 21.10.2019], <https://ec.europa.eu/info/sites/info/files/economy-finance/ip101_en.pdf>.

ECB (2019): Interest Rate Statistics. European Central Bank, 10 October 2019 [cit. 16.10.2019], <http://www.ecb.europa.eu/stats/money/long/html/index.en.html>.

EFB (2019): Assessment of EU fiscal rules with a focus on the six and two-pack legislation. Brussels, European Commission, European Fiscal Board, September 2019, [cit. 15.10.2019], <https://ec.europa.eu/info/sites/info/files/2019-09-10-assessment-of-eu-fiscal-rules_en.pdf>.

Eurostat (2017): Population Projections. Luxembourg, Eurostat, June 2017 [cit. 15.10.2019], <http://ec.europa.eu/eurostat/data/database?node_code=proj>.

Eurostat (2019a): Eurostat Database. Luxembourg, Eurostat, October 2019 [cit. 15.10.2019], <http://ec.europa.eu/eurostat/data/database>.

Eurostat (2019b): Excessive Deficit Procedure Notification Tables. Luxembourg, Eurostat, October 2019 [cit. 21.10.2019], <http://ec.europa.eu/eurostat/web/government-finance-statistics/excessive-deficit-procedure/edp-notification-tables>.

Eyraud, L., Debrun, X., Hodge, A., Lledó, V., Pattillo, C. (2018): Second-Generation Fiscal Rules: Balancing Simplicity, Flexibility, and Enforceability Washington, D. C., International Monetary Fund, IMF Staff Discussion Notes 18/04, April 2018, [cit. 15.10.2019], <https://www.imf.org/~/media/Files/Publications/SDN/2018/sdn1804-on-second-generation-fiscal-rules.ashx>.

Faccini, R., Bondibene, C. R. (2012): Labour market institutions and unemployment volatility: evidence from OECD countries. London, Bank of England, Bank of England working papers No 461.

Fitch Ratings (2019): Fitch Affirms Czech Republic at 'AA-'; Outlook Stable. Frankfurt am Main, July 2019, [cit. 17.10.2019], <https://www.fitchratings.com/site/pr/10079381>.

Fries, J. F., Bruce, B., & Chakravarty, E. (2011). Compression of morbidity 1980–2011: a focused review of paradigms and progress. Journal of aging research, 2011.

Gnocchi, S., Pappa, E. (2012): Do labor market institutions matter for business cycles? Journal of Economic Dynamics and Control, Elsevier, vol. 51(C), pp. 299-317.

IHME (2019): Global Burden of Disease Collaborative Network. Seattle, United States, Institute for Health Metrics and Evaluation (IHME), [cit. 15. 10. 2019], <http://ghdx.healthdata.org/gbd-results-tool>.

IMF (2017): Fiscal Rules at a Glance. Washington, D. C., International Monetary Fund, March 2017, [cit. 29.10.2019], <https://www.imf.org/external/datamapper/fiscalrules/Fiscal Rules at a Glance - Background Paper.pdf>.

IMF (2019): World Economic Outlook Database. Washington, D. C., International Monetary Fund, October 2019, [cit. 30.10.2019], <https://www.imf.org/external/pubs/ft/weo/2019/02/weodata/index.aspx>.

MF CR (2015): Fiscal Outlook of the CR (November 2015). Prague, Ministry of Finance of the CR, November 2015, ISSN 2570-5695 (on-line). [cit. 17.10.2019], <http://www.mfcr.cz/assets/en/media/Fiscal-Outlook-of-the-Czech-Republic-November-2015.pdf>.

MF CR (2019a): Convergence Programme of the CR. Prague, Ministry of Finance of the CR, April 2019, ISSN 2570-5687 (on-line). [cit. 16.10.2019], <http://www.mfcr.cz/assets/en/media/Convergence-Programme-of-the-Czech-Republic-April-2019.pdf>.

MF CR (2019b): Macroeconomic Forecast of the CR. Prague, Ministry of Finance of the CR, November 2019, ISSN 2533-5588 (on-line). [cit. 10.10.2019], <http://www.mfcr.cz/assets/en/media/Macroeconomic-Forecast-November-2019.pdf>.

MF CR (2019c): Budgetary Strategy of the Public Institutions' Sector of the CR for 2020–2022. Prague, Ministry of Finance of the CR, April 2019, ISSN 2570-575X (on-line). [cit. 16.10.2019], <http://www.mfcr.cz/assets/cs/media/Rozpoctova-strategie_2019_Rozpoctova-strategie-CR-duben-2019.pdf>. *In Czech only.*

MF CR (2019d): The Czech Republic Funding and Debt Management Strategy for 2017 - Second Half Update. Prague, Ministry of Finance of the CR, June 2019, ISSN 2336-2278 (on-line). [cit. 17.10.2019], <http://www.mfcr.cz/assets/en/media/The-Czech-Republic-Funding-and-Debt-Management-Strategy-for-2019_v02.pdf>.

MLSA (2019): Report on the State of the Czech Republic's Pension System and its Projected Developments with Regard to the Demographic Situation of the Czech Republic and the Expected Population and Economic Development. Prague, Ministry of labour and Social Affairs of the Czech Republic, 2019, [cit. 21.10.2019], <https://www.komora.cz/files/uploads/2019/06/ma_ALBSBCLD4MQD.pdf>. *In Czech only.*

Moody's (2019): Government of Czech Republic – Aa3 stable: Update following rating upgrade to Aa3 and change in outlook to stable. New York, October 2019, [cit. 17.10.2019], <https://www.moodys.com/research/Government-of-Czech-Republic-Aa3-stable-Update-following-rating-upgrade--PBC_1197162>.

NBC (2018): Communication of the National Budget Council of 18 April 2019 on the Amount of Debt of the Sector of Public Institutions after Deducting the Cash Reserve in Financing the State Debt, [cit. 17.10.2019], <https://unrr.cz/wp-content/uploads/2019/04/SDĚLENÍ_výše-dluhu-k-31.12.2018.pdf>. *In Czech only.*

Nunziata, L. (2001): Labour Market Institutions and the Cyclical Dynamics of Employment. Labour Economics, 2003, vol. 10, issue 1, pp. 31-53.

OECD (2016): OECD Economic Surveys: Euro Area 2016, Paris, Organisation for Economic Co-operation and Development, 2018, ISSN 1999-1363 (online). [cit. 14.10. 2019], <https://doi.org/10.1787/19990804>.

OECD (2017): Pensions at a Glance 2017: OECD and G20 Indicators, OECD Publishing, Paris, Organisation for Economic Co-operation and Development,, 2017, ISSN 1999-0804 (online). [cit. 14.10. 2019], <http://dx.doi.org/10.1787/pension_glance-2017-en>.

Pirdal, B. (2017): A Comparative Analysis of Fiscal Rules and Independent Fiscal Agencies. Journal of Economics & Administrative Sciences. December 2017, Vol. 19 Issue 2, p1-12.

Resolution of the Government of the Czech Republic of 27 March 2018 No. 206 on the Introduction of New Rebates for Public Train and Bus Transportation for Senior Citizens, Children, Pupils and Students.

Resolution of the Government of the Czech Republic of 29 April 2019 No. 278 on the Budgetary Strategy of the Public Institutions' Sector of the Czech Republic and on the Convergence Programme of the Czech Republic.

Rychtaříková, J. (2015): Length of life, health and attitudes in the European Union. Geografie, 120, No. 4, pp. 542–563.

Stallard, E. (2016): Compression of morbidity and mortality: new perspectives. North American actuarial journal, 20(4), 341-354.

Vrabcová, J., Daňková, S., & Faltysová, K. (2017): Healthy Life Years in the Czech Republic: Different Data Sources, Different Figures. Demografie, 59(4), 315-331.

WHO (2015). World report on ageing and health. World Health Organization.

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

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total revenue	*CZK bn*	**1 523**	**1 558**	**1 626**	**1 646**	**1 695**	**1 740**	**1 888**	**1 917**	**2 044**	**2 225**
	% growth	-2.1	2.3	4.4	1.2	2.9	2.7	8.5	1.5	6.7	8.8
Current taxes on inc., wealth, etc.	*CZK bn*	278	269	282	282	294	315	332	361	390	428
	% growth	-11.1	-3.3	4.8	0.0	4.0	7.4	5.3	8.8	7.8	9.9
Social contributions [1)]	*CZK bn*	560	578	593	600	607	629	663	703	760	834
	% growth	-6.6	3.3	2.5	1.3	1.1	3.6	5.5	6.1	8.0	9.8
Taxes on production and imports [2)]	*CZK bn*	425	441	481	502	522	511	562	587	628	657
	% growth	1.9	3.9	9.0	4.3	4.0	-2.1	10.1	4.4	7.1	4.6
Capital taxes [3)]	*CZK bn*	0	0	0	0	0	0	0	0	0	0
	% growth	-8.2	-3.4	0.9	0.9	-33.3	-93.5	10.0	54.5	70.6	-24.1
Property income	*CZK bn*	38	38	35	35	38	37	37	37	31	35
	% growth	4.0	-0.5	-6.9	0.8	7.0	-0.9	-1.3	0.8	-17.7	13.2
Interest	*CZK bn*	12	11	10	11	10	9	7	6	5	8
	% growth	-17.2	-4.0	-12.3	6.8	-5.5	-12.9	-24.0	-7.8	-18.4	56.8
Other property income	*CZK bn*	26	26	25	25	28	29	30	31	26	27
	% growth	17.9	1.1	-4.6	-1.6	12.5	3.5	5.6	2.7	-17.6	4.7
Sales [4)]	*CZK bn*	140	138	146	148	150	152	155	158	163	174
	% growth	3.2	-0.9	5.6	1.2	1.1	1.8	2.0	1.6	3.5	6.7
Other current transfers and subs.	*CZK bn*	29	36	35	39	44	42	48	40	40	51
	% growth	22.7	21.3	-0.7	10.5	13.5	-4.5	13.9	-17.7	1.5	25.8
Investment grants	*CZK bn*	50	53	50	35	36	49	81	23	26	42
	% growth	84.7	4.9	-6.0	-29.0	1.5	36.3	66.6	-72.1	15.4	60.4
Other capital transfers	*CZK bn*	3	5	4	4	5	5	9	8	6	4
	% growth	-9.2	88.2	-25.8	9.3	18.6	-10.6	103.3	-11.3	-21.3	-40.9
	% of GDP										
Total revenue		**38.7**	**39.3**	**40.3**	**40.5**	**41.4**	**40.3**	**41.1**	**40.2**	**40.5**	**41.7**
Current taxes on income, wealth, etc.		7.1	6.8	7.0	6.9	7.2	7.3	7.2	7.6	7.7	8.0
Social contributions [1)]		14.2	14.6	14.7	14.8	14.8	14.6	14.4	14.7	15.0	15.6
Taxes on production and imports [2)]		10.8	11.1	11.9	12.4	12.7	11.8	12.2	12.3	12.4	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		1.0	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.6	0.7
Interest		0.3	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1
Other property income		0.7	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.5	0.5
Sales [4)]		3.6	3.5	3.6	3.6	3.7	3.5	3.4	3.3	3.2	3.3
Other current transfers and subsidies		0.7	0.9	0.9	1.0	1.1	1.0	1.1	0.8	0.8	1.0
Investment grants		1.3	1.3	1.2	0.9	0.9	1.1	1.8	0.5	0.5	0.8
Other capital transfers		0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1

Note: [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.
[4)] Consists of market output, output produced for own final use and payments for other non-market output.
Source: CZSO (2019b).

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

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Taxes and social contributions	*CZK bn*	**1 263**	**1 289**	**1 356**	**1 384**	**1 422**	**1 455**	**1 557**	**1 651**	**1 778**	**1 919**
	% growth	-5.0	2.0	5.2	2.1	2.7	2.3	7.1	6.0	7.7	8.0
Current taxes on income, wealth, etc.	*CZK bn*	**278**	**269**	**282**	**282**	**294**	**315**	**332**	**361**	**390**	**428**
	% growth	-11.1	-3.3	4.8	0.0	4.0	7.4	5.3	8.8	7.8	9.9
Individuals or households	*CZK bn*	136	131	143	144	151	161	165	183	202	231
	% growth	-3.8	-3.1	8.7	1.0	4.5	6.9	2.2	11.3	10.4	14.2
Corporations	*CZK bn*	132	127	129	127	133	144	157	167	176	186
	% growth	-18.3	-3.7	1.3	-1.2	4.0	8.5	8.8	6.8	5.2	6.0
Levy on lottery revenue	*CZK bn*	-	-	-	-	-	-	-	-	-	-
	% growth	-	-	-	-	-	-	-	-	-	-
Other current taxes	*CZK bn*	10	10	10	10	10	10	11	11	12	11
	% growth	1.7	0.0	-1.6	1.8	-1.4	0.0	5.4	2.2	4.4	-5.8
Social security contributions	*CZK bn*	**560**	**578**	**593**	**600**	**607**	**629**	**663**	**703**	**760**	**834**
	% growth	-6.6	3.3	2.5	1.3	1.1	3.6	5.5	6.1	8.0	9.8
Actual contributions of employers	*CZK bn*	350	368	378	383	387	401	423	450	488	538
	% growth	-7.9	5.1	2.7	1.4	1.3	3.4	5.5	6.4	8.6	10.2
Imputed contributions of employers	*CZK bn*	1	1	1	1	1	1	1	1	1	1
	% growth	162.3	-17.3	31.8	-5.1	4.6	-21.5	40.1	-1.9	16.1	21.9
Actual contributions of households	*CZK bn*	209	209	214	217	218	227	239	252	270	294
	% growth	-4.6	0.3	2.2	1.2	0.7	4.1	5.4	5.4	6.9	9.0
Additional contrib. of households	*CZK bn*	-	-	-	-	-	-	-	-	-	-
	% growth	-	-	-	-	-	-	-	-	-	-
Taxes on production and imports	*CZK bn*	**425**	**441**	**481**	**502**	**522**	**511**	**562**	**587**	**628**	**657**
	% growth	1.9	3.9	9.0	4.3	4.0	-2.1	10.1	4.4	7.1	4.6
Taxes on products [1)]	*CZK bn*	409	421	457	479	501	489	538	562	601	619
	% growth	2.0	3.0	8.5	4.8	4.7	-2.3	10.0	4.4	6.9	3.1
Value added tax	*CZK bn*	259	263	277	286	304	319	333	354	388	409
	% growth	-0.7	1.9	5.0	3.5	6.2	5.2	4.3	6.2	9.5	5.4
Excises	*CZK bn*	140	148	171	176	179	151	183	181	186	186
	% growth	9.1	5.6	15.4	2.9	1.6	-15.4	21.0	-0.8	2.3	0.0
Other taxes on products [2)]	*CZK bn*	10	10	10	17	19	19	22	27	28	25
	% growth	-14.6	-4.3	-1.3	75.9	10.5	-0.2	17.7	20.4	3.9	-8.6
Other taxes on production [3)]	*CZK bn*	16	20	24	23	21	21	24	25	28	38
	% growth	-2.4	25.6	20.1	-4.9	-9.8	2.7	12.5	3.4	11.0	37.0
Capital taxes	*CZK bn*	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	% growth	-8.2	-3.4	0.9	0.9	-33.3	-93.5	10.0	54.5	70.6	-24.1

Note: [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 (2019b).

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

in % of GDP

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Taxes and social contributions	**32.1**	**32.5**	**33.6**	**34.1**	**34.7**	**33.7**	**33.9**	**34.6**	**35.2**	**36.0**
Current taxes on income, wealth, etc.	**7.1**	**6.8**	**7.0**	**6.9**	**7.2**	**7.3**	**7.2**	**7.6**	**7.7**	**8.0**
Individuals or households	3.4	3.3	3.5	3.6	3.7	3.7	3.6	3.8	4.0	4.3
Corporations	3.4	3.2	3.2	3.1	3.2	3.3	3.4	3.5	3.5	3.5
Levy on lottery revenue	-	-	-	-	-	-	-	-	-	-
Other current taxes	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2
Social security contributions	**14.2**	**14.6**	**14.7**	**14.8**	**14.8**	**14.6**	**14.4**	**14.7**	**15.0**	**15.6**
Actual contributions of employers	8.9	9.3	9.4	9.4	9.5	9.3	9.2	9.4	9.7	10.1
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	5.3	5.3	5.3	5.3	5.3	5.3	5.2	5.3	5.3	5.5
Additional contributions of households	-	-	-	-	-	-	-	-	-	-
Taxes on production and imports	**10.8**	**11.1**	**11.9**	**12.4**	**12.7**	**11.8**	**12.2**	**12.3**	**12.4**	**12.3**
Taxes on products [1)]	10.4	10.6	11.3	11.8	12.2	11.3	11.7	11.8	11.9	11.6
Value added tax	6.6	6.6	6.9	7.0	7.4	7.4	7.3	7.4	7.7	7.7
Excises	3.6	3.7	4.2	4.3	4.4	3.5	4.0	3.8	3.7	3.5
Other taxes on products [2)]	0.3	0.2	0.2	0.4	0.5	0.4	0.5	0.6	0.5	0.5
Other taxes on production [3)]	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.7
Capital taxes	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Note: [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 (2019b).

Table A.4: Central Government Revenue

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total revenue	*CZK bn*	**1 079**	**1 107**	**1 167**	**1 180**	**1 202**	**1 222**	**1 338**	**1 371**	**1 461**	**1 573**
	% growth	-3.2	2.6	5.4	1.1	1.9	1.7	9.5	2.5	6.5	7.7
Current taxes on income, wealth, etc.	*CZK bn*	187	182	190	190	193	207	218	236	258	284
	% growth	-11.2	-2.9	4.8	0.0	1.3	7.5	5.3	8.1	9.2	10.0
Social contributions	*CZK bn*	352	365	374	378	379	391	413	439	478	525
	% growth	-10.4	3.7	2.7	0.9	0.4	3.2	5.6	6.2	9.0	9.8
Taxes on production and imports	*CZK bn*	338	351	387	406	420	404	451	464	493	509
	% growth	2.4	3.9	10.2	4.9	3.4	-3.7	11.5	2.9	6.3	3.2
Capital taxes	*CZK bn*	0	0	0	0	0	-	-	-	-	-
	% growth	-10.4	-2.7	-2.3	3.8	-33.5	-	-	-	-	-
Property income	*CZK bn*	30	30	28	27	30	30	30	30	24	27
	% growth	9.2	2.5	-8.3	-3.0	11.4	-1.4	1.7	-0.1	-20.2	11.4
Sales	*CZK bn*	67	68	75	76	75	78	81	81	85	93
	% growth	2.1	1.8	9.8	0.9	-1.1	4.4	3.1	1.1	4.2	9.4
Other revenue	*CZK bn*	105	111	112	103	105	112	145	121	123	136
	% growth	18.7	5.6	0.9	-8.0	1.8	6.4	30.1	-16.7	1.2	10.6

Source: CZSO (2019b).

Table A.5: Local Government Revenue

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total revenue	*CZK bn*	**482**	**488**	**483**	**455**	**478**	**506**	**544**	**535**	**581**	**648**
	% growth	4.6	1.1	-0.9	-5.8	4.9	5.8	7.6	-1.6	8.6	11.6
Current taxes on income, wealth, etc.	*CZK bn*	91	87	92	92	101	108	114	125	132	145
	% growth	-11.0	-4.2	4.9	0.0	9.8	7.2	5.3	10.2	5.2	9.7
Social contributions	*CZK bn*	0	0	0	1	1	0	1	1	1	1
	% growth	567.2	-10.9	43.8	17.7	-0.3	-19.9	50.4	1.9	10.9	21.5
Taxes on production and imports	*CZK bn*	87	90	94	96	102	107	112	123	135	148
	% growth	0.0	3.7	4.4	1.9	6.5	4.2	4.7	10.3	9.9	9.5
Capital taxes	*CZK bn*	0	0	0	0	0	0	0	0	0	0
	% growth	83.3	-18.2	77.8	-37.5	-30.0	42.9	10.0	54.5	70.6	-24.1
Property income	*CZK bn*	7	7	7	8	8	8	7	7	7	8
	% growth	-9.0	-5.8	0.1	16.5	-4.3	0.8	-13.1	4.8	-5.4	19.7
Sales	*CZK bn*	72	70	71	72	75	74	75	76	78	81
	% growth	4.3	-3.3	1.6	1.7	3.3	-0.7	0.8	2.2	2.7	3.9
Other revenue	*CZK bn*	224	233	219	187	192	209	237	203	228	265
	% growth	15.4	3.9	-5.9	-14.6	2.8	8.7	13.4	-14.3	12.5	16.3

Source: CZSO (2019b).

Table A.6: Social Security Funds Revenue

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total revenue	*CZK bn*	**211**	**216**	**221**	**225**	**230**	**239**	**252**	**267**	**284**	**312**
	% growth	0.2	2.1	2.4	1.8	2.2	4.3	5.2	5.9	6.5	9.7
Current taxes on income, wealth, etc.	*CZK bn*	-	-	-	-	-	-	-	-	-	-
	% growth	-	-	-	-	-	-	-	-	-	-
Social contributions	*CZK bn*	208	213	218	222	227	237	249	264	281	308
	% growth	0.4	2.6	2.2	2.0	2.2	4.3	5.2	5.8	6.5	9.7
Taxes on production and imports	*CZK bn*	-	-	-	-	-	-	-	-	-	-
	% growth	-	-	-	-	-	-	-	-	-	-
Capital taxes	*CZK bn*	-	-	-	-	-	-	-	-	-	-
	% growth	-	-	-	-	-	-	-	-	-	-
Property income	*CZK bn*	1	1	0	1	0	0	0	0	0	0
	% growth	-24.2	-46.3	-18.7	9.7	-47.2	-5.2	-28.1	-21.7	-95.1	57.1
Sales	*CZK bn*	0	0	0	0	0	0	0	0	0	0
	% growth	-2.5	-1.7	20.2	-16.1	3.5	-5.9	-1.8	0.0	-6.4	3.9
Other revenue	*CZK bn*	2	2	3	2	2	3	3	3	3	4
	% growth	-5.0	-14.5	29.2	-19.3	8.1	11.2	10.1	9.3	12.2	9.9

Source: CZSO (2019b).

Table A.7: General Government Expenditure

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total expenditure	*CZK bn*	**1 737**	**1 724**	**1 736**	**1 806**	**1 746**	**1 831**	**1 916**	**1 883**	**1 966**	**2 166**
	% growth	6.2	-0.7	0.7	4.0	-3.3	4.8	4.7	-1.8	4.4	10.2
Compensation of employees	*CZK bn*	352	354	350	359	367	380	398	419	462	521
	% growth	5.3	0.4	-1.0	2.7	2.0	3.5	4.8	5.4	10.1	12.8
Intermediate consumption	*CZK bn*	292	290	281	259	270	274	283	291	296	325
	% growth	4.8	-0.9	-3.1	-7.7	4.1	1.5	3.4	2.8	1.6	9.9
Social benefits other than in kind [1)]	*CZK bn*	509	518	527	533	545	556	568	581	597	628
	% growth	7.1	1.7	1.9	1.2	2.1	2.0	2.3	2.3	2.7	5.2
Social transfers in kind	*CZK bn*	120	121	124	130	133	140	142	148	152	160
	% growth	11.4	0.3	2.6	4.7	2.6	4.8	1.4	4.3	3.1	4.7
Property income	*CZK bn*	49	52	53	59	55	57	49	44	38	40
	% growth	20.8	7.4	2.1	9.9	-5.8	2.6	-13.0	-10.6	-14.2	6.6
Interest	*CZK bn*	48	52	53	58	55	56	49	44	38	40
	% growth	20.7	7.7	1.9	9.1	-4.9	2.0	-12.7	-10.6	-13.7	5.8
Other property income	*CZK bn*	0	0	0	1	0	1	0	0	0	0
	% growth	29.4	-30.1	40.6	117.2	-69.4	119.1	-44.4	-1.8	-91.2	1146.4
Subsidies	*CZK bn*	69	71	91	91	96	99	105	108	110	119
	% growth	19.6	2.3	29.2	0.0	5.1	3.8	5.6	2.7	1.7	8.9
Gross fixed capital formation	*CZK bn*	237	202	181	169	152	178	236	155	171	224
	% growth	11.7	-14.6	-10.6	-6.4	-10.0	16.8	32.8	-34.3	10.3	31.0
Capital transfers [2)]	*CZK bn*	47	46	45	121	39	60	41	36	30	35
	% growth	-13.3	-1.8	-2.6	169.8	-67.5	53.4	-32.3	-12.8	-14.7	16.7
Investment grants [3)]	*CZK bn*	26	25	32	31	21	18	15	13	15	23
	% growth	-15.3	-5.8	28.6	-1.8	-32.2	-14.5	-19.1	-12.8	15.0	57.0
Other capital transfers	*CZK bn*	20	21	13	89	18	42	26	23	16	12
	% growth	-10.4	3.3	-39.4	598.0	-79.8	133.5	-37.9	-12.8	-31.4	-21.3
Other expenditure	*CZK bn*	62	71	84	84	89	87	94	100	109	113
	% growth	-16.7	15.1	17.3	0.5	5.5	-1.5	7.2	6.5	9.3	3.3
Final consumption expenditure	*CZK bn*	**825**	**825**	**813**	**804**	**826**	**849**	**883**	**919**	**968**	**1 059**
	% growth	5.7	0.0	-1.5	-1.1	2.7	2.8	4.0	4.0	5.4	9.4
Collective consumption [4)]	*CZK bn*	412	410	387	375	388	395	415	434	453	494
	% growth	4.2	-0.7	-5.6	-3.0	3.5	1.7	5.2	4.4	4.5	9.1
Individual consumption	*CZK bn*	413	416	427	429	438	454	468	485	516	565
	% growth	7.3	0.7	2.6	0.6	2.0	3.8	3.0	3.7	6.3	9.6

Note: [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 (2019b), MF CR.

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

in % of GDP

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total expenditure	**44.2**	**43.5**	**43.0**	**44.5**	**42.6**	**42.4**	**41.7**	**39.5**	**38.9**	**40.7**
Compensation of employees	9.0	8.9	8.7	8.9	8.9	8.8	8.7	8.8	9.1	9.8
Intermediate consumption	7.4	7.3	7.0	6.4	6.6	6.4	6.2	6.1	5.9	6.1
Social benefits other than in kind	12.9	13.1	13.1	13.1	13.3	12.9	12.4	12.2	11.8	11.8
Social transfers in kind	3.1	3.0	3.1	3.2	3.3	3.2	3.1	3.1	3.0	3.0
Property income	1.2	1.3	1.3	1.4	1.3	1.3	1.1	0.9	0.7	0.8
Interest	1.2	1.3	1.3	1.4	1.3	1.3	1.1	0.9	0.7	0.8
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	1.8	2.3	2.2	2.3	2.3	2.3	2.3	2.2	2.2
Gross fixed capital formation	6.0	5.1	4.5	4.2	3.7	4.1	5.1	3.3	3.4	4.2
Capital transfers	1.2	1.2	1.1	3.0	1.0	1.4	0.9	0.7	0.6	0.7
Investment grants	0.7	0.6	0.8	0.8	0.5	0.4	0.3	0.3	0.3	0.4
Other capital transfers	0.5	0.5	0.3	2.2	0.4	1.0	0.6	0.5	0.3	0.2
Other expenditure	1.6	1.8	2.1	2.1	2.2	2.0	2.0	2.1	2.2	2.1
Final consumption expenditure	**21.0**	**20.8**	**20.2**	**19.8**	**20.2**	**19.7**	**19.2**	**19.3**	**19.2**	**19.9**
Collective consumption	10.5	10.3	9.6	9.2	9.5	9.2	9.0	9.1	9.0	9.3
Individual consumption	10.5	10.5	10.6	10.6	10.7	10.5	10.2	10.2	10.2	10.6

Source: CZSO (2019b), MF CR.

Table A.9: Central Government Expenditure

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total expenditure	*CZK bn*	**1 258**	**1 249**	**1 259**	**1 331**	**1 266**	**1 318**	**1 395**	**1 392**	**1 432**	**1 554**
	% growth	5.1	-0.7	0.7	5.7	-4.9	4.1	5.8	-0.2	2.9	8.5
Compensation of employees	*CZK bn*	181	179	172	179	183	190	200	210	231	258
	% growth	5.6	-1.3	-3.4	3.7	2.4	3.7	5.1	5.3	9.9	11.6
Intermediate consumption	*CZK bn*	148	144	139	123	128	131	141	143	140	159
	% growth	4.5	-2.5	-3.7	-11.3	4.2	2.5	7.3	1.8	-2.2	13.3
Social benefits other than in kind	*CZK bn*	485	491	501	530	540	552	564	577	594	625
	% growth	7.0	1.4	2.0	5.6	2.0	2.1	2.3	2.3	3.0	5.2
Social transfers in kind	*CZK bn*	3	4	5	9	12	14	15	14	13	14
	% growth	36.6	53.3	20.0	83.4	37.2	15.4	1.8	-1.1	-8.7	4.5
Interest	*CZK bn*	46	50	52	56	54	55	48	43	37	39
	% growth	24.3	9.9	2.2	8.9	-4.2	1.9	-12.9	-10.4	-13.7	5.5
Subsidies	*CZK bn*	34	33	54	53	57	59	63	65	65	71
	% growth	21.2	-5.1	64.4	-0.5	6.9	2.7	7.0	3.4	-0.4	10.7
Gross fixed capital formation	*CZK bn*	128	107	88	88	76	80	122	92	89	107
	% growth	4.0	-17.0	-17.5	0.2	-14.2	6.0	52.0	-24.8	-2.5	20.3
Capital transfers	*CZK bn*	55	52	53	119	36	56	48	42	34	36
	% growth	2.1	-5.0	2.4	123.5	-69.3	55.1	-15.1	-13.0	-17.9	5.5
Other expenditure	*CZK bn*	178	190	195	174	179	181	195	205	228	244
	% growth	-4.5	6.4	2.7	-10.9	3.0	1.0	7.9	5.2	11.1	7.1

Source: CZSO (2019b).

Table A.10: Local Government Expenditure

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total expenditure	*CZK bn*	**507**	**503**	**495**	**458**	**466**	**498**	**518**	**486**	**539**	**626**
	% growth	8.2	-0.8	-1.6	-7.5	1.8	6.9	4.1	-6.3	11.0	16.0
Compensation of employees	*CZK bn*	167	171	174	177	180	186	194	205	226	258
	% growth	4.9	2.4	1.5	1.9	1.7	3.3	4.5	5.6	10.4	14.0
Intermediate consumption	*CZK bn*	142	142	140	134	139	140	141	146	154	165
	% growth	4.7	0.6	-1.9	-4.4	4.4	0.7	0.0	3.9	5.6	6.8
Social benefits other than in kind	*CZK bn*	24	26	26	4	4	4	4	4	3	3
	% growth	9.3	7.6	-1.5	-85.2	17.8	-11.1	7.0	0.1	-28.3	7.1
Social transfers in kind	*CZK bn*	3	2	3	0	-	-	-	-	-	-
	% growth	0.2	-16.4	11.1	-99.0	-	-	-	-	-	-
Interest	*CZK bn*	3	2	2	2	1	1	1	1	1	1
	% growth	-20.9	-32.3	-7.5	16.6	-23.3	4.0	-9.2	-19.9	-12.2	18.1
Subsidies	*CZK bn*	35	38	38	38	39	41	42	43	45	48
	% growth	18.1	9.6	-1.0	0.6	2.6	5.3	3.6	1.7	4.8	6.3
Gross fixed capital formation	*CZK bn*	108	95	92	81	77	97	114	63	82	116
	% growth	22.2	-11.7	-2.7	-12.6	-5.1	27.1	17.3	-44.6	28.8	42.8
Capital transfers	*CZK bn*	12	12	7	11	10	12	5	5	6	11
	% growth	-31.7	-1.3	-42.1	55.8	-11.2	25.8	-63.4	6.5	23.0	82.3
Other expenditure	*CZK bn*	14	14	14	12	15	16	17	18	22	23
	% growth	36.0	-1.5	2.8	-16.2	31.1	0.9	8.8	7.3	22.3	4.9

Source: CZSO (2019b).

Table A.11: Social Security Fund Expenditure

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total expenditure	*CZK bn*	**222**	**224**	**228**	**232**	**229**	**242**	**250**	**262**	**276**	**295**
	% growth	10.5	1.2	1.5	1.7	-1.3	5.9	3.3	4.7	5.3	6.9
Compensation of employees	*CZK bn*	4	4	4	4	4	4	4	4	4	5
	% growth	9.6	-0.2	-2.3	-3.0	-0.6	2.5	4.9	2.6	5.3	8.4
Intermediate consumption	*CZK bn*	3	3	3	3	2	2	2	2	2	2
	% growth	26.3	9.9	-21.5	1.3	-15.8	-1.0	-6.4	-3.5	-7.4	6.4
Social benefits other than in kind	*CZK bn*	0	0	0	0	0	0	0	0	0	0
	% growth	600.0	0.0	-28.6	-20.0	12.5	-22.2	28.6	11.1	-20.0	50.0
Social transfers in kind	*CZK bn*	115	114	116	121	121	125	127	133	139	146
	% growth	11.2	-0.5	1.8	3.8	0.0	3.7	1.4	5.0	4.4	4.7
Interest	*CZK bn*	0	-	0	-	-	-	-	-	0	-
	% growth	0.0	-	-	-	-	-	-	-	-	-
Subsidies	*CZK bn*	-	-	-	-	-	-	-	-	-	-
	% growth	-	-	-	-	-	-	-	-	-	-
Gross fixed capital formation	*CZK bn*	1	1	1	1	0	1	0	0	0	0
	% growth	48.4	-15.7	-14.1	-23.7	-59.6	119.0	-22.6	-18.7	-6.3	24.9
Capital transfers	*CZK bn*	-	0	-	-	-	-	-	-	-	-
	% growth	-	-	-	-	-	-	-	-	-	-
Other expenditure	*CZK bn*	99	102	104	104	102	110	117	122	130	142
	% growth	9.0	3.1	2.1	-0.3	-2.1	8.5	5.7	4.7	6.6	9.1

Source: CZSO (2019b).

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

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
CZK bn										
General government	**-214**	**-166**	**-110**	**-160**	**-51**	**-91**	**-28**	**34**	**79**	**58**
Central government	-179	-142	-92	-151	-64	-96	-56	-20	29	19
Local governments	-25	-15	-11	-2	12	8	26	50	42	23
Social security funds	-11	-9	-7	-7	1	-3	2	5	8	17
% of GDP										
General government	**-5.5**	**-4.2**	**-2.7**	**-3.9**	**-1.2**	**-2.1**	**-0.6**	**0.7**	**1.6**	**1.1**
Central government	-4.6	-3.6	-2.3	-3.7	-1.6	-2.2	-1.2	-0.4	0.6	0.4
Local governments	-0.6	-0.4	-0.3	-0.1	0.3	0.2	0.6	1.0	0.8	0.4
Social security funds	-0.3	-0.2	-0.2	-0.2	0.0	-0.1	0.0	0.1	0.2	0.3

Source: CZSO (2019b).

Table A.13: General Government Debt by Instruments

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
General government debt	*CZK bn*	**1 319**	**1 480**	**1 606**	**1 805**	**1 840**	**1 819**	**1 836**	**1 755**	**1 750**	**1 735**
	% growth	16.0	12.2	8.5	12.4	1.9	-1.2	0.9	-4.4	-0.3	-0.8
Currency and deposits	*CZK bn*	10	9	3	8	7	10	5	9	6	9
	% growth	-0.1	-11.7	-61.1	153.8	-18.7	45.7	-46.1	58.5	-30.5	46.8
Securities other than shares	*CZK bn*	1 125	1 280	1 408	1 603	1 639	1 623	1 648	1 593	1 602	1 554
	% growth	16.3	13.8	10.0	13.9	2.2	-1.0	1.6	-3.4	0.6	-3.0
Loans	*CZK bn*	184	191	195	194	194	186	183	153	141	172
	% growth	15.2	3.8	1.9	-0.8	0.5	-4.3	-1.9	-16.0	-7.8	22.0
Central government debt	*CZK bn*	**1 224**	**1 383**	**1 506**	**1 698**	**1 734**	**1 714**	**1 740**	**1 714**	**1 734**	**1 753**
	% growth	16.6	13.1	8.9	12.7	2.1	-1.2	1.6	-1.5	1.2	1.1
Currency and deposits	*CZK bn*	10	9	3	8	7	15	15	54	74	109
	% growth	-0.1	-11.5	-60.8	151.8	-18.4	121.4	-0.3	257.0	35.6	47.5
Securities other than shares	*CZK bn*	1 109	1 265	1 394	1 592	1 627	1 613	1 638	1 581	1 591	1 542
	% growth	17.7	14.1	10.2	14.2	2.2	-0.9	1.6	-3.5	0.6	-3.0
Loans	*CZK bn*	105	110	109	98	100	86	87	79	70	101
	% growth	8.0	4.6	-1.0	-9.8	2.0	-14.4	1.6	-9.6	-10.7	44.4
Local government debt	*CZK bn*	**99**	**101**	**103**	**113**	**116**	**116**	**111**	**89**	**85**	**84**
	% growth	7.9	1.5	2.6	9.2	3.2	-0.1	-4.8	-19.2	-5.1	-1.1
Currency and deposits	*CZK bn*	-	-	-	-	-	-	-	-	-	-
	% growth	-	-	-	-	-	-	-	-	-	-
Securities other than shares	*CZK bn*	17	17	15	15	16	13	13	13	13	12
	% growth	-33.3	-0.6	-11.5	2.4	5.0	-17.1	-2.9	1.3	-2.5	-3.7
Loans	*CZK bn*	82	84	88	97	100	103	98	76	72	72
	% growth	23.8	1.9	5.4	10.4	3.0	2.6	-5.0	-22.0	-5.6	-0.3
Social security funds debt	*CZK bn*	**0**	**0**	**0**	**0**	**2**	**1**	**1**	**0**	**0**	**0**
	% growth	-44.8	-26.4	415.4	-9.0	928.4	-43.1	-41.1	-85.1	213.8	-14.6
Currency and deposits	*CZK bn*	-	-	-	-	-	-	-	-	-	-
	% growth	-	-	-	-	-	-	-	-	-	-
Securities other than shares	*CZK bn*	-	-	-	-	-	-	-	-	-	-
	% growth	-	-	-	-	-	-	-	-	-	-
Loans	*CZK bn*	0	0	0	0	2	1	1	0	0	0
	% growth	-44.8	-26.4	415.4	-9.0	928.4	-43.1	-41.1	-85.1	213.8	-14.6

Note: 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 (2019b).

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

in % of GDP

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
General government debt	**33.6**	**37.4**	**39.8**	**44.5**	**44.9**	**42.2**	**40.0**	**36.8**	**34.7**	**32.6**
Currency and deposits	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2
Securities other than shares	28.6	32.3	34.9	39.5	40.0	37.6	35.9	33.4	31.7	29.2
Loans	4.7	4.8	4.8	4.8	4.7	4.3	4.0	3.2	2.8	3.2
Central government debt	**31.1**	**34.9**	**37.3**	**41.8**	**42.3**	**39.7**	**37.9**	**35.9**	**34.4**	**32.9**
Currency and deposits	0.2	0.2	0.1	0.2	0.2	0.4	0.3	1.1	1.5	2.0
Securities other than shares	28.2	31.9	34.6	39.2	39.7	37.4	35.6	33.2	31.5	28.9
Loans	2.7	2.8	2.7	2.4	2.4	2.0	1.9	1.6	1.4	1.9
Local government debt	**2.5**	**2.5**	**2.6**	**2.8**	**2.8**	**2.7**	**2.4**	**1.9**	**1.7**	**1.6**
Currency and deposits	-	-	-	-	-	-	-	-	-	-
Securities other than shares	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.2
Loans	2.1	2.1	2.2	2.4	2.4	2.4	2.1	1.6	1.4	1.3
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: 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 (2019b).

Table A.15: General Government Balance and Debt of EU Countries

in % of GDP

	Balance					Debt				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
EU28	-2.4	-1.7	-1.0	-0.7	.	84.9	83.8	82.1	80.4	.
EA19 [1)]	-2.0	-1.4	-0.9	-0.5	.	90.8	90.0	87.8	85.9	.
Austria	-1.0	-1.5	-0.7	0.2	0.3	84.9	82.9	78.3	74.0	70.0
Belgium [2)]	-2.4	-2.4	-0.7	-0.7	-1.3	105.2	104.9	101.8	100.0	101.0
Bulgaria	-1.7	0.1	1.1	1.8	0.0	26.0	29.3	25.3	22.3	20.8
Croatia	-3.3	-1.1	0.8	0.3	-0.3	84.4	81.0	78.0	74.8	71.7
Cyprus	-1.0	0.1	1.7	-4.4	3.8	107.5	103.4	93.9	100.6	96.2
Czech Republic	-0.6	0.7	1.6	1.1	0.3	40.0	36.8	34.7	32.6	31.2
Denmark	-1.2	0.2	1.7	0.8	2.0	39.8	37.2	35.5	34.2	34.7
Estonia	0.1	-0.5	-0.8	-0.6	-0.2	10.0	10.2	9.3	8.3	8.7
Finland	-2.4	-1.7	-0.7	-0.8	-1.0	63.0	62.6	60.9	59.0	58.8
France [2)]	-3.6	-3.5	-2.8	-2.5	-3.3	95.6	98.0	98.4	98.4	99.3
Germany	0.9	1.2	1.2	1.9	1.3	72.1	69.2	65.3	61.9	59.7
Greece	-5.6	0.5	0.7	1.0	1.6	175.9	178.5	176.2	181.2	173.3
Hungary	-2.0	-1.8	-2.4	-2.3	-1.8	76.1	75.5	72.9	70.2	68.5
Ireland	-1.9	-0.7	-0.3	0.1	0.2	76.7	73.9	67.8	63.6	59.3
Italy	-2.6	-2.4	-2.4	-2.2	-2.2	135.3	134.8	134.1	134.8	135.7
Latvia	-1.4	0.1	-0.5	-0.7	-0.5	36.7	40.2	38.6	36.4	37.3
Lithuania	-0.3	0.2	0.5	0.6	0.1	42.7	39.9	39.3	34.1	36.4
Luxembourg	1.4	1.8	1.4	2.7	2.0	22.0	20.1	22.3	21.0	19.9
Malta	-1.0	0.9	3.4	1.9	1.4	57.8	55.5	50.3	45.8	43.1
Netherlands	-2.0	0.0	1.3	1.5	1.3	64.6	61.9	56.9	52.4	49.2
Poland	-2.6	-2.4	-1.5	-0.2	-1.7	51.3	54.2	50.6	48.9	47.7
Portugal	-4.4	-1.9	-3.0	-0.4	-0.2	131.2	131.5	126.0	122.2	119.3
Romania	-0.6	-2.6	-2.6	-3.0	-2.8	37.8	37.3	35.1	35.0	35.4
Slovakia [3)]	-2.7	-2.5	-1.0	-1.1	-0.9	51.9	52.0	51.3	49.4	48.4
Slovenia	-2.8	-1.9	0.0	0.8	0.8	82.6	78.7	74.1	70.4	66.3
Spain	-5.2	-4.3	-3.0	-2.5	-2.0	99.3	99.2	98.6	97.6	95.9
Sweden	0.0	1.0	1.4	0.8	0.4	43.9	42.3	40.7	38.8	34.8
United Kingdom [4)]	-4.3	-2.8	-2.7	-1.9	-1.4	85.4	85.2	84.6	84.3	83.8

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.

[2)] Balance and debt for 2019 according to IMF data.

[3)] Debt for 2019 according to IMF data.

[4)] Data for the financial year (1 April of year T to 31 March of year T+1).

Source: Eurostat (2019b), IMF (2019).

Table A.16: Transactions of General Government of EU Countries in 2018

in % of GDP

	Revenue	Expenditure	Compen. of employees	Cash social benefits	Collective consumption	Individual consumption	Investments[1]	Interest expenditure
EU28	45.1	45.8	9.9	15.6	7.5	12.7	2.9	1.8
EA19 [2)]	46.5	47.0	9.9	16.6	7.6	12.8	2.7	1.8
Austria	48.8	48.6	10.4	17.9	7.1	12.2	3.0	1.6
Belgium	51.4	52.1	12.3	16.9	8.0	15.1	2.6	2.1
Bulgaria	38.3	36.5	9.5	10.9	8.3	8.1	3.1	0.6
Croatia	46.3	46.1	11.6	13.3	9.5	9.9	3.5	2.3
Cyprus	39.2	43.6	11.7	12.8	7.7	7.2	5.7	2.4
Czech Republic	41.7	40.7	9.8	11.8	9.3	10.6	4.2	0.8
Denmark	52.0	51.5	15.3	16.0	7.1	17.4	3.5	1.1
Estonia	38.5	39.1	11.3	11.4	8.4	11.2	5.3	0.0
Finland	52.2	53.1	12.3	18.4	7.6	15.0	4.2	0.9
France	53.5	56.0	12.5	19.5	8.1	15.3	3.4	1.7
Germany	46.4	44.6	7.8	15.6	7.1	12.8	2.4	0.9
Greece	48.0	47.0	11.8	18.6	10.6	8.6	3.0	3.3
Hungary	44.4	46.7	10.5	11.5	9.8	9.9	5.8	2.4
Ireland	25.4	25.4	6.9	7.2	3.9	8.1	2.0	1.6
Italy	46.2	48.4	9.8	19.8	8.1	11.0	2.1	3.7
Latvia	37.8	38.5	10.3	10.3	9.3	8.5	5.4	0.7
Lithuania	34.6	34.0	9.8	11.8	6.9	9.6	3.2	0.9
Luxembourg	44.6	41.9	8.9	15.0	6.6	10.1	3.9	0.3
Malta	38.7	36.7	11.1	8.9	5.1	11.2	3.1	1.5
Netherlands	43.5	42.1	8.3	10.5	7.9	16.3	3.3	0.9
Poland	41.4	41.6	10.2	14.9	8.0	9.8	4.7	1.4
Portugal	43.0	43.5	10.7	16.4	7.6	9.4	1.9	3.4
Romania	32.3	35.2	11.0	10.8	9.5	7.4	2.7	1.2
Slovakia	40.8	41.8	9.3	13.2	9.9	8.7	3.7	1.3
Slovenia	44.3	43.5	11.1	15.4	7.3	11.0	3.6	2.0
Spain	39.2	41.7	10.6	15.4	7.7	10.9	2.1	2.4
Sweden	50.6	49.8	12.7	12.6	7.0	19.0	4.9	0.5
United Kingdom	38.7	41.0	8.9	12.7	6.6	11.9	2.7	2.4

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 (2019a).

B 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.

Compensation of employees is composed of wages and salaries incl. accessories, i. e. contributions paid by employers (social security contributions or other contributions such as the Cultural and Social Needs Fund). This is a component of the final consumption of the general government.

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.).

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.

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.

Intermediate Consumption is a component of the final consumption of the general government and contains the general government purchase of goods and services, which are consumed in the given time period.

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. For the 2020–2022 period, it is set stricter by 0.25pp, i.e. at −0.75% 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.

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

Social transfers in kind reflect the value of goods and services provided particularly in the form of health and social care, education, housing. They are mostly in-kind benefits related to the health insurance (amounts for medical devices, medical or dental treatment, surgery, etc.), funded by health insurance companies to those, who provide these goods and services. They are a component of the final consumption of the general government.

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

C 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
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
November 2017	Fiscal Councils
November 2019	Proposal for the New EU Fiscal Rule

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

Published	Box Topic
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 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
November 2017	Box 1: Requirements of Directive 2011/85/EU and Regulation No 473/2013 on establishment of national fiscal councils Box 2: Selected recommendations of the European Fiscal Board for the implementation of fiscal policy and public budgeting in the euro-area countries for 2018
November 2018	Box 1: Changes in the Methodical Classification of Certain Revenue and Expenditure of General Government Sector Box2: National Methodology for the Classification of One-off and Other Temporary Measures
November 2019	Box 1: Healthy Ageing Box 2: Pension Expenditure in the CR and EU Member States Box 3: Excluding Specific Items from Expenditure Rules

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