Brussels, 7 April 2010 ECFIN/G3/Ares(2010)170084

# **CZECH REPUBLIC: MACRO FISCAL ASSESSMENT**

AN ANALYSIS OF THE FEBRUARY 2010 UPDATE OF THE CONVERGENCE PROGRAMME

The Stability and Growth Pact requires each EU Member State to present an annual update of its medium-term fiscal programme, called 'stability programme' for countries that have adopted the euro as their currency and 'convergence programme' for those that have not. The most recent update of the Czech Republic's convergence programme was submitted on 15 February 2010.

The attached technical analysis of the programme prepared by the staff and under the responsibility of the Directorate-General for Economic and Financial Affairs (DG ECFIN) of the European Commission, was finalised on 24 March 2010. Comments should Renata Hruzova be sent to (renata.hruzova@ec.europa.eu) and Malgorzata Galar (malgorzata.galar@ec.europa.eu). The main aim of the analysis is to assess the realism of the budgetary strategy presented in the programme as well as its compliance with the requirements of the Stability and Growth Pact. However, the analysis also looks at the overall macro-economic performance of the country and highlights relevant policy challenges.

The analysis takes into account (i) the Commission services' autumn 2009 forecast, (ii) the code of conduct ("Specifications on the implementation of the Stability and Growth Pact and guidelines on the format and content of stability and convergence programmes", endorsed by the ECOFIN Council of 10 November 2009) and (iii) the commonly agreed methodology for the estimation of potential output and cyclically-adjusted balances.

Based on this analysis, the European Commission adopted a recommendation for a Council opinion on the programme on 24 March 2010. The ECOFIN Council is expected to discuss the opinion on the programme on 16 April 2010.

\* \* \*

All these documents, as well as the provisions of the Stability and Growth Pact, can be found on the following website:

http://ec.europa.eu/economy\_finance/sgp/index\_en.htm

# TABLE OF CONTENTS

1.	INTF	RODUCTION	4
2.		CHALLENGES IN THE ECONOMIC DOWNTURN AND THE ICY RESPONSE	4
3.	MAC	CROECONOMIC OUTLOOK	6
4.	GEN	ERAL GOVERNMENT BALANCE	7
	4.1.	Budgetary implementation in 2009	7
	4.2.	The programme's budgetary strategy for 2010	9
	4.3.	The programme's medium-term budgetary strategy	10
	4.4.	Risk assessment	13
5.	GOV	ERNMENT DEBT AND LONG-TERM SUSTAINABILITY	14
	5.1.	Recent debt developments and medium-term prospects	14
		5.1.1. Debt projections in the programme	14
		5.1.2. Assessment	14
	5.2.	Long-term debt projections and the sustainability of public finances	16
		5.2.1. Sustainability indicators and long-term debt projections	16
		5.2.2. Additional factors	19
		5.2.3. Assessment	20
6.	FISC	AL FRAMEWORK AND QUALITY OF PUBLIC FINANCES	20
	6.1.	Fiscal framework	20
	6.2.	Quality of public finances	21
7.	OVE	RALL ASSESSMENT	21
AN	_	COMPLIANCE WITH THE FORMAT AND CONTENT UIREMENTS FOR STABILITY AND CONVERGENCE GRAMMES	23

### 1. Introduction

This document assesses the February 2010 update of the Czech Republic's convergence programme, which was submitted on 15 February 2010 and covers the period 2009-2012. The programme builds on the 2010 budget proposal. It was approved by the government and presented to the national parliament for a debate without a vote.

This assessment is structured as follows. Section 2 discusses the key challenges for public finances in the Czech Republic. Section 3 assesses the plausibility of the macroeconomic scenario underpinning the public finance projections of the convergence programme against the background of the Commission services' economic forecasts<sup>1</sup>. Section 4 analyses budgetary implementation in the year 2009, the budgetary plans for 2010 and the medium-term budgetary strategy. It also assesses risks attached to the budgetary targets. Section 5 reviews recent debt developments and medium-term prospects, as well as the long-term sustainability of public finances. Section 6 discusses institutional features of public finances. Finally, Section 7 concludes with an overall assessment of the programme. The annex provides a detailed assessment of compliance with the code of conduct, including an overview of the summary tables from the programme.

#### 2. KEY CHALLENGES IN THE ECONOMIC DOWNTURN AND THE POLICY RESPONSE

This section describes recent economic and budgetary developments for the Czech Republic, which form the background against which the current programme assessment should be viewed, and outlines the key challenges to be addressed by future economic policies.

After three years of rapid expansion with growth rates above 6%, the Czech economy started to slow down markedly in the second half of 2008. The global economic crisis hit the country mainly via the trade channel. Both exports and imports registered a double-digit decrease in 2009. The collapse of external demand, increased uncertainty caused by the crisis, tighter credit conditions and shrinking foreign investment inflows triggered a sizeable decline of investment which amplified the economic contraction. Unemployment has been on the rise since the beginning of the crisis, albeit from lower levels than in most other EU countries. The unemployment rate reached 7.8% in the last quarter of 2009 and is expected to grow further throughout this year. Despite the large shocks to the real economy and turbulences in international capital and financial markets, the financial sector in the Czech Republic has remained relatively stable, mainly due to prudent regulation, a strong domestic deposit base and low exposure to toxic assets and foreign exchange loans.

The Czech National Bank reacted to the economic downturn by successive interest rate reductions. The key policy interest rate was lowered from 3.75% in mid-2008 to current 1% (February 2010). Exchange rate developments were marked by strong volatility of the Czech koruna. It depreciated by about one fifth against the euro between mid-July 2008 and mid-February 2009 and then appreciated by some 15%.

<sup>&</sup>lt;sup>1</sup> This assessment uses the Commission services' 2009 autumn forecast, as published on 3 November 2009, as a benchmark. However, more recent information that has become available has also been taken into account to assess the risks to the programme scenarios.

Table 1. Comparison of key macroeconomic and budgetary projections

	of key macroed	2008	2009	2010	2011	2012
	CP Feb 2010	2.5	-4.0	1.3	2.6	3.8
Real GDP	COM Nov 2009	2.5	-4.0 -4.8	0.8	2.3	
(% change)						n.a.
	CP Oct 2008	4.4	3.7	4.4	5.2	n.a.
HICP inflation	CP Feb 2010	6.3	0.6	1.8	1.5	1.8
(%)	COM Nov 2009	6.3	0.6	1.5	1.8	n.a.
, ,	CP Oct 2008	6.4	2.9	3.0	2.5	n.a.
Output gap <sup>1</sup>	CP Feb 2010	4.8	-2.0	-2.9	-2.6	-1.1
(% of potential GDP)	COM Nov 2009 <sup>2</sup>	5.6	-1.8	-2.9	-2.5	n.a.
(70 of potential GDI)	CP Oct 2008	1.9	0.4	-0.4	-0.2	n.a.
Net lending/borrowing vis-à-vis	CP Feb 2010	-2.4	-0.2	1.0	0.2	0.6
the rest of the world	COM Nov 2009	-2.2	-1.5	-0.7	-0.4	n.a.
(% of GDP)	CP Oct 2008	-1.0	-0.5	0.4	1.2	n.a.
C1	CP Feb 2010	40.9	39.0	40.5	40.8	40.5
General government revenue (% of GDP)	COM Nov 2009	40.9	40.3	41.0	40.9	n.a.
(% of GDP)	CP Oct 2008	41.0	40.6	39.6	39.0	n.a.
	CP Feb 2010	43.0	45.5	45.8	45.6	44.7
General government expenditure	COM Nov 2009	43.0	46.9	46.5	46.6	n.a.
(% of GDP)	CP Oct 2008	42.2	42.2	41.1	40.2	n.a.
	CP Feb 2010	-2.1	-6.6	-5.3	-4.8	-4.2
General government balance	COM Nov 2009	-2.1	-6.6	-5.5	-5.7	n.a.
(% of GDP)	CP Oct 2008	-1.2	-1.6	-1.5	-1.2	n.a.
	CP Feb 2010	-1.0	-5.3	-3.5	-2.8	-2.0
Primary balance	COM Nov 2009	-1.0	-5.2	-3.9	-4.1	n.a.
(% of GDP)	CP Oct 2008	0.0	-0.4	-0.4	-0.1	n.a.
	CP Feb 2010	-3.8	-5.9	-4.2	-3.8	-3.8
Cyclically-adjusted balance2	COM Nov 2009	-4.1	-6.0	-4.5	-4.8	n.a.
(% of GDP)	CP Oct 2008	-2.0	-1.7	-1.4	-1.1	n.a.
	CP Feb 2010	-3.7	-6.1	-4.1	-3.7	-3.5
Structural balance <sup>3</sup>	COM Nov 2009	-4.1	-6.3	-4.7	-4.9	n.a.
(% of GDP)	CP Oct 2008	-1.9	-1.7	-1.3	-1.1	n.a.
	CP Feb 2010	30.0	35.2	38.6	40.8	42.0
Government gross debt	COM Nov 2009	30.0	36.5	40.6	44.0	n.a.
(% of GDP)	CP Oct 2008	28.8	27.9	26.8	25.5	n.a.

#### Notes:

#### Source:

Convergence programme (CP); Commission services' autumn 2009 forecasts (COM); Commission services' calculations

In response to the economic downturn, the Czech Republic adopted and implemented two stimulus packages in the course of 2009, amounting to some 2.2% of GDP. Most measures are temporary and have supported the recovery of the Czech economy mainly through providing bridging support for businesses. Worsening economic conditions put a serious strain on public finances. The general government deficit increased from 2.1% of GDP in 2008 to 6.6% of GDP in 2009, mainly as a result of the economic downturn and

<sup>&</sup>lt;sup>1</sup>Output gaps and cyclically-adjusted balances according to the programmes as recalculated by Commission services on the basis of the information in the programmes.

<sup>&</sup>lt;sup>2</sup>Based on estimated potential growth of 2.4%, 2.0%, 2.0% and 2.2% respectively in the period 2009-2012

<sup>&</sup>lt;sup>3</sup>Cyclically-adjusted balance excluding one-off and other temporary measures. One-off and other temporary measures are 0.2% of GDP in 2009 (deficit reducing), and -0.1% in 2010 and 2011 (deficit-increasing) according to the most recent programme and 0.3% of GDP in 2009, 0.2% of GDP in 2010 and 0.1% of GDP in 2011 (all deficit-reducing) in the Commission services' autumn 2009 forecast.

discretionary measures taken to counter the impact of the crisis. The size of the deficit expected in 2009 triggered the opening of the Excessive Deficit Procedure (EDP). On 2 December 2009, the Council decided on the existence of an excessive deficit and issued recommendations addressed to the Czech authorities with a view to bringing the excessive deficit below the 3% of GDP threshold by 2013 (see Box 1 for more details). Thus, with a structural deficit estimated at 6% of GDP in 2009, consolidation of public finances is one of the main challenges for the country in the short term.

Looking ahead, the recovery is likely to remain shallow. Given the high degree of openness of the economy, it will largely depend on external demand, in particular from other EU countries. Under these circumstances, it will be important to ensure a rapid adjustment of the labour market to the downturn in order to prevent hysteresis, progress towards long-lasting convergence, pursue prudent and sustainable fiscal policies and implement further structural reforms aimed at raising productivity (enhancing R&D and innovation, business environment and competition) as well as labour supply and skills.

#### 3. MACROECONOMIC OUTLOOK

Against the background of the current macroeconomic situation and the main policy challenges set out in the previous section, this section makes an assessment of the plausibility of the macroeconomic scenario underpinning the public finance projections of the programme.

The programme's macroeconomic scenario anticipates a gradual acceleration of real GDP growth over the forecast horizon. Following a sharp contraction of real GDP by 4.3% in 2009, the programme projects an increase by 1.3% in 2010, 2.6% in 2011 and 3.8% in 2012. According to the output gaps as recalculated by Commission services based on the information in the programme, following the commonly agreed methodology, the output gap shifted from very positive prior to 2009 to negative territory in 2009. The cyclical upturn expected over the forecast period would allow a gradual elimination of the slack in the economy starting from 2011.

The macroeconomic scenario presented in the programme is broadly consistent with monetary and exchange rate assumptions. The programme anticipates a moderate nominal appreciation of the koruna. External assumptions underpinning the programme scenario are somewhat more optimistic than those of the Commission autumn forecast with regard to EU27 GDP growth (1.1% and 2.0% in 2010 and 2011, against 0.7% and 1.6% in the Commission autumn forecast).

Compared to the programme projections, the Commission services' autumn forecast foresaw a slightly slower recovery in 2010 and 2011. However, taking into account recent information, the macroeconomic scenario seems plausible up to 2011. The assessment is different for 2012, when the programme projects a sharp acceleration of real GDP growth to 3.8%. This assumption does not reflect the degree of prudence that should underpin fiscal consolidation strategies, especially given the unusually high uncertainties in the current post-crisis environment.

The situation on the labour market is projected in the programme to deteriorate further throughout 2010. While according to the programme employment growth would turn into positive territory only in 2012, the Commission services' autumn 2009 forecast envisages employment to gain momentum already in 2011. Anti-crisis measures supporting the labour market adjustment introduced in the framework of the 2009 stimulus package should help to partially mitigate the adverse effect of the crisis on the labour market.

The inflation projection in the programme is plausible. Inflation is expected to increase moderately in 2010 mainly due to rise in indirect taxes and in line with the expected economic upturn. It should however remain below the CNB target of 2% in both 2010 and 2011. Wage growth diminished significantly in 2009 and is expected to remain low in 2010, while it should increase somewhat as of 2011.

Overall, the programme's macroeconomic assumptions are plausible until 2011 and favourable in 2012.

Table 2: Comparison of macroeconomic developments and forecasts

•	20	09	20	10	20	11	2012
	COM	CP	COM	CP	COM	CP	CP
Real GDP (% change)	-4.8	-4.0	0.8	1.3	2.3	2.6	3.8
Private consumption (% change)	1.0	1.4	-0.5	-0.8	1.7	2.0	2.5
Gross fixed capital formation (% change)	-7.2	-7.5	0.3	-3.7	4.5	2.5	3.6
Exports of goods and services (% change)	-16.5	-11.9	2.1	4.4	5.8	6.4	6.5
Imports of goods and services (% change)	-17.0	-11.9	1.8	2.4	5.9	6.1	4.9
Contributions to real GDP growth:							
- Final domestic demand	-0.9	-0.3	-0.2	-1.6	2.0	1.5	2.0
- Change in inventories	-3.5	-3.2	0.8	1.4	0.0	0.5	0.3
- Net exports	-0.4	-0.6	0.3	1.5	0.3	0.6	1.5
Output gap <sup>1</sup>	-1.8	-2.0	-2.9	-2.9	-2.5	-2.6	-1.1
Employment (% change)	-2.0	-1.3	-1.4	-1.6	0.3	-0.4	0.6
Unemployment rate (%)	6.9	6.7	7.9	8.8	7.4	8.6	7.6
Labour productivity (% change)	-2.8	-2.8	2.2	3.0	2.0	3.0	3.2
HICP inflation (%)	0.6	0.6	1.5	1.8	1.8	1.5	1.8
GDP deflator (% change)	1.3	3.1	1.3	0.5	1.7	1.0	1.5
Comp. of employees (per head, % change)	0.5	0.3	1.6	2.5	3.3	4.1	4.8
Net lending/borrowing vis-à-vis the rest of the	-1.5	-0.2	-0.7	1.0	-0.4	0.2	0.6
world (% of GDP)							

Note:

<sup>1</sup>In percent of potential GDP, with potential GDP growth according to the programme as recalculated by Commission services.

Source:

Commission services' autumn 2009 forecasts (COM); Convergence programme (CP).

#### 4. GENERAL GOVERNMENT BALANCE

This section consists of four parts. The first three parts discuss the budgetary implementation in the year 2009, the budgetary plans for 2010 and the medium-term budgetary strategy in the programme. The final part analyses the risks attached to the budgetary targets.

# 4.1. Budgetary implementation in 2009

The programme estimates the general government deficit in 2009 at 6.6% of GDP. The significant deterioration from a deficit of 2.1% of GDP in 2008 reflects to a large extent the impact of the crisis on government finances, but was also brought about by stimulus measures amounting to 2.2% of GDP which the government adopted in line with the European Economic Recovery Plan (EERP). The stimulus measures were an adequate response to the crisis. The main measures included temporary reductions in social contributions paid by employers, faster write-offs, increases in public infrastructure investment, financial support to businesses and measures to support employment. Direct support of the demand side played a less important role. Furthermore, several permanent measures were implemented, such as cuts in social contributions paid by employees and

a gradual reduction in corporate income tax, which are of structural nature and support the long-term objectives of growth and jobs.

Table 3 compares the projected outcome for the general government balance, revenue and expenditure (as a percentage of GDP) in 2009 as presented in the new convergence programme with the targets from the previous update of the programme. Differences between outcomes and targets (excluding the impact of an unanticipated GDP developments which may have affected the ratio, referred to as the 'denominator effect') are decomposed in the impact of a different starting position (i.e. the outcome of 2008 may also have been different from what was anticipated in the previous programme update) and the impact of differences in the revenue / expenditure growth rate from the planned growth rates<sup>2</sup>.

The estimated outcome of the general government balance in 2009 as presented in the convergence programme appears plausible. As shown in Table 3, the budgetary outcome was much worse than anticipated by the previous update of the convergence programme, partly due to worse-than-expected starting position by end 2008 but mainly due to differences in the growth dynamics of revenues. This reflects both the effect of automatic stabilizers and of discretionary measures taken to stimulate the economy. Overall, when excluding the denominator effect, revenues were 4.3 p.p. of GDP lower than anticipated, mainly as a result of lower-than-expected revenue from taxes on income and wealth and from social contributions.

The difference between the target and the estimated outcome on the expenditure side (when excluding the sizeable denominator effect) is much lower. The expenditure outturn was 0.5 p.p. higher-than-expected, but this was due to a worse starting position. Remarkably, expenditure growth in 2009 was lower than anticipated, which contributed to a less pronounced deterioration of the deficit in 2009 (by about 0.5 percentage points of GDP).

The convergence programme includes a deficit decreasing one-off measure of 0.2% of GDP which includes revenues from sale of CO2 emissions allowances to third countries. This one-off measure was not included in the previous update of the convergence programme but it was taken into account in the Commission's autumn 2009 forecast.

 $\rho^{o} - \rho^{p} = \underbrace{\frac{1 + r^{p}}{1 + g^{p}} \Delta \rho_{-1}}_{\text{Base effect}} + \underbrace{\frac{\rho^{o}_{-1}}{(1 + g^{o})(1 + g^{p})} \Delta r}_{\text{Revenue growth effect}} - \underbrace{\frac{\rho^{o}_{-1}}{(1 + g^{o})(1 + g^{p})} \Delta g}_{\text{Denominator effect}} + \underbrace{\frac{\rho^{o}_{-1}(r^{o}g^{p} - r^{p}g^{o})}{(1 + g^{o})(1 + g^{p})}}_{\text{Residual}}$ 

where r is the growth rate of revenue and g is the growth rate of GDP. The subscript -1 refers to the previous year's value. Superscripts o and p refer to the outcome and the planned value respectively. Similar for the expenditure ratio.

<sup>&</sup>lt;sup>2</sup> Mathematically, the difference in the revenue ratio in Table 3 can be expressed as

Table 3: Budgetary implementation in 2009

	20	08	20	009	
	Planned	Outcome	Planned	Outcome	
	CP Oct 2008	CP Feb 2010	CP Oct 2008	CP Feb 2010	
Government balance (% of GDP)	-1.2	-2.1	-1.6	-6.6	
Difference compared to target 1	-0	.9	-5	5.0	
Difference excluding denominator effect 1,2			-4	1.8	
Of which: due to a different starting position end 2008			-0	).9	
due to different revenue / expenditure growth	in 2009		-	3.6	
p.m. Residual <sup>3</sup>			-0	).2	
p.m. Nominal GDP growth (planned and outcome)			5.8	-1.1	
Revenue (% of GDP)	41.0	40.9	40.6	39.0	
Revenue surprise compared to target 1	-(	0.1	-1.6		
Revenue surprise excluding denominator effect 1,2			-4.3		
Of which: due to a different starting position end 2008			-0.1		
due to different revenue growth in 2009			-4	1.1	
p.m. Residual <sup>3</sup>			-0	0.1	
p.m. Revenue growth rate (planned and outcome)			4.8	-5.7	
Expenditure (% of GDP)	42.2	43.0	42.2	45.5	
Expenditure surprise compared to target 1	-(	0.8	-3	3.3	
Expenditure surprise excluding denominator effect 1,2			-0	).5	
Of which: due to different starting position end 2008			-0	0.8	
due to different expenditure growth rate in 2009				.5	
p.m. Residual <sup>3</sup>			-0	0.1	
p.m. Expenditure growth rate (planned and outcome)			5.8	4.7	
Notes:					

#### Notes:

Source: Commission services

# Box 1: The excessive deficit procedure (EDP) for the Czech Republic

Standard text: On 2 December the Council adopted a decision stating that the Czech Republic had an excessive deficit in accordance with Article 126(6) of the Treaty on the Functioning of the European Union (TFEU). At the same time, the Council addressed a recommendation under Article 126(7) TFEU specifying that the excessive deficit had to be corrected by 2013.

In particular, the Czech Republic was recommended to implement the deficit reducing measures in 2010 as planned in the draft budget law for 2010; ensure an average annual fiscal effort of 1% of GDP over the period 2010-2013; and to specify the measures that are necessary to achieve the correction of the excessive deficit by 2013, cyclical conditions permitting, and accelerate the reduction of the deficit if economic or budgetary conditions turn out better than currently expected. In addition, in order to limit risks to the adjustment, the Czech Republic was recommended to rigorously enforce its medium term budgetary framework and to improve monitoring of the budget execution throughout the year to avoid expenditure overruns compared to budget and multiannual plans. The Council established the deadline of 2 June 2010 for the Czech government to take effective action to implement the deficit reducing measures in 2010 as planned in the draft budget law for 2010 and to outline in some detail the consolidation strategy that will be necessary to progress towards the correction of the excessive deficit. The assessment of effective action will take into account economic developments compared to the economic outlook in the Commission services' autumn 2009 forecast.

The Czech authorities should report on progress made in the implementation of these recommendations in a separate chapter in the updates of the convergence programmes which will be prepared between 2010 and 2013.

# 4.2. The programme's budgetary strategy for 2010

The central government budget for 2010 was approved by the Czech parliament on 9 December 2009. According to the programme, the central budget implies a general

 $<sup>^{1}</sup>$  A positive number implies that the outcome was better (in terms of government balance) than planned.

<sup>&</sup>lt;sup>2</sup> The denominator effect captures the mechanical effect that, if GDP tums out higher than planned, the ratio of revenue or expenditure to GDP will fall because of a higher denominator. Although the denominator effect can be very significant for revenue and expenditure separately, on the balance they usually largely cancel against each other.

<sup>&</sup>lt;sup>3</sup> The decomposition leaves a small residual that cannot be assigned to the previous components. The residual is generally small, except in some cases where planned and actual growth rates of revenue, expenditure and GDP differ significantly.

government deficit of 5.3% of GDP in 2010. The revenue-to-GDP ratio is projected to increase by 1.5 p.p. to 40.5% of GDP and the expenditure-to-GDP ratio is expected to rise by 0.3 p.p. to 45.8% of GDP. The projected deficit takes into account consolidation measures approved in the 2010 budget.

Faced with a severe deterioration of the deficit in 2009, the Czech authorities decided to start fiscal consolidation already in 2010. As a result, most temporary stimulus measures were withdrawn by the end of 2009 and some of the planned increases in expenditure were not implemented. Permanent measures, such as cuts in social security contributions paid by employees and reduction of the CIT to 19%, remain in place.

Main discretionary measures on the revenue side – as shown in Table 4 – include increases in VAT, excise duties and real estate taxes. Revenues should increase also due to an early withdrawal of temporary social security cuts combined with an increase of social security ceilings (expected impact of about 0.9% of GDP). Most changes on the revenue side are conceived as permanent. Fiscal impact of consolidation measures on the expenditure side is more modest. Main measures include cuts in social benefits covering sickness and maternity leave (around 0.1% of GDP) and unused possibility of pension indexation in 2010 (around 0.2% of GDP).

According to the recalculated structural balance on the basis of information in the convergence programme, the fiscal stance will be restrictive. Structural balance calculated according to the commonly agreed methodology will improve by 2 p.p. of GDP in 2010. This is broadly in line with the Commission services autumn 2009 forecast which expected a structural adjustment of 1.6 p.p. This adjustment is larger than the average 1 percent recommended by the Council over the period 2010-2013.

More generally, the fiscal plans for 2010 are in line with the Council Recommendation under Article 126(7). The Czech authorities were recommended to implement the deficit reducing measures in 2010 as planned in the draft budget. The budgetary strategy in 2010 is backed by sufficiently concrete measures.

Table 4. Main budgetary measures for 2010

Revenue measures <sup>1</sup>	Expenditure measures <sup>2</sup>
Increase in real estate tax (0.1% of GDP) Increase in excise duties (0.3% of GDP) Increase in VAT (0.5% of GDP) Higher social security contributions (0.9% of GDP)	Cuts in social benefits (- 0.1% of GDP)  Unused possibility of pension indexation (-0.2% of GDP)
Notes: <sup>1</sup> Estimated impact on general government revenue	

# 4.3. The programme's medium-term budgetary strategy

<sup>2</sup> Estimated impact on general government expenditure

Source: Commission services and Convergence Programme

This section describes the medium-term budgetary strategy outlined in the programme - and how it compares with the one in the previous update - as well as the composition of the budgetary adjustment, including the broad measures envisaged.

The main goal of the medium-term budgetary strategy is to continue consolidation after 2010 and reduce the general government deficit below the 3% of GDP by 2013, in line with the Council Recommendation under Article 126(7) of 2 December 2009. This goal is stated explicitly in a separate EDP chapter. Nevertheless, as the correction of the excessive deficit does not fall within the programme horizon (2009-2012), no detail is provided on deficit-reducing measures in 2013 (including the underlying growth assumptions). As communicated by the authorities, the MTO of the Czech Republic is -1.0% of GDP. In view of the new methodology and given the most recent projections and debt level, the MTO reflects the objectives of the Pact. However, the programme does not envisage achieving it within the programme period.

According to the programme, the general government deficit is projected to gradually decrease from 5.3% of GDP in 2010 to 4.8% and 4.2% of GDP in 2011 and 2012 respectively. The policy stance implied by the programme is mildly restrictive over the programme period. The structural balance calculated according to the commonly agreed methodology is estimated to improve only very slowly from 4.1% in 2010 to 3.5% in 2012.

With respect to the structure of the planned budgetary adjustment, about three quarters of measures are foreseen on the expenditure side, one quarter on the revenue side. In the case of the Czech Republic, this appears to be broadly appropriate. Expenditure-oriented consolidation tends to be more durable and less likely to have a negative impact on growth. Furthermore and as explained above, the bulk of consolidation measures planned for 2010 focuses on the revenue side. Significant revenue-increasing measures, particularly in the form of higher direct taxation, may have a negative impact on economic growth and competitiveness.

In terms of concreteness of the measures underpinning the consolidation strategy, the revenue side measures are more specific and detailed. On the expenditure side, the programme only states that half of the cuts will involve operational expenditure (a combination of reduction of public wage bill and government consumption), and the other half will target mandatory spending (i.e. mainly social benefits). Thus, the programme does not provide sufficient details on which mandatory and operational expenditure items should be cut and how. Reforms of public service and social benefits system which are necessarily related to the planned cuts are not spelled out.

On the revenue side, the programme relies on two main measures: maintaining higher ceilings for social security contributions introduced already in 2010 and introduction of a second tax bracket for the personal income tax (21% and 31% of gross wage). The measures are sufficiently concrete and appear appropriate. In particular, the combination of higher social security ceilings and higher PIT for high income earners eliminates the regressive element of the Czech tax system.

As the programme covers only the period until 2012, budgetary strategy and consolidation effort in 2013 are not specified.

# Box 2: The medium-term objective (MTO) for the Czech Republic

As noted in the Code of Conduct<sup>3</sup>, the MTO aims to (a) provide a safety margin with respect to the 3% of GDP deficit limit; (b) ensure rapid progress towards fiscal sustainability; and (c) allow room for budgetary manoeuvre, in particular taking into account the needs for public investment. The MTO is defined in cyclically adjusted terms, net of one-off and other temporary measures.

\_

<sup>&</sup>lt;sup>3</sup> "Specifications on the implementation of the Stability and Growth Pact and guidelines on the format and content of stability and convergence programmes", endorsed by the ECOFIN Council on 10 November 2009, available at: http://ec.europa.eu/economy/finance/sgp/legal\_texts/index\_en.htm

On 7 July 2009, the ECOFIN Council took note of a new methodology for setting MTOs, ensuring that implicit liabilities (costs related to ageing populations, in particular projected healthcare and pension expenditure) are also accounted for.

Specifically, the country-specific MTOs should take into account three components: (i) the debt-stabilising balance for a debt ratio equal to the (60% of GDP) reference value (dependent on long-term potential growth), implying room for budgetary manoeuvre for Member States with relatively low debt; (ii) a supplementary debt-reduction effort for Member States with a debt ratio in excess of the (60% of GDP) reference value, implying rapid progress towards it; and (iii) a fraction of the adjustment needed to cover the present value of the future increase in age-related government expenditure. This implies a partial frontloading of the budgetary cost of ageing irrespective of the current level of debt. In addition to these criteria, MTOs should provide a safety margin with respect to the 3% of GDP deficit reference value and, for euro area and ERM II Member States, in any case not exceed a deficit of 1% of GDP.

As communicated by the authorities, the MTO of the Czech Republic is a government balance of -1.0% of GDP in structural terms. In view of the new methodology and given the most recent projections and debt level, the MTO reflects the objectives of the Pact.

Table 5: Composition of the budgetary adjustment

Table 5: Composition of the budgetary adjustment									
	2008	20	09	20	10	20	11	2012	Change:
(% of GDP)									2009-2012
	COM	COM	CP	COM	CP	$COM^1$	CP	CP	CP
Revenue	40.9	40.3	39.0	41.0	40.5	40.9	40.8	40.5	1.5
of which:									
- Taxes on production and imports	11.0	11.2	11.1	11.8	11.9	11.7	11.6	11.6	0.5
- Current taxes on income, wealth, etc.	8.6	8.0	7.0	7.9	7.2	8.0	7.5	7.6	0.6
- Social contributions	16.2	15.5	15.1	15.8	15.4	15.6	15.6	15.6	0.5
- Other (residual)	5.0	5.5	5.8	5.5	6.0	5.6	6.1	5.7	-0.1
Expenditure	43.0	46.9	45.5	46.5	45.8	46.6	45.6	44.7	-0.8
of which:									
- Primary expenditure	41.8	45.5	44.2	45.0	44.1	45.0	43.6	42.6	-1.6
of which:									
Compensation of employees	7.6	8.1	7.9	7.7	7.7	7.7	7.4	7.0	-0.9
Intermediate consumption	6.2	6.3	6.8	6.1	6.3	6.0	6.0	5.6	-1.2
Social payments	18.2	20.0	19.6	20.2	19.8	20.2	19.5	19.1	-0.5
Subsidies	1.7	1.8	1.8	1.7	1.7	1.7	1.7	1.7	-0.1
Gross fixed capital formation	5.0	5.4	5.1	5.4	5.4	5.4	5.6	5.7	0.6
Other (residual)	3.2	3.8	3.1	3.9	3.1	3.9	3.3	3.5	0.4
- Interest expenditure	1.1	1.4	1.3	1.6	1.7	1.6	2.0	2.1	0.8
General government balance (GGB)	-2.1	-6.6	-6.6	-5.5	-5.3	-5.7	-4.8	-4.2	2.4
Primary balance	-1.0	-5.2	-5.3	-3.9	-3.5	-4.1	-2.8	-2.0	3.3
One-off and other temporary measures	0.0	0.3	0.2	0.2	-0.1	0.1	-0.1	-0.3	-0.5
GGB excl. one-offs	-2.1	-6.9	-6.8	-5.7	-5.2	-5.8	-4.7	-3.9	2.9
Output gap <sup>2</sup>	5.6	-1.8	-2.0	-2.9	-2.9	-2.5	-2.6	-1.1	1.0
Cyclically-adjusted balance <sup>2</sup>	-4.1	-6.0	-5.9	-4.5	-4.2	-4.8	-3.8	-3.8	2.0
Structural balance <sup>3</sup>	-4.1	-6.3	-6.1	-4.7	-4.1	-4.9	-3.7	-3.5	2.5
Change in structural balance		-2.1	-1.9	1.6	1.9	-0.2	0.4	0.2	
Structural primary balance <sup>3</sup>	-3.0	-4.9	-4.8	-3.1	-2.4	-3.3	-1.7	-1.4	3.3
Change in structural primary balance		-1.8	-1.7	1.7	2.3	-0.1	0.7	0.3	

#### Notes:

#### Source:

Convergence programme (CP); Commission services' autumn 2009 forecasts (COM); Commission services' calculations

On a no-policy-change basis.

<sup>&</sup>lt;sup>2</sup>Output gap (in % of potential GDP) and cyclically-adjusted balance according to the programme as recalculated by Commission services on the basis of the information in the programme.

<sup>&</sup>lt;sup>3</sup>Structural (primary) balance = cyclically-adjusted (primary) balance excluding one-off and other temporary measures.

### 4.4. Risk assessment

This section discusses the plausibility of the programme's budgetary projections by analysing various risk factors. For the period until 2011, Table 5 compares the detailed revenue and expenditure projections in the Commission services' autumn 2009 forecast, which are derived under a no-policy change scenario, with those in the updated programme. However, although the assessment uses the Commission services' forecast as a benchmark, it also takes explicitly into account all available information about more recent developments.

Risks to the government balance target for 2010 are slightly on the downside. Revenue projection appears plausible, although additional revenues from VAT and excise duties may turn slightly lower than expected due to low private consumption. On the expenditure side, spending may increase due to possible spending pressures before the parliamentary elections.

Budgetary projections for the following years are subject to more downside risks:

- Consolidation after 2010 relies mostly on expenditure cuts but concrete measures on the expenditure side are not sufficiently specified. Half of the expenditure cuts will involve mandatory spending requiring change of legislation which may prove difficult. Furthermore, the expenditure targets set in the current update of the convergence programme are lower than the medium term expenditure ceilings which were approved by the parliament in autumn 2009 together with the 2010 budget proposal. The expenditure ceilings were based on a no-policy-change scenario whereby the general government deficit was forecast to reach 5.6% and 5.5% of GDP in 2011 and 2012 respectively. As the expenditure ceilings are legally binding, they should be aligned with the convergence programme targets or be possibly more ambitious.
- The macroeconomic scenario underpinning the programme is optimistic for 2012 and is conditioned by favourable developments of exports and investment. Government revenue may turn out to be lower than expected in case of a less favourable macro-economic scenario.
- The programme does not specify revenue and expenditure targets beyond 2012. For the year 2013, only the overall target for the general government deficit is given but no details are provided on the revenue and expenditure projections and underlying measures. The headline deficit in 2012 is expected to be still 1.2 p.p. in excess over the 3% of GDP threshold, leaving significant consolidation effort to be undertaken in 2013. No information on the underlying growth assumptions is provided.

In conclusion, the main risks to the budgetary projections stem from the fact that consolidation measures on the expenditure side beyond 2010 are not sufficiently specified, the forecast for real GDP in 2012 is optimistic and no measures are proposed after 2012 to reach the deficit threshold of 3% of GDP in 2013.

0.0 -2.0 COM -4.0Reference value CP 2005 -6.0 CP 2006 CP 2010 CP/2004 -8.0 -10.0 -12.0 CP May 2004 -14.0 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012

Figure 1: Government balance projections in successive programmes (% of GDP)

Source: Commission services' autumn 2009 forecast (COM) and successive convergence programmes

#### 5. GOVERNMENT DEBT AND LONG-TERM SUSTAINABILITY

This section is in two parts. A first part describes recent debt developments and mediumterm prospects, including risks to the outlook presented in the programme. A second part takes a longer-term perspective with the aim of assessing the long-term sustainability of public finances.

# 5.1. Recent debt developments and medium-term prospects

# 5.1.1. Debt projections in the programme

The government gross debt-to-GDP ratio was broadly stable until 2007 but started to increase in 2008. In 2009, a marked increase by 5 p.p. to 35.2% of GDP is estimated in the convergence programme while the Commission services' autumn 2009 forecast projected an even steeper rise to 36.5% of GDP. The outcome is markedly different from the target in the previous programme (27.9% of GDP) due to significantly different macro-economic and budgetary assumptions underpinning the previous programme. As table 6 shows, change in primary balance contributed most to the significantly higher-than-anticipated growth of the debt ratio in 2009. The snowball effect was somewhat less important and was entirely offset by the negative contribution of stock-flow adjustment (mainly through a sale of financial assets by local public authorities).

# 5.1.2. Assessment

The convergence programme projects a slower increase in the debt-to-GDP ratio after 2009 compared to the Commission service's autumn 2009 forecast. The main reason is that the Commission forecast is based on no-policy-change assumption whereas the

convergence programme assumes a consolidation scenario with decreasing primary deficit. Furthermore, the programme assumes larger differences between cash and accruals and a higher sale of financial assets. No major privatisation projects are planned within the programme horizon.

With respect to the debt structure, the Czech authorities aim at keeping the share of short-term debt low (below 20% of total debt) and the average maturity between 5.5 and 7 years. About 30% of debt is subject to change in interest rates in a one-year horizon. The share of long-term debt with variable interest rates has increased during the crisis which has led to an increase in the overall interest rate exposure.

Overall, the level of government debt will remain below the 60% of GDP threshold over the whole programme period and its increase should be contained by the envisaged reduction of the primary deficit and of accumulated financial assets. The debt structure is relatively stable and does not represent a reason for major concerns in the medium term.

CP May 2004 · CP 2008 

Figure 2: Debt projections in successive programmes (% of GDP)

Source: Commission services' autumn 2009 forecast (COM) and successive convergence programmes

**Table 6: Debt dynamics** 

(0/ of CDD)	average	2008	20	09	20	10	2011		
(% of GDP)	2003-07	2008	COM	CP	COM	CP	COM	CP	CP
Gross debt ratio <sup>1</sup>	29.7	30.0	36.5	35.2	40.6	38.6	44.0	40.8	42.0
Change in the ratio	0.1	1.0	6.6	5.2	4.1	3.4	3.4	2.2	1.2
Contributions <sup>2</sup> :									
1. Primary balance	2.1	1.0	5.2	5.3	3.9	3.5	4.1	2.8	2.0
2. "Snow-ball" effect	-0.9	-0.1	2.5	1.6	0.8	0.5	0.0	0.7	0.1
Of which:									
Interest expenditure	1.2	1.1	1.4	1.3	1.6	1.8	1.6	2.0	2.2
Growth effect	-1.5	-0.7	1.5	1.2	-0.3	-0.4	-0.9	-1.0	-1.5
Inflation effect	-0.5	-0.5	-0.4	-0.9	-0.5	-0.9	-0.7	-0.4	-0.6
3. Stock-flow adjustment	-1.1	0.1	-1.2	-1.7	-0.6	-0.6	-0.8	-1.3	-0.9
Of which:									
Cash/accruals diff.	-0.3	-1.3		-0.5		-0.5		-0.3	-0.2
Acc. financial assets	-0.7	1.3		-1.1		-0.7		-0.7	-0.6
Privatisation	-1.0	-0.6		0.0		0.0		0.0	0.0
Val. effect & residual	-0.1	0.1		0.0		0.0		0.0	0.0

Notes:

#### Source.

Convergence programme (CP); Commission services' autumn 2009 forecasts (COM); Commission services' calculations

# 5.2. Long-term debt projections and the sustainability of public finances

# 5.2.1. Sustainability indicators and long-term debt projections

This section presents sustainability indicators based on the long-term age-related government spending as projected by the Member States and the EPC in 2009 according to an agreed methodology<sup>4</sup>.

Table 7 shows that age-related spending is projected to rise by 6.3 percentage points of GDP between 2010 and 2060, which is above the EU average (4.6 pps.). Sustainability indicators for two scenarios are presented in Table 8. 'The 2009 scenario' is based on a no-policy-change assumption and the 2009 structural primary balance as a starting year, while 'the programme scenario' takes into account the consolidation planned in the programme up to 2012 and is based on the projected 2012 structural primary balance as a starting position. Including the increase of age-related expenditure and assuming that the structural primary balance remains at its 2009 level, the sustainability gap (S2)<sup>5</sup> would amount to 9.8% of GDP; about 3½ percentage points more than in last year's assessment. This is mainly due to a significant deterioration in the estimated structural primary balance in the starting year. On the contrary, the rise in age-related expenditure is

<sup>&</sup>lt;sup>1</sup>End of period.

<sup>&</sup>lt;sup>2</sup>The snow-ball effect captures the impact of interest expenditure on accumulated debt, as well as the impact of real GDP growth and inflation on the debt ratio (through the denominator). The stock-flow adjustment includes differences in cash and accrual accounting, accumulation of financial assets and valuation and other residual effects.

<sup>&</sup>lt;sup>4</sup> Economic Policy Committee and the European Commission (2009), '2009 Ageing Report: Economic and budgetary projections for the EU-27 Member States (2008-60)', *European Economy* No. 2/2009. European Commission (2009), 'Sustainability Report 2009, European Economy No. 9/2009. European Commission (2008), 'Public finances in EMU – 2008', *European Economy* No. 4/2008.

The S2 indicator is defined as the change in the current level of the structural primary balance required to make sure that the discounted value of future structural primary balances (including the path of property income) covers the current level of debt.

somewhat lower in the 2009 projections compared to the previous one, mainly due to some parametric reforms of the pay-as-you-go pension system. The starting budgetary position is not sufficient to stabilize the debt ratio over the long-term and entails a risk of unsustainable public finances even before considering the long-term budgetary impact of ageing.

In contrast to the "2009 scenario", the "programme scenario", which is based on the end-of-programme structural primary balance, shows a smaller gap. If the budgetary consolidation planned in the programme was achieved, risks to long-term sustainability of public finances would be somewhat mitigated.

Table 7: Long-term age-related expenditure: main projections

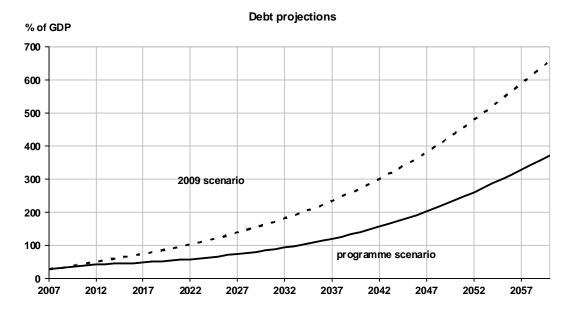
(% of GDP)	2007	2010	2020	2030	2040	2060	Change 2010-
Total age-related spending	17.9	17.0	17.2	18.1	19.8	23.4	6.3
- Pensions	7.8	7.1	6.9	7.1	8.4	11.0	4.0
- Healthcare	6.2	6.4	6.9	7.4	7.8	8.4	2.0
- Long-term care	0.2	0.2	0.3	0.4	0.5	0.7	0.4
- Education and unemployment benefits	3.7	3.3	3.1	3.2	3.0	3.3	0.0
Property income received Source: Economic Policy Committee and Commi	0.8 ission serv	0.7 ices.	0.6	0.5	0.5	0.4	-0.3

Table 8: Sustainability indicators and the required primary balance

·	2009 scenario			Programme scenario		
	<b>S1</b>	<b>S2</b>	RPB	S1	S2	RPB
Value	7.7	9.8	5.0	4.1	6.2	4.9
of which:						
Initial budgetary position (IBP)	5.7	5.8	-	2.1	2.2	-
Debt requirement in 2060 (DR)	-0.1	-	-	-0.2	-	-
Long-term change in the primary balance (LTC)	2.2	4.0	-	2.2	4.0	-
Source: Commission services.						

Based on the assumptions used in the projection of age-related expenditure and the calculation of the sustainability indicators, Figure 3 displays the projected debt-to-GDP ratio over the long-term.

Figure 3: Long-term projections for the government debt ratio



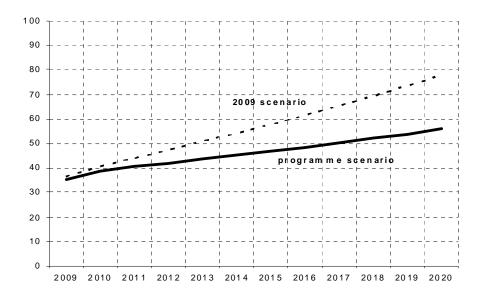
<u>Note</u>: Being a mechanical, partial-equilibrium analysis, the long-term debt projections are bound to show highly accentuated profiles. As a consequence, the projected evolution of debt levels should not be seen as a forecast similar to the Commission services' short-term forecasts, but as an indication of the risks faced by Member States.

Source: Commission services calculations

Based on the alternative assumptions of economic developments presented in the Commission services' autumn 2009 forecast<sup>6</sup>, Figure 4 shows projected medium-term trajectory of the debt-to-GDP ratio. Under both set of assumptions, the debt ratio would remain on an increasing trend, growing less rapidly under the programme scenario but reaching the level of around 55% of GDP in 2020.

Section 3.5 in European Commission (2009), 'European Economic Forecast – autumn 2009', European Economy No. 10/2009. this scenario assumes that the output gap caused by the crisis will be closed by 2017.

Figure 4: Medium-term projections for the government debt ratio



Source: Commission services' calculations

# 5.2.2. Additional factors

For an overall assessment of the sustainability of public finances, other relevant factors are taken into account, as shown in Table 9. Overall, these factors do not change the assessment of the long-term sustainability risk of public finances.

Table 9: Additional factors for the assessment of long-term sustainability risks

	Impact on risk
Debt and pension assets	na
Decline in structural balance until 2011 in COM Autumn 2009 forecast	na
Alternative projection of cost of ageing	na
Strong decline in benefit ratio	na
High tax burden	na
Difference between S1 and S2	na

<u>Note:</u> '-': factor tends to increase the risk to sustainability, '+': factor tends to decrease the risk to sustainability.

'na': not applicable.

Alternative projections are often presented in the programmes, whose assumptions often diverge from the common method. Projections currently discussed in the Economic Policy Committee but not yet published, are for the time being also considered "unofficial".

An explanation on these factors can be found in chapter V of: European Commission (2009), Sustainability Report 2009, European Economy No. 9/2009.

Source: Commission services.

#### 5.2.3. Assessment

The long-term budgetary impact of ageing is clearly above the EU average, mainly as a result of a relatively high increase in pension expenditure as a share of GDP over the coming decades. The budgetary position in 2009, as estimated in the programme, worsened considerably compared with the starting position of the previous programme and compounds the budgetary impact of population ageing on the sustainability gap. Achieving primary surpluses over the medium term and undertaking reforms of pension and healthcare systems with a view of containing the future increase in these expenditures would contribute to reducing the high risks to the sustainability of public finances.

Medium-term debt projections until 2020 assuming that GDP growth rates will only gradually recover to the values projected before the crisis and tax ratios will return to precrisis levels show that the budgetary strategy envisaged in the programme, taken at face value, would not be enough to stabilise the debt-to-GDP ratio by 2020.

# 6. FISCAL FRAMEWORK AND QUALITY OF PUBLIC FINANCES

# 6.1. Fiscal framework

When assessed against cross-country indicators measuring the strength of the fiscal framework, the Czech Republic ranks very close to the EU average. However, there are noticeable weaknesses in several areas, in particular in budgetary procedures and enforcement of the medium-term budgetary framework.

With respect to budgetary procedures, preparation of budget is rather decentralised but at the same time not governed by strong fiscal rules. Evaluation of efficiency of spending is not carried out on a systematic basis, which can lead to overspending in some areas and underfunding in others.

In 2004, the Czech Republic introduced a medium-term budgetary framework which includes annual ceilings for nominal expenditure for the state budget over three years. The framework appears sound from a legal perspective. According to the Czech budgetary rules, binding expenditure ceilings comprise only state budget and state funds. The ceilings for the next three years are adopted by the government and approved by the parliament as an annex to the annual budget proposal. The budgetary rules determine in which circumstances these ceilings can be exceeded, e.g. in case of significant deviations from the macro-economic prediction, natural disasters, etc. Experience shows that the expenditure ceilings have been revised upwards several times in the past beyond the revisions permitted by the budgetary rules. Main weaknesses of the current set-up include low enforceability, limited ex-post monitoring, operational complexity and limited public scrutiny of the whole process.

On 2 December 2010, the Council recommended the Czech Republic to "enforce rigorously its medium-term budgetary framework and improve the monitoring of the budget execution throughout the year to avoid expenditure overruns compared to budget and multiannual plans." This update of the convergence programme does not include sufficient proposals to improve enforcement of the medium-term budgetary framework. Moreover, as mentioned above, the current expenditure ceilings which were approved together with the 2010 budget proposal for 2011 and 2012 are not fully in line with the consolidation scenario proposed in the convergence programme.

Nevertheless, in line with the recommendation to improve monitoring of budgetary execution, the Czech Republic is currently implementing significant changes to its tax collection and tax management systems. A project of "single collection point", i.e. a unified system of collection of taxes, customs duties and social security contribution is currently under way and should be completed by 2014. The aim is to simplify and harmonize the existing complex system and achieve significant efficiency gains. In addition, a project of an integrated information system of the state treasury has been launched which will introduce a real time and fully automated budgetary information system and thereby improve management of public finances, enable greater efficiency of budgetary spending and lower costs of debt service. Both projects represent a step in the right direction and will contribute to more efficient management of public finances.

# 6.2. Quality of public finances

Measured by the share of general government expenditure to GDP, the size of the public sector in the Czech Republic is close to EU average. With respect to the composition, of public expenditure, the Czech Republic spends a relatively high proportion of expenditure on economic affairs and health care. By contrast, spending on social protection is lower than the EU average. The level of government investment government investment is relatively high; it has remained close to 5% of GDP over the last four years. Nevertheless, there is some scope to improve the quality of public spending in the Czech Republic. In particular, spending on R&D is lower than the EU average and efficiency of public expenditure in areas such as healthcare, education and public procurement could be improved. The government embarked on a reform programme of research in 2008, and took some initial steps aimed at widening participation in tertiary education.

On the revenue side, the Czech authorities implemented several reforms since 2007 aiming at a gradual shift from direct to indirect taxation. These include introduction of a flat personal income tax, reduction of the corporate income tax and gradual increase in VAT and property taxes. Social security contributions which are still high compared to the EU average were cut in the framework of the anti-crisis stimulus measures. Nevertheless, the tax and benefits system requires further reforms in order to increase work incentives and to reduce inactivity traps. Furthermore, the system of direct taxation and tax collection is complex and would benefit from further simplification. The unified system of tax collection mentioned in Chapter 6.1 will help achieve this objective.

## 7. OVERALL ASSESSMENT

Taking into account risks attached to the budgetary targets discussed above, this section assesses the appropriateness of the fiscal strategy in relation to the Council Recommendations under Article 126(7) of 2 December 2009 with a view to correcting the excessive deficit and the budgetary objectives of the Stability and Growth Pact, against the background of the current economic situation, the debt and long-term sustainability position of the country, and the institutional features of its public finances.

Appropriateness of the fiscal strategy varies along the consolidation path envisaged in the programme period. The general government deficit target for 2010 appears appropriate, is underpinned by specific consolidation measures and is in line the Council Recommendations under Article 126(7). The main risk involves possible expenditure slippages related to the electoral cycle. The planned structural fiscal effort exceeds the 1% of GDP recommended by the Council. Given the large structural deficit and the

projected economic recovery, such a front-loaded fiscal consolidation strategy is appropriate.

The budgetary strategy for the years 2011-2012 is less ambitious and subject to more risks. The fiscal adjustment is projected to slow significantly in 2011-2012 despite a projected improvement of the economic situation. The annual fiscal effort over the programme period (2010-2012) amounts to 0.8% on average, which is close to but below the 1% average annual fiscal effort recommended by the Council. Furthermore, consolidation relies mainly on expenditure cuts which are not sufficiently detailed and will require important reforms of mandatory expenditure and public service. These are not specified in the programme. Revenue side measures account for approximately one fourth of the planned consolidation, are sufficiently detailed and appropriate. Moreover, the macroeconomic scenario underpinning the programme, while plausible for 2010 and 2011, appears favourable for 2012.

Correction of the excessive deficit is foreseen after the end of the programme period. While the target date of correction is in line with the Council Recommendation, the programme does not provide any details on consolidation measures in 2013 (including the underlying growth assumptions). A significant structural adjustment will be needed in order to reach the deadline.

Overall, the budgetary strategy for 2010 is appropriate. From 2011 on, the budgetary strategy may not be fully consistent with the Council recommendations under Art. 126(7). Meeting the recommendation will require implementation of further consolidation measures in 2011-2013 to ensure the recommended fiscal effort of 1% on average. With respect to the fiscal framework, there are noticeable weaknesses in several areas, in particular in budgetary procedures, enforcement and functioning of the medium-term budgetary framework. Furthermore, the long-term budgetary impact of ageing is clearly above the EU average which remains a concern for long-term sustainability of public finances and points to the need for reforms in the areas of pensions and healthcare.

\* \* \*

# ANNEX. COMPLIANCE WITH THE FORMAT AND CONTENT REQUIREMENTS FOR STABILITY AND CONVERGENCE PROGRAMMES

This annex provides an assessment of whether the programme respects the requirements of Section II of the code of conduct (guidelines on the format and content), notably as far as (i) the model structure (Annex 1 of the code of conduct); (ii) the formal data provisions (Annex 2 of the code of conduct); and (iv) other information requirements is concerned. It also assesses to what extent Country followed up on the Council's recommendation to report on progress made in the correction of the excessive deficit, in a separate chapter of the programme (iii).

#### (i) Model structure

The convergence programme respects the model structure as defined in Annex 1 of the Code of Conduct.

# (ii) Data requirements

The tables on the following pages show the data presented in the February 2010 update of convergence programme, following the structure of the tables in Annex 2 of the code of conduct. Compulsory data are in bold, missing data are indicated with grey-shading. With respect to the compulsory data, the following data were not provided: COFOG data for 2012 (Table 3) and data on liquid financial assets and net financial debt (Table 4).

# (iii) Separate chapter on progress made in the correction of the excessive deficit

In its recommendations under Article 126(7) of 2 December 2009 with a view to bring the excessive deficit situation to an end, the Council also invited the Czech Republic to report on progress made in the implementation of the Council's recommendations in a separate chapter in the updates of the convergence programmes. The Czech Republic partly complied with this recommendation.

#### (iv) Other information requirements

The table below provides a summary assessment of the adherence to the other information requirements in the code of conduct.

\* \* \*

The SCP	Yes	No	Comments
a. Involvement of parliament			
mentions status vis-à-vis national parliament.	X		
indicates whether Council opinion on previous programme has		X	
been presented to national parliament.			
b. Economic outlook			
(for euro area and ERM II Member States) uses "common			n.a.
external assumptions" on main extra-EU variables.			
explains significant divergences with Commission services'		X	
forecasts <sup>1</sup> .			
bears out possible upside/downside risks to economic outlook.		X	
analyses outlook for sectoral balances and, especially for	X		
countries with high external deficit, external balance.			
c. Monetary/exchange rate policy			
(CP only) presents medium-term monetary policy objectives and	X		
their relationship to price and exchange rate stability.			
d. Budgetary strategy			
presents budgetary targets for general government balance in		X	Budgetary targets are
relation to MTO and projected path for debt ratio.			not presented in
			relation to MTO

The SCP	Yes	No	Comments
(in case new government has taken office) shows continuity with		X	
respect to budgetary targets endorsed by Council.			
(when applicable) explains reasons for deviations from previous	X		
targets and, in case of substantial deviations, whether measures are			
taken to rectify situation (+ provides information on them).			
backs budgetary targets by indication of broad measures	X		Only partly
necessary to achieve them and analyses their quantitative effects on			
balance.			
specifies state of implementation of measures.	X		
e. "Major structural reforms"			
(if MTO not yet reached or temporary deviation is planned from	X		Only partly
MTO) includes comprehensive information on economic and			
budgetary effects of possible 'major structural reforms' over time.			
includes quantitative cost-benefit analysis of short-term costs and		X	
long-term benefits of reforms.			
f. Sensitivity analysis		1	T
includes comprehensive sensitivity analyses and/or develops	X		
alternative scenarios showing impact on balance and debt of:			
a) changes in main economic assumptions			
b) different interest rate assumptions			
c) (for CP only) different exchange rate assumptions			
d) if common external assumptions are not used, changes in			
assumptions for main extra-EU variables.			
(in case of "major structural reforms") analyses how changes in			n.a.
assumptions would affect budget and potential growth.			
g. Broad economic policy guidelines		37	1
provides information on consistency with broad economic policy		X	
guidelines of budgetary objectives and measures to achieve them.			
h. Quality of public finances	37		1
describes measures to improve quality of public finances, both	X		
revenue and expenditure sides.			
i. Long-term sustainability		37	1
outlines strategies to ensure sustainability.	37	X	
includes common budgetary projections by the AWG and all	X		
necessary additional information (esp. new relevant information).			
j. Other information (optional)	V	1	01
includes information on implementation of existing national	X		Only partly
budgetary rules and on other institutional features of public finances.			
Notes: SCP = stability/convergence programme; CP = convergence programme; To the extent possible bearing in mind the typically chart time as			the publication of the
<sup>1</sup> To the extent possible, bearing in mind the typically short time pe			ule publication of the

Commission services' autumn forecast and the submission of the programme.

<u>Source</u>: Commission services

# Tables from Annex 2 of the code of conduct

Table 1a. Macroeconomic prospects

		2008	2008	2009	2010	2011	2012	
	ESA Code		rate of					
		Level	change	change	change	change	change	
1. Real GDP	B1*g	3623	2.5	-4.0	1.3	2.6	3.8	
2. Nominal GDP	B1*g	3689	4.3	-1.1	3.9	3.6	5.4	
Components of real GDP								
3. Private consumption expenditure	P.3	1748	3.6	1.4	-0.8	2.0	2.5	
4. Government consumption expenditure	P.3	725	1.0	4.0	-1.7	0.0	-0.4	
5. Gross fixed capital formation	P.51	877	-1.5	-7.5	-3.7	2.5	3.6	
6. Changes in inventories and net acquisition of valuables (% of GDP)	P.52 + P.53	51.0	1.4	-1.8	-0.3	0.3	0.7	
7. Exports of goods and services	P.6	3000	6.0	-11.9	4.4	6.4	6.5	
8. Imports of goods and services	P.7	2779	4.7	-11.9	2.4	6.1	4.9	
Contr	ributions to	real GDP	growth					
9. Final domestic demand		-	1.5	-0.3	-1.6	1.5	2.0	
10. Changes in inventories and net acquisition of valuables	P.52 + P.53	-	-0.4	-3.2	1.4	0.5	0.3	
11. External balance of goods and services	B.11	-	1.3	-0.6	1.5	0.6	1.5	

Table 1b. Price developments

Tubic 16. Tirec de teropinents							
		2008	2008	2009	2010	2011	2012
	ESA Code	Level	rate of				
		Level	change	change	change	change	change
1. GDP deflator		120.8	1.8	3.1	0.5	1.0	1.5
2. Private consumption deflator		119.5	4.9	0.3	1.6	1.5	2.2
3. HICP <sup>1</sup>		111.7	6.3	0.6	1.8	1.5	1.8
4. Public consumption deflator		135.2	3.9	1.9	0.7	0.3	1.1
5. Investment deflator		104.7	0.7	1.8	0.7	0.7	0.7
6. Export price deflator (goods and services)		88.6	-5.2	0.4	-0.3	-1.3	1.0
7. Import price deflator (goods and services)		85.1	-3.7	-2.6	0.5	-1.1	1.1

<sup>&</sup>lt;sup>1</sup> Optional for stability programmes.

Table 1c. Labour market developments

		2008	2008	2009	2010	2011	2012
	ESA Code	Level	rate of				
		Level	change	change	change	change	change
1. Employment, persons <sup>1</sup>		5288	1.2	-1.3	-1.6	-0.4	0.6
2. Employment, hours worked <sup>2</sup>		10.3	1.4	-4.1	-2.4	-0.4	0.8
3. Unemployment rate (%) <sup>3</sup>		4.4	4.4	6.7	8.8	8.6	7.6
4. Labour productivity, persons <sup>4</sup>		685	1.2	-2.8	3.0	3.0	3.2
5. Labour productivity, hours worked <sup>5</sup>		352	1.0	0.1	3.9	3.0	3.0
6. Compensation of employees	D.1	1634	7.7	-1.8	0.1	3.9	5.4
7. Compensation per employee		377	6.3	0.3	2.5	4.1	4.8

<sup>&</sup>lt;sup>1</sup>Occupied population, domestic concept national accounts definition.

Table 1d. Sectoral balances

% of GDP	ESA Code	2008	2009	2010	2011	2012
1. Net lending/borrowing vis-à-vis the rest of the world	B.9	-2.4	-0.2	1.0	0.2	0.6
of which:						
- Balance on goods and services		4.6	6.0	6.8	7.0	8.1
- Balance of primary incomes and transfers		-8.0	-7.1	-6.8	-7.7	-8.4
- Capital account		0.9	1.0	1.0	1.0	1.0
2. Net lending/borrowing of the private sector	B.9	-0.3	6.4	6.3	5.0	4.8
3. Net lending/borrowing of general government	EDP B.9	-2.1	-6.6	-5.3	-4.8	-4.2
4. Statistical discrepancy		0.0	0.0	0.0	0.0	0.0

<sup>&</sup>lt;sup>2</sup>National accounts definition.

<sup>&</sup>lt;sup>3</sup>Harmonised definition, Eurostat; levels.

<sup>&</sup>lt;sup>4</sup>Real GDP per person employed.

<sup>&</sup>lt;sup>5</sup>Real GDP per hour worked.

Table 2. General government budgetary prospects

Table 2. General government budgetary prosp	ects	2000	2000	2000	2010	2011	2012				
	ESA Code	2008	2008	2009	2010	2011	2012				
	ESA COGE	Level	% of GDP								
Net lending (EDP B.9) by sub-sector											
1. General government	S.13	-77.4	-2.1	-6.6	-5.3	-4.8	-4.2				
2. Central government	S.1311	-87.5	-2.4	-5.8	-5.2	-4.8	-4.2				
3. State government	S.1312	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.				
4. Local government	S.1313	0.1	0.0	-0.6	-0.1	-0.1	0.0				
5. Social security funds	S.1314	10	0.3	-0.2	0.0	0.0	0.0				
General government (S13)											
6. Total revenue	TR	1507.8	40.9	39.0	40.5	40.8	40.5				
7. Total expenditure	TE1	1585.2	43.0	45.5	45.8	45.6	44.7				
8. Net lending/borrowing	EDP B.9	-77.4	-2.1	-6.6	-5.3	-4.8	-4.2				
9. Interest expenditure	EDP D.41	41.4	1.1	1.3	1.7	2.0	2.1				
10. Primary balance <sup>2</sup>		-35.9	-1.0	-5.3	-3.5	-2.8	-2.0				
11. One-off and other temporary measures <sup>3</sup>		-3.1	-0.1	0.2	-0.1	-0.1	-0.3				
Sele	cted compo	nents of re	venue								
<b>12. Total taxes</b> (12=12a+12b+12c)		722.7	19.6	18.1	19.1	19.1	19.0				
12a. Taxes on production and imports	D.2	405.6	11.0	11.1	11.9	11.6	11.6				
12b. Current taxes on income, wealth, etc	D.5	316.7	8.6	7.0	7.2	7.5	7.6				
12c. Capital taxes	D.91	0.4	0.0	0.0	0.0	0.0	0.0				
13. Social contributions	D.61	599.2	16.2	15.1	15.4	15.6	15.6				
14. Property income	D.4	31.4	0.9	0.9	1.0	0.9	0.9				
15. Other <sup>4</sup>		154.4	4.2	4.9	5.1	5.1	5.1				
16=6. Total revenue	TR	1507.8	40.9	39.0	40.5	40.8	40.5				
<b>p.m.: Tax burden</b> (D.2+D.5+D.61+D.91-D.995) <sup>5</sup>		1321.9	35.8	33.2	34.5	34.7	34.6				
Selec	ted compone	ents of exp	enditure								
17. Compensation of employees + intermediate consumption	D.1+P.2	509.1	13.8	14.7	14.0	13.4	12.6				
17a. Compensation of employees	D.1	280	7.6	7.9	7.7	7.4	7.0				
17b. Intermediate consumption	P.2	229.1	6.2	6.8	6.3	6.0	5.6				
<b>18. Social payments</b> (18=18a+18b)		669.8	18.2	19.6	19.8	19.5	19.1				
18a. Social transfers in kind supplied via market producers	D.6311, D.63121, D.63131	198.6	5.4	5.8	5.8	5.8	5.7				
18b. Social transfers other than in kind	D.62	471.2	12.8	13.8	14.0	13.7	13.4				
19=9. Interest expenditure	EDP D.41	41.4	1.1	1.3	1.7	2.0	2.1				
20. Subsidies	D.3	63.7	1.7	1.8	1.7	1.7	1.7				
21. Gross fixed capital formation	P.51	183.1	5.0	51.0	5.4	5.6	5.7				
22. Other <sup>6</sup>		118	3.2	3.1	3.1	3.3	3.5				
23=7. Total expenditure	TE <sup>1</sup>	1585.2	43.0	45.5	45.8	45.6	44.7				
p.m.: Government consumption (nominal)	P.3	753.2	20.4	21.9	21.3	20.6	19.6				
<sup>1</sup> Adjusted for the net flow of swap-related flows so t	hot TD TE-	EDD D 0	•	•							

<sup>&</sup>lt;sup>1</sup>Adjusted for the net flow of swap-related flows, so that TR-TE=EDP B.9.

<sup>&</sup>lt;sup>2</sup>The primary balance is calculated as (EDP B.9, item 8) plus (EDP D.41, item 9).

 $<sup>^3\</sup>mbox{A}$  plus sign means deficit-reducing one-off measures.

 $<sup>^4</sup>$ P.11+P.12+P.131+D.39+D.7+D.9 (other than D.91).

<sup>&</sup>lt;sup>5</sup>Including those collected by the EU and including an adjustment for uncollected taxes and social contributions (D.995), if appropriate.

 $<sup>^6</sup>$  D.29+D4 (other than D.41)+ D.5+D.7+D.9+P.52+P.53+K.2+D.8.

Table 3. General government expenditure by function

% of GDP	COFOG Code	2007	2012
1. General public services	1	4.4	n.a.
2. Defence	2	1.2	n.a.
3. Public order and safety	3	2.1	n.a.
4. Economic affairs	4	6.9	n.a.
5. Environmental protection	5	1.0	n.a.
6. Housing and community amenities	6	1.1	n.a.
7. Health	7	7.1	n.a.
8. Recreation, culture and religion	8	1.3	n.a.
9. Education	9	4.7	n.a.
10. Social protection	10	12.9	n.a.
11. Total expenditure (=item 7=23 in Table 2)	TE <sup>1</sup>	42.6	n.a.

<sup>&</sup>lt;sup>1</sup>Adjusted for the net flow of swap-related flows, so that TR-TE=EDP B.9.

Table 4. General government debt developments

% of GDP	ESA Code	2008	2009	2010	2011	2012				
1. Gross debt <sup>1</sup>		30.0	35.2	38.6	40.8	42.0				
2. Change in gross debt ratio		1.0	5.2	3.4	2.3	1.2				
Contributions to changes in gross debt										
3. Primary balance <sup>2</sup>		1.0	5.4	3.5	2.8	2.1				
4. Interest expenditure <sup>3</sup>	EDP D.41	1.1	1.1	1.7	2.0	2.1				
5. Stock-flow adjustment		-1.2	0.3	-0.7	-1.3	-2.1				
of which:										
- Differences between cash and accruals <sup>4</sup>		-1.3	-0.5	-0.5	-0.3	-0.2				
- Net accumulation of financial assets <sup>5</sup>		1.3	-1.1	-0.7	-0.7	-0.6				
of which:										
- privatisation proceeds		0.6	0.0	0.0	0.0	0.0				
- Valuation effects and other <sup>6</sup>		0.1	0.0	0.0	0.0	0.0				
p.m.: Implicit interest rate on debt <sup>7</sup>		3.6	3.3	4.5	5.0	5.0				
Other relevant variables										
6. Liquid financial assets <sup>8</sup>		n.a.	n.a.	n.a.	n.a.	n.a.				
7. Net financial debt (7=1-6)		n.a.	n.a.	n.a.	n.a.	n.a.				

<sup>&</sup>lt;sup>1</sup>As defined in Regulation 3605/93 (not an ESA concept).

<sup>&</sup>lt;sup>2</sup>Cf. item 10 in Table 2.

<sup>&</sup>lt;sup>3</sup>Cf. item 9 in Table 2.

<sup>&</sup>lt;sup>4</sup>The differences concerning interest expenditure, other expenditure and revenue could be distinguished when relevant.

<sup>&</sup>lt;sup>5</sup>Liquid assets, assets on third countries, government controlled enterprises and the difference between quoted and non-quoted assets could be distinguished when relevant.

<sup>&</sup>lt;sup>6</sup>Changes due to exchange rate movements, and operation in secondary market could be distinguished when relevant.

 $<sup>^{7}\</sup>mbox{Proxied}$  by interest expenditure divided by the debt level of the previous year.

<sup>8</sup>AF1, AF2, AF3 (consolidated at market value), AF5 (if quoted in stock exchange; including mutual fund shares).

Table 5. Cyclical developments

% of GDP	ESA Code	2008	2009	2010	2011	2012
1. Real GDP growth (%)		2.5	-4.0	1.3	2.6	3.8
2. Net lending of general government	EDP B.9	-2.1	-6.6	-5.3	-4.8	-4.2
3. Interest expenditure	EDP D.41	1.1	1.1	1.7	2.0	2.1
4. One-off and other temporary measures <sup>1</sup>		-0.1	0.2	-0.1	-0.1	-0.3
5. Potential GDP growth (%)		3.6	3.1	2.5	2.5	3.0
contributions:						
- labour		0.4	0.5	0.3	0.1	0.1
- capital		1.0	0.8	0.6	0.6	0.7
- total factor productivity		2.2	1.8	1.6	1.8	2.2
6. Output gap		2.5	-4.6	-5.6	-5.5	-4.8
7. Cyclical budgetary component		0.7	-1.2	-1.6	-1.6	-1.3
8. Cyclically-adjusted balance (2 - 7)		-2.8	-5.3	-3.7	-3.3	-2.9
9. Cyclically-adjusted primary balance (8 + 3)		-1.7	-4.2	-1.9	-1.2	-0.8
10. Structural balance (8 - 4)		-2.7	-5.5	-3.6	-3.2	-2.6

<sup>&</sup>lt;sup>1</sup>A plus sign means deficit-reducing one-off measures.

Table 6. Divergence from previous update

	ESA Code	2008	2009	2010	2011	2012
Real GDP growth (%)						
Previous update		4.4	3.7	4.4	5.2	n.a.
Current update		2.5	-4.0	1.3	2.6	3.8
Difference		-2.0	-7.7	-3.1	-2.6	n.a.
General government net lending (% of GDP)	EDP B.9					
Previous update		-1.2	-1.6	-1.5	-1.2	n.a.
Current update		-2.1	-6.6	-5.3	-4.8	-4.2
Difference		-0.9	-5.0	-3.7	-3.6	n.a.
General government gross debt (% of GDP)						
Previous update		28.8	27.9	26.8	25.5	n.a.
Current update		30.0	35.2	38.6	40.8	42.0
Difference		1.2	7.3	11.7	15.3	n.a.

Table 7. Long-term sustainability of public finances

% of GDP	2007	2010	2020	2030	2050	2060
Total expenditure	43.1	41.9	41.4	43.7	53.5	59.8
Of which: age-related expenditures	18.8	18.0	18.2	19.1	23.1	24.5
Pension expenditure	7.8	7.1	6.9	7.1	10.2	11.0
Social security pension	7.8	7.1	6.9	7.1	10.2	11.0
Old-age and early pensions	7.1	6.5	6.3	6.6	9.7	10.5
Other pensions (disability, survivors)	0.7	0.5	0.5	0.6	0.5	0.6
Occupational pensions (if in general government)	0.0	0.0	0.0	0.0	0.0	0.0
Health care	6.2	6.4	6.9	7.4	8.1	8.4
Long-term care (this was earlier included in the health care)	0.2	0.2	0.3	0.4	0.5	0.7
Education expenditure	3.5	3.0	3.0	3.1	3.0	3.2
Other age-related expenditures	1.0	1.0	1.0	1.0	1.1	1.1
Interest expenditure	1.1	1.0	1.8	3.2	9.0	13.9
Total revenue	42.0	41.0	40.1	40.0	39.9	39.9
Of which: property income	0.8	0.7	0.6	0.5	0.5	0.4
Of which: from pensions contributions (or social contributions if appropriate)	8.6	8.6	8.6	8.6	8.6	8.6
Pension reserve fund assets	0.4	3.4	17.1	32.6	42.3	24.2
Of which: consolidated public pension fund assets (assets other than government liabilities)	0.0	0.0	0.0	0.0	0.0	0.0
	Assumption	ons				
Labour productivity growth	4.1	3.0	2.9	1.8	1.7	1.7
Real GDP growth	5.2	3.0	2.5	1.4	0.7	1.1
Participation rate males (aged 20-64)	78.3	80.7	81.0	78.8	79.0	78.9
Participation rates females (aged 20-64)	61.6	66.1	66.7	66.0	67.8	68.1
Total participation rates (aged 20-64)	70.0	73.5	73.9	72.5	73.5	73.5
Unemployment rate	5.4	4.5	4.5	4.5	4.5	4.5
Population aged 65+ over total population	14.6	17.9	20.2	22.9	30.9	33.4

Table 8. Basic assumptions

	2008	2009	2010	2011	2012
Short-term interest rate <sup>1</sup> (annual average)	4.0	2.2	1.7	2.4	2.8
Long-term interest rate (annual average)	4.6	4.7	3.8	4.0	4.0
USD/€ exchange rate (annual average) (euro area and ERM II countries)	n.a.	n.a.	n.a.	n.a.	n.a.
Nominal effective exchange rate	120.0	116.0	119.0	124.0	129.0
(for countries not in euro area or ERM II) exchange rate vis-à-vis the € (annual average)	24.9	26.4	25.8	24.8	23.8
World excluding EU, GDP growth	3.0	-1.0	3.5	4.0	4.5
EU GDP growth	0.8	-4.0	1.1	2.0	2.2
Growth of relevant foreign markets	1.7	-12.5	0.5	4.0	7.0
World import volumes, excluding EU	3.8	-9.7	5.5	6.5	7.3
Oil prices (Brent, USD/barrel)	98.0	62.0	81.0	92.0	91.0

<sup>&</sup>lt;sup>1</sup>If necessary, purely technical assumptions.