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ESTONIA: MACRO FISCAL ASSESSMENT

AN ANALYSIS OF THE DECEMBER 2008 UPDATE OF THE CONVERGENCE PROGRAMME

The Stability and Growth Pact requires each EU Member State to present an annual update of its medium-term budgetary programme, called "stability programme" for countries that have adopted the euro as their currency and "convergence programme" for those that have not.

The attached technical analysis of the programme, prepared by the staff of, and under the responsibility of, the Directorate-General for Economic and Financial Affairs (DG ECFIN) of the European Commission, was finalised on 18 February 2009. Comments should be sent to Ingrid Toming (ingrid.toming@ec.europa.eu) and Baudouin Lamine (baudouin.lamine@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' January 2009 interim 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 11 October 2005) and (iii) the commonly agreed methodology for the estimation of potential output and cyclically-adjusted balances. Technical issues are explained in an accompanying methodological paper prepared by DG ECFIN.

Based on this technical analysis, the European Commission adopted a recommendation for a Council opinion on the programme on 18 February 2009. The ECOFIN Council is expected to adopt its opinion on the programme on 10 March 2009.

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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/about/activities/sgp/main_en.htm

1. INTRODUCTION

This document assesses the December 2008 update of the Estonia's convergence programme. It takes into account all currently available information, notably the Commission services' January 2009 interim forecast and the available information on measures adopted by the country's authorities in response to the economic downturn. The programme, which was submitted on 5 December 2008[1], covers the period 2008-2012 and builds on the 2009 budget proposal and the State Budget Strategy 2009-2012. The programme was approved by the government on 4 December 2008. The assessment was finalised on 18 February 2009 and does not reflect the subsequent adoption of a restrictive supplementary budget.

2. MAIN CHALLENGES IN THE ECONOMIC DOWNTURN AND THE POLICY RESPONSE

The Estonian economy is currently experiencing a severe downturn following the economic cycle that peaked in 2006–2007. The downturn began, initially moderately, in 2007. However, during 2008 several external factors – notably the deepening global financial crisis and weakening external demand – added to the ongoing fall in domestic demand and contributed to speeding up the contraction of the economy, driving it into the deepest recession since the beginning of the adjustment to a market economy. By the end of 2008 the unemployment rate had returned to the level of 2005 and short-term indicators suggest that adjustment on the labour market accelerated considerably in the beginning of 2009.

A high degree of openness of the Estonian economy and high reliance on foreign savings to finance catching-up makes the economy particularly responsive to changes in the external environment. Declining demand in exports markets and stricter requirements of retail bank-lending, driven by the global economic slowdown and uncertainties in the global financial markets, are inhibiting orderly economic adjustment. Wage growth, including in the public sector, has remained above productivity growth for several successive years, undermining price competitiveness of the economy. In the context of the currency board framework, monetary and credit conditions tightened in 2008 amid higher country risk perceptions and a continued appreciation of the real effective exchange rate. Severe corrections and delayed economic restructuring continue to undermine investor and consumer confidence, also resulting in the deterioration of public finances.

The recession, however, is bringing with it a moderation of the external and internal imbalances accumulated during the years of overheating. This moderation is improving prospects of future recovery once the external environment strengthens. Improvement in the country's external competitiveness and greater availability of labour currently stand out as primary channels to foster recovery prospects, since inward investors may still be attracted by Estonia's lower operational costs. According to the Commission services' January 2009 interim forecasts, the economic recession is expected to deepen further in 2009 and the economy to turn to a slightly positive growth path in 2010. The Estonian economy was thus entering "bad economic times" in 2008 and is expected to remain in bad times throughout the forecast period.

[1] The English language version was submitted on 5 January 2009.

With the downturn and deflation of asset prices, tax receipts deteriorated sharply in 2008, resulting in an expected general government deficit of 2.0% of GDP in that year despite the adoption of a mid-year restrictive supplementary budget. In the absence of policy adjustment public finances seem set to deteriorate further to a deficit above 3% of GDP in 2009 and 2010. The deterioration in public finances in 2008 follows six consecutive years of nominal surpluses. Although part of the windfall revenue has been saved, routine recourse to expansionary mid-year supplementary budgets in recent years resulted in expenditure growing more rapidly than nominal GDP in 2006-2008, also due to the absorption of EU structural funds. Increases in expenditure were accompanied by structural tax cuts, in particular of income tax, and resulted in a mostly pro-cyclical evolution of the structural balance. This created unfavourable dynamics for the downturn, in particular as around 70% of the expenditure is determined by laws in force and existing international agreements. While low government debt level provides some scope to face the deterioration, it will be challenging to secure new financing at favourable conditions in the current global financial environment. Accumulated reserves of the central government (ca 8½% of GDP as of end-2008) initially provide a buffer against deficits. However, without new source of financing the existing reserves would be exhausted over the forecast period. In the Commission services' January 2009 interim forecast it is assumed that the deficit will be financed by a combination of a new borrowing and gradual running down of the reserves.

Due to the monetary regime in Estonia, the country is particularly constrained by a trade-off between the credibility and stabilisation function of fiscal policy. It is even more the case since fiscal multipliers are rather low due to the relatively small size of the public sector and high degree of openness of the economy. Over the last decade, fiscal contractions in the course of economic downturns have been associated with relatively rapid upturns, mostly as a result of the improved competitiveness of the economy due to lower public sector wages and a decrease in social transfers that weakened the position of employees in wage bargaining[2]; however, it must be noted that this usually occurred in a strong external demand environment.

The considerable deterioration of the fiscal position in 2008, by approaching 2½% of GDP in structural terms, provided a sizeable fiscal stimulus in response to the worsening cyclical conditions. Looking ahead, the authorities consider the objectives of restoring market confidence and meeting the Maastricht criteria for euro adoption their primary priority.

Box. Measures to stabilise the financial system

There has been no state intervention to date to support the financial sector and no such intervention is assumed in the programme or Commission services' forecast.

With a view to stabilising the financial sector, the Estonian authorities increased the deposit guarantee coverage from the kroon equivalent of €20 000 to €50 000 and extended the deposit guarantee ratio to 100%, both with effect from 9 October 2008. In addition, a package of legislative proposals to make crisis management more flexible, including by establishing fast-track procedure for state intervention, was submitted to Parliament in December 2008. It is also expected that a second set of draft measures to enhance operability of financial supervision in

[2] Rzońca, A., Cizkowicz, P. (2005), Non-Keynesian Effects of Fiscal Contraction in New Member States, ECB Working Paper 519/2005

crisis situations, as well as to specify rules of deployment of the deposit guarantee scheme, will be adopted by the government in the first quarter of 2009.

In line with the European Economic Recovery Plan (EERP) agreed in December 2008 by the European Council, Estonia, as a country facing significant external and internal imbalances, has aimed its budgetary policy at correcting such imbalances.

In the context of the National Reform Programme, the Estonian authorities have enacted a number of structural reforms with neutral or limited short term budgetary impact, in particular measures to support labour market and investment, while there has been less emphasis on measures that support industrial sectors and household purchasing power.

3. MACROECONOMIC SCENARIO

The programme's baseline macroeconomic scenario, which is used as the reference scenario for the assessment, foresees a deepening of the economic contraction from 2.2% in 2008 to 3.5% in 2009, before returning to a positive growth of 2.6% in 2010. The growth projections in the baseline scenario are more favourable over the whole programme period than those in the Commission services' January 2009 interim forecast (see Table I). The programme also provides a negative risk scenario with a limited set of macroeconomic and budgetary indicators, which appears closer to the Commission services' forecast; this applies not only to real growth projections but also to the evolution of other main macroeconomic variables. Cyclical conditions in the baseline scenario are expected to deteriorate considerably, with the output gaps as recalculated by Commission services based on the information in the programme, following the commonly agreed methodology, turning markedly negative in 2009 and 2010. It should be noted, however, that the calculation of potential output growth and hence the output gap should be interpreted with some caution for countries undergoing structural adjustment[3]. In addition, the steep turnaround in the cycle has added further uncertainty to the output gap estimations.

The steeper contraction of domestic demand envisaged in the Commission services' forecast implies a faster unwinding of imbalances than in the programme's baseline scenario, partly also attributable to the assumption of lower world commodities prices in the recent Commission services' forecast. At the same time, the programme's scenario is based on a more favourable assessment of export markets growth.

Overall, the baseline macroeconomic scenario in the programme appears favourable, in particular for 2009 and 2010, taking into account the further deterioration of short-term indicators in the last months of 2008 and beginning of 2009. A further deterioration of the economic situation at the global level and in the main partner economies of Estonia, as well as delayed restructuring of the economy, could bring an even deeper and/or prolonged recession that currently foreseen, posing risks to the expected return to near-potential growth by the end of the programme period.

[3] Output gap calculations provided in the most recent programme update differ from Commission services' calculations made on the basis of the information in the programme according to the commonly agreed methodology. In particular this is so for 2007 (by 2¼ percentage points) and to a lesser extent for 2008 (by ½ percentage points), since the authorities treated high employment increase of 2007 as a partly structural change. The differences are more modest for 2009 and the outer years of the programme.

Table I: Comparison of macroeconomic developments and forecasts

	2008		2009		2010		2011	2012
	COM	CP	COM	CP	COM	CP	CP	CP
Real GDP (% change)	-2.4	-2.2	-4.7	-3.5	1.2	2.6	4.8	5.0
Private consumption (% change)	-2.3	-2.0	-3.4	-2.4	0.8	2.0	5.0	5.4
Gross fixed capital formation (% change)	-5.7	-6.4	-12.3	-12.9	-0.2	5.1	4.8	4.9
Exports of goods and services (% change)	0.5	-1.2	-1.6	0.0	1.5	3.1	5.7	5.8
Imports of goods and services (% change)	-5.5	-5.7	-3.2	-2.8	0.5	3.2	5.0	5.3
Contributions to real GDP growth:								
- Final domestic demand	-2.3	-2.7	-5.8	-5.3	0.4	2.7	4.3	4.7
- Change in inventories	-5.1	-2.3	-0.2	-0.3	0.0	0.1	0.2	0.2
- Net exports	5.1	4.0	1.4	2.2	0.8	-0.2	0.3	0.2
Output gap[1]	2.1	0.9	-5.4	-5.7	-6.4	-5.9	-3.9	-1.7
Employment (% change)	-1.3	-0.3	-4.1	-3.4	-1.2	-0.7	0.2	0.0
Unemployment rate (%)	5.1	5.3	8.8	8.6	9.7	9.3	9.0	8.8
Labour productivity (% change)	-1.6	-2.0	-0.7	-0.2	2.3	3.3	4.6	5.0
HICP inflation (%)	10.6	10.6	3.2	4.2	2.7	2.8	3.0	3.2
GDP deflator (% change)	8.5	8.8	3.7	4.4	2.0	3.0	3.3	3.4
Comp. of employees (per head, % change)	14.8	14.4	4.3	5.1	2.8	5.3	8.2	8.5
Net lending/borrowing vis-à-vis the rest of the world (% of GDP)	-8.8	-10.5	-4.2	-5.1	-2.6	-5.0	-4.7	-4.7

Note:

[1]In percent of potential GDP, with potential GDP growth according to the programme as recalculated by Commission services.

Source:

Commission services' January 2009 interim forecasts (COM); Convergence programme (CP)

4. BUDGETARY STRATEGY

4.1. Budgetary implementation in 2008

In 2008 the general government balance fell far short of the planned surplus of 1.3% of GDP in the previous programme update, and is now estimated to be a deficit of 2.0% of GDP. Taking into account worsening cyclical conditions, this implies a deterioration in the structural primary balance compared with a year earlier of around 2¼% of GDP.

The shortfall compared with the initial target was caused by markedly lower revenue, with the impact amounting to around 5% of GDP (see Table 1 in Annex 2). Lower revenue was mainly a result of a sharp contraction in domestic demand, which was in turn caused by falling confidence, less favourable financing conditions and unravelling of the real estate boom. The underperformance mostly related to shrinkage in taxes on production and imports, which took place despite excise tax rate increases in 2008, partly since a surge of spending on goods subject to those taxes in late 2007 anticipated these increases, resulting also in boosting 2007 revenue. Direct taxes and social contributions were also affected by the downturn, albeit to a lesser extent. Lower than initially planned absorption of EU structural funds (without a significant impact on the overall balance) was another substantial factor contributing to lower revenue.

Lower than planned revenue was to some extent offset by lower-than-initially-planned expenditure, with a positive impact of around 2% of GDP. This partly relates to the adoption of a restrictive supplementary budget in June 2008 and is partly a result of the abovementioned

delays in the implementation of EU structural funds. Expenditure targets of previous years are not directly comparable to the target in the most recent programme update due to the reclassification of certain entities into the government sector during 2008[4].

4.2. Near-term budgetary strategy

Projections in the programme are based on the 2009 state budget adopted by Parliament (*Riigikogu*) on 11 December 2008 and, for the outer years of the programme, take into account the State Budget Strategy 2009-2012 approved by the government on 29 May 2008. The programme a deficit of 1.7% of GDP in 2009; a deficit is projected across all subsectors of the general government, with the largest share of the deficit (1.3% of GDP) attributable to the central government, 0.3% to social security funds and 0.1% to the local governments. The deficit is expected to narrow to 1.0% in 2010 and to turn to modest surpluses in 2011 and 2012.

Table II. Main budgetary measures for 2009

Revenue measures[(a)]	Expenditure measures[(b)]
Measures in response to the downturn	
	• Advancement of adoption and enforcement of amendments to the Labour Law act (0.2% of GDP)
Other measures	
• Increase in social tax minimum contribution basis from 2 700 EEK to 4 350 EEK (0.4% of GDP) • Increase in unemployment insurance contribution rate (0.1% of GDP) • Increase in VAT reduced rate from 5% to 9% and limiting the use of reduced VAT rate (0.1% of GDP) • Impact of changes in income tax legislation that took place in 2008 (-0.3% of GDP)	• Increase in pensions (1.0% of GDP)
Note: [(a)] Estimated impact on general government revenue [(b)] Estimated impact on general government expenditure Source: Commission services, 2008 update of the Convergence Programme, national authorities' public information	

Although expenditure growth in the 2009 budget is set to be much lower than in recent years, it nevertheless considerably exceeds the projected nominal GDP growth. This is in part due to a substantial increase in pensions that was due to take effect from April 2009, as the indexation

[4] Mainly the State Real Estate Agency

formula takes into account social tax receipts and inflation of the previous year[5]. The deterioration of tax receipts due to the economic downturn is to some extent mitigated by a postponement of the previously planned income tax rate cut until 2010 and by an increase in the social tax minimum contribution basis. The overall fiscal stance in 2009, as measured by the change in the structural balance, is expected to be restrictive.

The advancement of the adoption and enforcement of the amendments to the Labour Law will inter alia shift part of the burden related to the shedding of labour from employers to the Unemployment Fund. However, the overall impact on the general government budget is expected to be broadly neutral, since it is accompanied by an increase in the unemployment insurance contribution rate. The change is of a permanent nature and aims at increasing the flexibility of the labour market; it is also timely since enhancing flexibility of the labour market and easing the burden on employers will be particularly relevant given the prospective scale of economic adjustment.

[5] The government indicated in February 2009 that the pension increase would be pared back as an economy measure.

Table III: Composition of the budgetary adjustment

(% of GDP)	2007	2008		2009		2010		2011	2012	Change: 2008-2012
	COM	COM	CP	COM	CP	COM[1]	CP	CP	CP	CP
Revenue	**38.2**	**36.5**	**36.2**	**38.2**	**38.9**	**38.4**	**37.8**	**36.5**	**35.2**	**-1.0**
of which:										
- Taxes on production and imports	13.8	12.0	12.4	12.3	13.3	12.4	13.1	12.8	12.6	0.2
- Current taxes on income, wealth, etc.	7.8	7.8	7.8	7.4	7.0	7.1	6.8	6.0	5.7	-2.1
- Social contributions	11.1	11.8	11.8	12.6	12.2	12.6	12.1	12.1	12.1	0.3
- Other (residual)	5.4	4.9	4.2	5.8	6.4	6.2	5.8	5.6	4.8	0.6
Expenditure	**35.5**	**38.5**	**38.2**	**41.4**	**40.6**	**41.6**	**38.8**	**36.4**	**35.0**	**-3.2**
of which:										
- Primary expenditure	35.3	38.3	38.0	41.2	40.4	41.3	38.6	36.2	34.8	-3.2
of which:										
Compensation of employees and intermediate consumption	16.5	17.9	17.9	18.5	18.5	18.5	17.6	16.5	15.4	-2.5
Social payments	10.4	12.5	12.5	14.5	14.5	14.6	14.1	13.2	12.9	0.4
Subsidies	0.8	0.9	1.1	1.0	1.1	1.0	1.1	1.1	1.1	0.0
Gross fixed capital formation	5.4	5.2	5.1	5.4	5.1	5.4	5.0	5.0	5.0	-0.1
Other (residual)	2.2	1.7	1.4	1.7	1.2	1.7	0.8	0.6	0.4	-1.0
- Interest expenditure	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.0
General government balance (GGB)	**2.7**	**-2.0**	**-1.9**	**-3.2**	**-1.7**	**-3.2**	**-1.0**	**0.1**	**0.2**	**2.1**
Primary balance	**2.9**	**-1.8**	**-1.8**	**-3.0**	**-1.5**	**-2.9**	**-0.8**	**0.3**	**0.4**	**2.2**
One-off and other temporary measures	0.4	0.2	0.2	0.0	0.1	0.0	0.4	0.1	0.0	-0.2
GGB excl. one-offs	**2.3**	**-2.1**	**-2.1**	**-3.2**	**-1.8**	**-3.2**	**-1.4**	**0.0**	**0.2**	**2.3**
Output gap[2]	9.0	2.1	0.9	-5.4	-5.7	-6.4	-5.9	-3.9	-1.7	-2.7
Cyclically-adjusted balance[2]	-0.1	-2.6	-2.2	-1.6	0.0	-1.3	0.8	1.3	0.7	2.9
Structural balance[3]	**-0.4**	**-2.8**	**-2.4**	**-1.6**	**-0.1**	**-1.3**	**0.4**	**1.2**	**0.7**	**3.1**
Change in structural balance		*-2.4*	*-2.0*	*1.2*	*2.3*	*0.3*	*0.5*	*0.8*	*-0.5*	
Structural primary balance[3]	-0.3	-2.6	-2.2	-1.4	0.1	-0.9	0.6	1.4	0.9	3.1
Change in structural primary balance		*-2.3*	*-1.9*	*1.2*	*2.3*	*0.4*	*0.5*	*0.8*	*-0.5*	

Notes:

[1]On a no-policy-change basis.

[2]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.

[3]Structural (primary) balance = cyclically-adjusted (primary) balance excluding one-off and other temporary measures.

Source:

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

4.3. Medium-term budgetary strategy

The medium-term budgetary strategy of the programme is to achieve a structural surplus, i.e. to over-achieve the medium term objective (MTO), which is defined as a structural balance. There has been no change in the medium-term objective compared to the previous programme update.

On the basis of output gaps and the structural balance as recalculated by the Commission services, the fiscal position was below the MTO in 2008 and is expected to remain so also in 2009. According to the programme, the MTO is expected to be achieved in 2010, with fiscal policy remaining restrictive throughout 2009-2011 and turning mildly expansionary thereafter. The programme posits an increase in the structural balance of ½% of GDP in 2010 and ¾% of GDP in 2011.

The planned adjustment results from a greater fall in the projected expenditure-to-GDP ratio than the revenue-to-GDP ratio. The fall in the expenditure ratio reflects projected low growth of compensation of employees and intermediate consumption and nominal declines in other

current expenditure. However, no measures underpinning the declining share of public sector wages, intermediate consumption and other expenditure in GDP beyond 2009 are spelled out in the programme. The share of social transfers in overall expenditure is set to decline in line with slowing wage growth and subsiding inflationary pressures, due to the pension indexation formula is force. Investment expenditure, largely related to the absorption of EU structural funds, is expected to remain at high levels of around 5% of GDP and to increase further towards the end of the programme period. On the revenue side, taxes on production and imports and social contributions are set to recover, given the projected turnaround of the economy. At the same time the share of taxes on income and wealth is expected to continue declining, taking into account planned cuts in the flat rate of corporate and personal income tax from its current 21% to 20% in 2010, 19% in 2011 and 18% in 2012, as foreseen by the legislation in force.

4.4. Risks to the budgetary targets

As discussed in Section 3, the baseline scenario provided in the most recent Convergence Programme update, which is used as a reference scenario for the assessment, appears more favourable than the Commission services' January 2009 interim forecast. The negative risk scenario provided in the programme is closer to the Commission services' current assessment of the macroeconomic outlook. However, the deterioration of the general government balance by 0.8 percentage points of GDP for 2009 and by 1.5 percentage points of GDP for 2010 expected in the negative risk scenario, compared to the baseline, still seems to take insufficiently into account all risks to the budgetary outlook stemming from a likely steeper and more prolonged recession.

In particular, the projected receipts of indirect taxes may prove to be optimistic taking into account an abrupt decline in private consumption due to the adjustment in the labour market, low household confidence and limited availability of new credit. This is already evident from indirect tax receipts in 2008, when receipts were lower than a year earlier despite still-positive nominal growth in private consumption in 2008 and several excise tax rate increases that took place early in the year. An additional risk factor comes from planned sales of non-financial assets in 2009 that may be difficult to achieve in current subdued real estate market conditions.

Budgetary measures related to 2009 are sufficiently spelled out in the programme and are overall plausible. However, there is insufficient information in the programme to back up the projected decline in the expenditure-to-GDP ratio in 2010 and beyond, even taking into account lower growth in pensions due to the indexation formula in force. There is thus a risk that a desirable consolidation of public finances from 2010 onwards will prove more muted than projected in the programme and that a return to the MTO will only be achieved beyond the forecast horizon.

The programme does not rely on significant one-offs and temporary measures. The Commission services do not currently consider a deficit-reducing measure in 2010 related to a temporary return to an additional basic exemption starting from a second child to be of a one-off nature. Moreover, the Commission services did not take into account deficit-reducing one-offs related to sales of non-financial assets above the historical average in 2009 and 2011, given the high uncertainty related to sales of non-financial assets in current real estate market conditions.

While nominal fiscal targets have often been outperformed in Estonia in recent years (see Figure 2 in Annex 2), it should be noted that this outperformance was achieved on the back of

very strong nominal growth and buoyant revenue. Moreover, outperformance of the targets in recent years until 2007 took place despite a practice of adopting expansionary mid-year supplementary budgets. It should be noted, however, that Estonia has also implemented successful fiscal consolidations, most recently in 2000 in the aftermath of the Russian crisis.

Overall, the budgetary outcomes are subject to downside risks in the short and medium term. This in particular concerns 2009 and 2010, when macroeconomic projections of the programme are more favourable than those in the Commission services' January 2009 forecast. However, a return to the MTO beyond 2010 may also prove challenging without substantial expenditure-reducing measures, which are insufficiently explained in the programme.

5. DEBT DEVELOPMENTS AND LONG-TERM SUSTAINABILITY

5.1. Debt developments

The general government gross debt ratio remained on a declining trend until 2007, reaching a trough of 3.5% of GDP by the end of that year. During 2008 the ratio started rising and is expected to have reached 4.3% of GDP, mainly on account of increasing local government debt and, to a lesser extent, an increase in central government debt due to the borrowing by the State Real Estate Agency.

The general government has a net asset position. At the end of 2007, accumulated gross assets (including currency and deposits, debt securities and quoted shares, based on Eurostat data) of the general government were around 15% of GDP. Of these reserves, around 11½% of GDP were attributable to the central government, 2% to social security funds and 1½% to the local governments. Financing of the deficit of 2008 already resulted in some decline in central government assets, to around 8½% of GDP at the end of 2008 (based on preliminary Ministry of Finance data).

The programme expects the debt-to-GDP ratio to remain broadly stable over 2008-2010 and to decrease further in the outer years of the programme, assuming thus financing the deficit entirely by running down of the existing reserves. A favourable public finances outlook in the programme entail risks that the debt level will increase further than projected, in particular regarding local governments. In the Commission services' January 2009 forecast it is assumed that the general government deficit of 2009-2010 will be financed by a combination of new borrowing and gradual running down of reserves, although the exact proportion between sources of financing is subject to uncertainty, given the disruptions on the global financial market and possible difficulties in securing new financing on satisfactory conditions.

Table IV: Debt dynamics

(% of GDP)	average 2002-06	2007	2008		2009		2010		2011	2012
			COM	CP	COM	CP	COM	CP	CP	CP
Gross debt ratio[1]	**5.0**	**3.5**	**4.3**	**3.7**	**6.1**	**3.7**	**7.6**	**3.5**	**3.0**	**2.8**
Change in the ratio	-0.1	-0.8	0.8	0.2	1.9	0.0	1.5	-0.2	-0.5	-0.2
Contributions[2] *:*										
1. Primary balance	**-1.8**	**-2.9**	**1.8**	**1.8**	**3.0**	**1.5**	**2.9**	**0.8**	**-0.3**	**-0.4**
2. "Snow-ball" effect	**-0.4**	**-0.4**	**0.0**	**-0.1**	**0.3**	**0.2**	**0.1**	**0.0**	**-0.1**	**0.1**
Of which:										
Interest expenditure	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.2
Growth effect	-0.4	-0.2	0.1	0.1	0.2	0.1	-0.1	-0.1	-0.2	-0.1
Inflation effect	-0.2	-0.4	-0.3	-0.3	-0.2	-0.2	-0.1	-0.1	-0.1	0.0
3. Stock-flow adjustment	**2.1**	**2.5**	**-1.0**	**-1.5**	**-1.4**	**-1.7**	**-1.6**	**-1.0**	**-0.1**	**0.1**
Of which:										
Cash/accruals diff.	-0.4	0.5		n.a.		n.a.		n.a.	n.a.	n.a.
Acc. financial assets	2.5	2.0		-1.1		-1.2		-0.5	0.3	0.7
Privatisation	0.0	0.0		n.a.		n.a.		n.a.	n.a.	n.a.
Val. effect & residual	0.0	0.0		-0.5		-0.5		-0.5	-0.5	-0.5

Notes:

[1]End of period.

[2]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.

Source :

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

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

This section presents sustainability indicators based on the long-term age-related government spending as projected by the Member States and the EPC in 2006 according to an agreed methodology.[6]

Table 3 in the Annex 2 shows that the projected dynamics in age-related spending are much below the EU average, falling by 1.8 percentage points of GDP between 2010 and 2050. Sustainability indicators for two scenarios are presented in Table 4 in the Annex 2. Even with a projected decrease of the age-related expenditure, while assuming that the structural primary balance remained at its 2008 level, the sustainability gap (S2)[7] would amount to 1.5% of GDP, about 4 percentage points higher than in last year's assessment, which is due to a significantly worse estimated structural primary balance in the starting year. The starting budgetary position

[6] Economic Policy Committee and the European Commission (2006), 'The impact of aging on public expenditure: projections for the EU-25 Member States on pensions, health care, long-term care, education and unemployment transfers (2004-50)', *European Economy − Special Report* No. 1/2006. European Commission (2006), The long-term sustainability of public finances in the European Union, European Economy No. 4/2006. European Commission (2008), *Public finances in EMU – 2008*, *European Economy* No. 4/2008.

[7] 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.

if remained unchanged would indicate a growing debt ratio over the long-term from a current very low level.

While the "2008 scenario" already reflects the weakening of the budgetary position on account of the current economic crisis, the "programme scenario", which is based on the positive end-of-programme structural primary balance, would eliminate the gap. If the budgetary consolidation planned in the programme were achieved, risks to long-term sustainability of public finances would be removed.

Based on the assumptions used for the calculation of the sustainability indicators, Figure 4 in the Annex 2 displays the projected debt-to-GDP ratio over the long-term.

For an overall assessment of the sustainability of public finances, other relevant factors are taken into account, as shown in Table 5 in the Annex 2. Notably, the programme presents the country's contribution to the current process of updating of the common EPC projections, including the increase in the pension index introduced in 2007. However, until the updated projections are validated by the EPC, they are considered as "national projections".

The long-term budgetary impact of ageing is among the lowest in the EU and should remain so according to the programme, even taking into account the effect of the recent change in the pension indexation rule. The current level of gross debt is very low and maintaining sound government finances, in line with the budgetary plans over the programme period, would contribute to limiting the risks to the long-term sustainability of public finances, which are currently at low level.

6. INSTITUTIONAL FEATURES OF PUBLIC FINANCES

The objective of ex ante general government budget to be in balance or in surplus remains the cornerstone of budgetary policy in Estonia. Although the rule does not have any legal underpinning, the principle has been respected by all recent governments. Lately, the implementation of the rule has been adapted by taking into account to a greater extent the cyclical condition of the economy, as the 2007 supplementary budget and 2008 initial budget were in each case adopted with ex ante surpluses. Though discussed, there are currently no explicit plans to switch to a fiscal rule that balances the budget over the cycle, partly due to large uncertainties related to the calculation of the output gap and, as a consequence, cyclically-adjusted balances. Estonia's budgetary process is nevertheless evolving, including plans communicated in the most recent convergence programme to move towards performance- and accrual-based budgeting, initially in the form of pilot projects, as well as to make medium-term planning more stable.

Strengthening the expenditure planning framework currently stands out as one of the main challenges. In recent years, buoyant revenue has resulted in rapid expenditure growth, with frequent changes in expenditure targets. The lack of a firm expenditure rule and weak medium-term planning have resulted in expenditure targets set in the state's medium-term budgetary strategy (usually adopted in May) being often substantially revised during autumn budgetary process, and sometimes changed further through the adoption of mid-year supplementary budgets. Large expenditure shortfalls (over 6% of total planned expenditure on average during 2003-2007) indicate that expenditure needs might have been overestimated. While carrying over to the next budgetary year the part of the expenditure that has not been implemented

mitigates the risk of end-year expenditure surges, it makes the budgetary process less predictable and transparent[8].

The relatively low size of the government sector and the composition of tax revenue and expenditure favour an economic growth-supportive objective for public finances rather than a stabilisation objective. Characteristically for a catching-up economy, performance indicators related to the main functions of the state remain (sometimes considerably) below the EU average. The role of fiscal policy in supporting growth and external competitiveness is discussed in more detail in Annex 1.

7. ASSESSMENT

This section assesses the budgetary strategy, taking into account risks, in the light of (i) the adequacy of the fiscal stimulus package in response to the Commission Communication of 26 November 2008 on the European Economic Recovery Plan (EERP) as agreed by the European Council conclusions on the European Economic Recovery Plan (EERP) on 16 December 2008 and the overall fiscal stance (ii) the criteria for short-term action laid down the above mentioned Commission Communication, and (iii) the objectives of the Stability and Growth Pact.

In line with the European Economic Recovery Plan (EERP), Estonia, as a country facing significant external and internal imbalances should essentially aim its budgetary policy at correcting such imbalances. The considerable deterioration of the fiscal position in 2008 already provided a sizeable fiscal stimulus in response to the worsening cyclical conditions in that year. Taking into account exiting imbalances, as well as risks to the budgetary outcome and difficulty in securing new financing at acceptable conditions due to market risk aversion, the overall restrictive fiscal stance planned in 2009 and 2010 is an adequate response to current macroeconomic challenges. Moreover, fiscal multipliers are rather low in Estonia due to the relatively small size of the public sector and high degree of openness of the economy, while in current circumstances the authorities also consider it important to retain market confidence and with a view to euro adoption to limit the budgetary deterioration.

Structural reforms are an important element of the EERP and are a relevant avenue for policy action in Estonia in light of a limited scope for fiscal stimulus due to the external competitiveness position. In the context of the National Reform Programme, the Estonian authorities have enacted a number of measures to support labour market and investment, while there has been less emphasis on measures that support industrial sectors and household purchasing power. Two measures to facilitate labour market transition are the recent adoption of the modernised Labour Law and an ongoing reform of the Public Service Law to raise labour market flexibility, while increasing unemployment benefit rates and broadening the range of beneficiaries to enhance security. These measures are related to the medium-term reform agenda and the country-specific recommendation proposed by the Commission on 28 January 2009 under the Lisbon Strategy for Growth and Jobs.

Fiscal policy was counter-cyclical in 2008 against the worsening cyclical conditions and entering economic "bad times", with a deterioration of the structural balance of around 2% of

[8] See also report by the National Audit Office of Estonia "Activities of the Ministry of Finance in developing budgeting principles", October 2008, www.riigikontroll.ee

GDP according to the most recent update of the convergence programme and around 2¼% of GDP according to Commission services' January 2009 forecast. The fiscal stance is projected to turn restrictive from 2009 onwards as the authorities aim to limit the deterioration in public finances, before turning mildly expansionary in 2012.

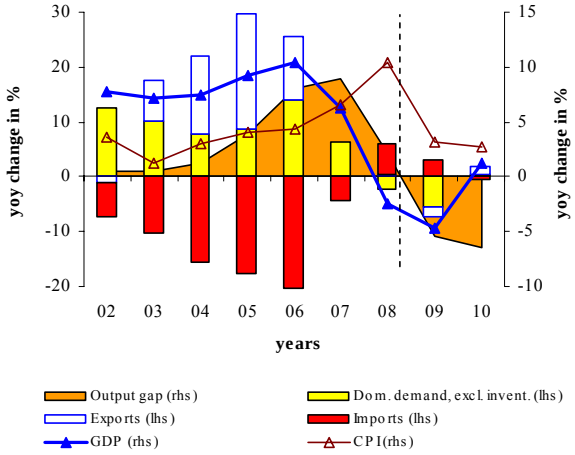
The MTO, defined as a structural balance, is projected to be reached in 2010, according to the programme, and to be maintained by a margin thereafter. However, the programme is based on more favourable macroeconomic scenario than Commission services' January 2009 forecast and does not provide sufficient information to back the expenditure-based consolidation from 2010 onwards, with respective risks to the attainment of returning to the MTO already in 2010. Although the safety margin against normal cyclical fluctuations is respected in all years starting from 2009, this may become insufficient, due to the severe downturn, to prevent breaching the 3% threshold in 2009 and 2010. It should be noted, however, that the current assessment was finalised on 18 February and does not take into account the subsequent adoption of the restrictive supplementary budget.

ANNEX 1. SPECIAL TOPIC: KEY CHALLENGES FOR PUBLIC FINANCES WITH A PARTICULAR FOCUS ON ITS CONTRIBUTION TO GDP GROWTH AND EXTERNAL COMPETITIVENESS

The present section is in two parts, both related to the challenges which were identified in the assessment[1] of Estonia's December 2007 convergence programme update (overheating, external imbalances, wages and competitiveness). The first part presents an overview of the structure of the economy and developments in industrial output, labour costs as well as of exports. It highlights that the risks involved in the macroeconomic imbalances have now materialised into a sudden growth stop. On the basis of this assessment, the second part discusses the main challenges for fiscal policy, with a particular focus on its contribution to GDP growth and external competitiveness.

1. RISKS HIGHLIGHTED IN LAST YEAR'S ASSESSMENT HAVE MATERIALISED

Figure 1: Estonia - Output gap, contributions to GDP growth and CPI



Source: Commission services

Over the 2005-2007 period[2], Estonia experienced above-potential growth, fostered by expansionary monetary conditions and an accelerated financial integration made possible by the predominance of foreign-owned (predominantly Swedish) banks drawing on international credit. A combination of accelerating inflation and further widening of external deficits (see Figure 1) indicated that Estonia's economy was overheating. Optimistic expectations about future income, as wages strongly increased, boosted domestic demand as well as imports.

In 2007, as growing imbalances appeared unsustainable[3], prompting the bursting of the housing boom, with interest rates rising and credit conditions tightening in a less favourable international environment, investment and domestic consumption sharply slowed down. This entailed the turn of the economic cycle, which had begun in 2000 with the end of the Russian crisis. As a result, growth sharply declined from 6.3% in 2007 down to contraction of around 2.5% in 2008 (Figure 1).

1.1. Structural changes in the economy

Value-added growth in 2005-2007 was high (8.5% on average). Output growth in construction (18%) was well ahead of those in total market services and industry (both around 10%), in an increasingly "non-tradable" economy (Figure 2). In 2007, the dominance of market services

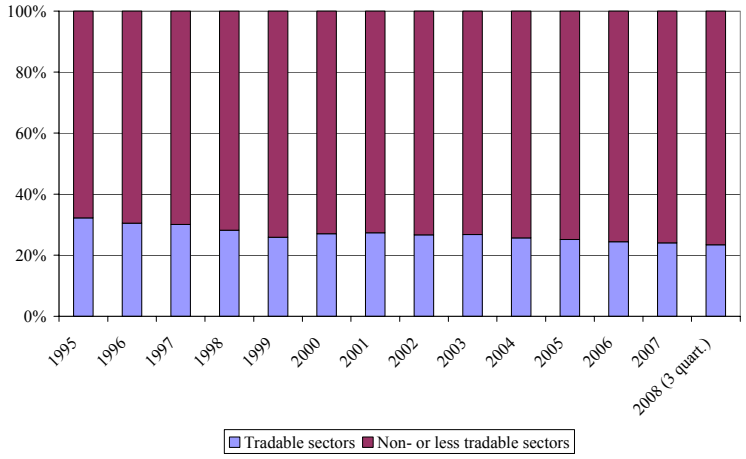
[1] Estonia: Macro Fiscal Assessment. An analysis of the November 2007 update of the Convergence Programme. http://ec.europa.eu/economy_finance/publications/publication10366_en.pdf

[2] The first part focuses on the years 2005 to 2007, given the role of this period in the present economic slowdown.

[3] The current account deficit reached 18.3% of GDP in 2007.

ratcheted up close to 55% (in real terms) of total value-added, pointing to a too rapid expansion of market services activities. Employment surged in the non-tradable sectors[4] (growth of 5.4% annually), while FDIs and capital formation concentrated in the banking and real-estate-related sectors. Manufacturing registered TFP growth significantly higher than the services and the construction sectors, while resources directed at it were declining in relative terms. This relative misallocation of resources led to macroeconomic imbalances, triggering the abrupt end of the high phase of the economic cycle.[5]

Figure 2: VA shares by sectors 1993-2007 in nominal terms



Source: Statistics Estonia

1.2. Manufacturing output

Over the 2005-2007 period, growth in manufacturing was maintained at about 11% in real terms. The good value-added outcome as well as the high TFP contribution to growth could be explained by openness to trade, continuous restructuring and relative employment losses: the share of manufacturing in total employment declined and approached its share in value-added. Vacancies were on average higher than in most other subsectors, reflecting capacity constraints, including labour mismatches, with a lack of qualified technicians and engineers[6], clearly indicating that more resources could have been absorbed by the sector. The sector never registered investment levels corresponding to its weight in total value-added: its investment share, even though stable and sizeable, fell increasingly below the share in total value-added.

1.3. Labour cost developments

In 2007, after several years of rapid growth supported by large credit inflows, Estonia's economy was facing capacity constraints, in particular a progressive tightening of the labour market, which aggravated inflation. Labour shortages appeared in many sectors, driving up wages growth (Figure 3) up to 20.4% (nominal). Nominal unit labour costs in most subsectors

[4] Traditionally, the goods sector has been considered as producing tradable output, while the services sectors have been considered as producing non-tradable output. But, obviously, many traded goods contain non-traded components in the form of retailing services, while advances in transportation and information availability, as well as FDIs and improved competitiveness, can turn a formerly non-traded good into a traded one. Moreover, certain market services can also have a tradable character.

[5] J. Rahman, "*Current account developments in New Member States of the EU: equilibrium, excess and EU-Phoria*", IMF Working Paper WP/08/92, April 2008. See also B. Lamine, *"Estonia: overheating and sectoral dynamics"*, ECFIN Country Focus Volume 5, Issue 7 of 01.08.2008.

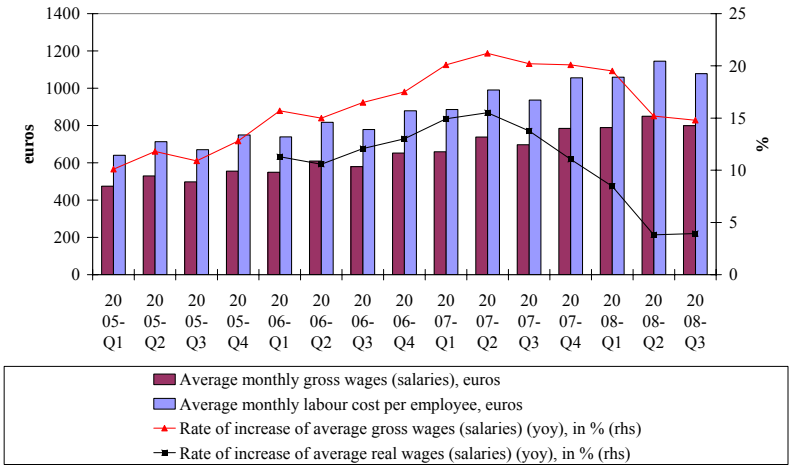
[6] Salaries in the services (market and non-market) sector in Estonia were generally higher than in manufacturing, given the volume of financial resources entering those sector and the relative absence of competition from outside. Therefore, the country, as many other European countries, lacks engineers or technicians: not only do graduates in social sciences outnumber engineers and technicians, but the latter are tempted to work in the services sector.

of manufacturing were rapidly growing, indicating that cost-competitiveness in the sector was weakening.[7] In parallel, structural constraints, such as caused by significant emigration, skills mismatches and ageing, emerged as important impediments to economic growth. In 2008, the gap between labour productivity growth and real wage growth, even though diminishing, was still too wide (around 5% in 2008Q3), in particular for a contracting economy, the recovery of which crucially depends on a large contribution from exports.

1.4. Exports developments

The development of Estonia's trade flows with the EU is facilitated by the country's hard peg (currency board) with the euro, as well as by the proximity and facility of trading with Latvia and Lithuania (similar transition economies), Finland, Sweden and Germany. However, the proportion of goods going to the EU declined (78% in 2005 / 70% in 2007), while the proportion of services only slowly increased (69% in 2005 / 71% in 2007). In 2007, Estonia's exports of goods and services to GDP ratio was declining, but was still higher (78% in 2007[8]) than in the other two Baltic states.

Figure 3: Wages and labour costs



Source: Statistics Estonia – Commission Services' calculations

Over the 2005-2007 period, goods represented 72% of Estonia's total exports, and 83% of total imports. In 2008, the sharp fall in domestic demand reduced the import of goods, while a part of domestic production was redirected towards foreign markets, resulting in a swift narrowing of the external deficit (-18.3% of GDP in 2007 / -10.1% in 2008). However, exports suffered from the declining quasi-transit trade with Russia (vehicles, mineral products and related transport). In 2008, additional costs related to limited CO^2 quotas[9] made Estonia's exports of electricity to Finland less competitive vis-à-vis hydro-electricity produced in the Nordic countries.

In the present economic downturn, despite the increasingly difficult international environment, exports are still expected to play a major role in Estonia's economic recovery:

- manufacturing, given its large contribution to exports, could partly offset subdued domestic demand. In April 2008, more than 60% of manufactured production was exported. Moreover, when excluding certain low-skilled subsectors of manufacturing, which were facing cost-competitiveness problems, manufactured products constituted an increasing share of goods exports.

[7] The growth of real unit labour costs in manufacturing accelerated to 4% yoy in 2007, indicating that profitability of manufacturing enterprises has been weakened as well.

[8] 84% in 2008 – preliminary figure over three quarters.

[9] More recently (October 2008), the European Council agreed more favourable CO^2 quotas for Estonia.

- most services exports were growing over the 2005-2007 period (Figures 5 & 7), contributing positively to GDP growth, with a surplus close to 40% of the large deficit in goods. Two subsectors of services, at least, were notable:
  - *transportation:* transport represented 40% of the total export of services, contributing to the total net exports of services for 36%. Transport was however affected by regional political tensions and the development by Russia of its own ports on the Baltic sea. Estimates point to a possible negative impact of 1.5-2% of GDP annually[10];
  - *travel:* travel and tourism was one of the most successful economic activities in Estonia. Travel represented 27% of the total export of services, contributing to the total net export of services for 38%.

Merchanting activities corresponded to 14% of the total net exports of services. The growing share of *construction, personal and financial services* was partly offset by significant imports and was likely to suffer from the unfolding economic slowdown.

1.5. The competitiveness challenge

Estonia's external competitiveness indicators are mixed. The country's exports and market shares of goods considerably expanded over the 2003-2006 period, in particular in 2005 in the wings of the EU accession. This growth in market shares partly reflected persisting positive production costs differential in most EU partner countries. Another factor was that Finnish and Swedish companies have subsidiaries or long-term partners in Estonia, making the use of them more attractive than domestic producers. However, in 2007, market shares started stabilising, after having grown for several years. Average nominal wages were growing considerably faster than labour productivity, affecting enterprises' profitability (through labour costs) and competitiveness (Figures 4 & 5). At the same time, Estonia's external deficit further widened up to 18% of GDP.

The loss of profitability and competitiveness mostly hurt low-skilled and labour intensive sectors such as textiles and certain segments of machinery related to low-skilled subcontracting arrangements with foreign companies. Since machinery was a sector where Estonia's export volumes had considerably expanded till 2006 (Figure 6), these developments had a significant impact on the trade balance. In parallel, the increased tariffs imposed by Russia on its own timber and wood exports affected Estonia's wood industry, while regional political tensions resulted in a sharp contraction of the transit trade, in particular of mineral fuels, with Russia.

Conversely, most other categories of products (under "Others" in Figure 6), in particular those with lower labour content, were gaining in export market shares over time, in particular in chemicals, plastics, articles of the printing industry, construction supplies, articles of base metals, metal products and miscellaneous manufactured articles. Estonia was taking advantage of the already wide range of its products exported: exports were relatively low (less than 1% of total exports) in only seven categories of goods out of 22, and higher than 4% of total exports in nine categories. Moreover, exports of services, including transportation, remained vigorous (Figure 7).

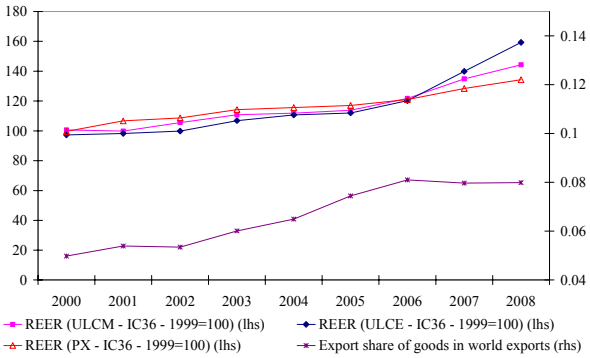
Further losses of market shares can not be excluded in the short run, as the country's real effective exchange rates (REER) have been growing steadily in recent years (Figure 4).

[10] A. Purju, Baltic Rim Economies, 29.02.2008, Bimonthly Review 1, 2008

However, this has been less true with respect to the REER based on export prices. Moreover, Estonia's long term competitiveness indicators remain relatively positive:

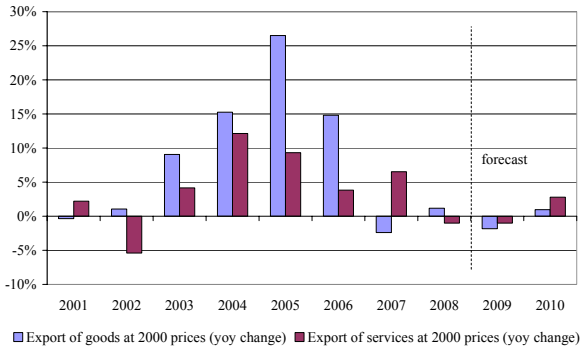
- *the marked increase in the REER over the 2001-2007 period (Figure 5) partly reflects a progressive shift towards higher export product quality,* as suggested by the high TFP growth values in manufacturing, the rising UVR values[11] and the increasing gap between the export deflator and the export price index. Nevertheless, the export of low- and medium-tech goods, where Estonia still has a comparative advantage, increased more rapidly than the high-tech exports. The share of high technology products in total exports at best stabilised (8% in 2006 - 10.1% in 2004), reflecting the small number of companies and the resulting higher volatility in the high-tech sector.

Figure 4: Real effective exchange rates and export share of goods in world exports



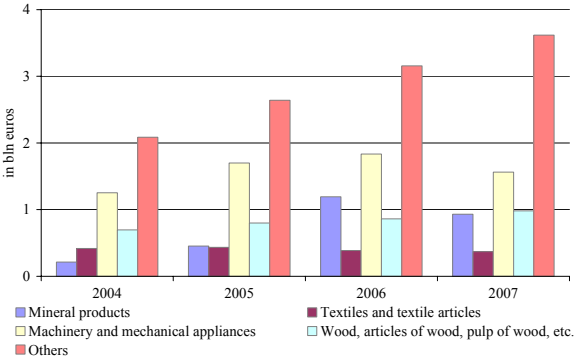
Source: AMECO – Commission services

Figure 5: Estonia's exports of goods and services (at constant prices)



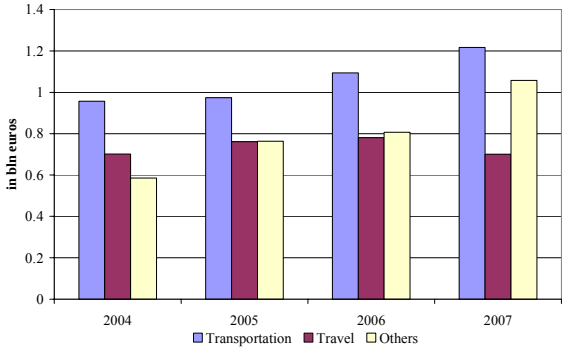
Source: AMECO – Commission services

Figure 6: Estonia's gross exports of goods in volumes



Source: Statistics Estonia – Commission services

Figure 7: Estonia's gross exports of services in volumes



Source: Eesti Pank – Commission services

- Estonia already has a sophisticated export basket, but with quality gaps to exploit[12], as the price per unit paid for exports from Estonia is still lower than prices on the world markets. *Estonia appears therefore to have room to upgrade quality and grow in the existing products. The country also seems to have good possibilities of moving to new products,* as many nearby export activities are expected to emerge naturally over time (thanks to relatively well connected industrial activities or clusters).

[11] UVR is the unit value of a country's exports divided by the unit value of world exports.

[12] EBRD Transition Report 2008.

- *the education system reconciles both quality and equity, and is globally above EU average. In parallel, investment in R&D and innovation is rapidly increasing,* even though from a very low base. That said, domestic enterprises are mostly SMEs (over the 1997-2005 period, 69% of enterprises had less than 10 workers) and their capacity to invest in R&D is therefore limited. As a result, the innovation rate as well as the patent and trademark application rates in Estonia is still rather low. Expenditure on innovation in the exporting sector, which has a large foreign ownership, appears to be quite large, in comparison with sectors oriented to the domestic market. But, it has not necessarily resulted in the launching of products new to markets, but only in products new to firms or in more up-to-date productive capacities, instead.
- *a reallocation of resources from the non tradable sectors to the tradable might be taking place,* as investment is declining the most in construction and market services.

1.6. Conclusions

Over the 2005-2007 period, competitiveness and exports were affected by the rapidly growing unit labour costs, in particular in the labour-intensive subsectors. However, exports hold up fairly well in most other subsectors, partly reflecting a progressive reorienting of the export base and a higher technology content. Capital investment was needed to ensure the necessary restructuring of labour intensive industries and to foster R&D and innovation. But, long term indicators of competitiveness and exports (quality of products, education system, R&D and innovation, structural reallocation) remained favourable. The second part of this section will examine the role Estonia's fiscal policy is playing to support production activities and facilitate the development of the higher-tech and exporting sectors.

2. THE ROLE OF FISCAL POLICY IN SUPPORTING GROWTH AND COMPETITIVENESS

2.1. The size of the government sector and taxation

The size of the Estonian government sector relative to the economy as a whole is rather small: total government expenditure amounted to 39.4% of GDP in 1998, but progressively declined to 35.5% of GDP in 2007, one of the lowest in the EU-27, while averages in the EU-27 and EU-10[13] were respectively 45.7% and 39.9%. The relatively small size of Estonia's government sector might have been one of the factors supporting high growth of recent years. Many studies find that the link between size of the government sector and growth is hump-shaped: when the government sector is very small or underdeveloped, the scant provision of public goods can be an impediment to long-term growth. On the other hand, since the size of the government sector is mirrored in the tax burden, a too high share of government can negatively affect capital accumulation, labour utilisation and productivity. Where exactly lies the optimal size of the government sector remains a matter of debate, but a large number of authors place it between 30% and 40% of GDP. Some studies also suggest that the threshold is lower for small open economies such as Estonia's.[14]

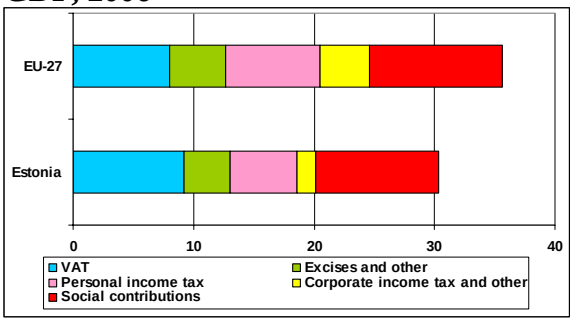
In recent years, Estonia's taxation level (including social contributions) has remained steady at around 31% of GDP, some 6% points below the EU-27 average and one of the lowest in the

[13] Member States that acceded in 2004, except Malta and Cyprus, and Member States that acceded in 2007.

[14] *Public Finances in EMU 2008, European Economy 04/2008.* Similar results are provided in the summary of the literature in the *EU-8 quarterly economic report of May 2006*.

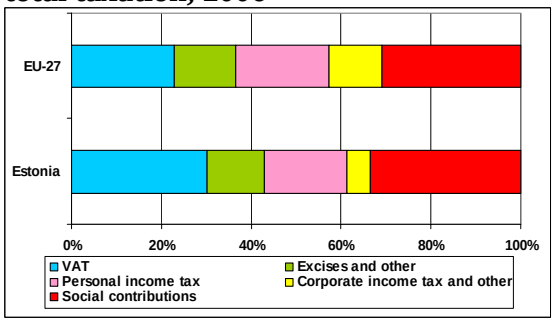
EU. One of the characteristics of the Estonian tax system is a relatively high reliance on indirect taxes. While the share of indirect taxes is similar to the EU average when compared to GDP (Figure 8), it is higher in terms of overall taxation (Figure 9).

Figure 8: Structure of taxes as % of GDP, 2006



Source: European Commission, Taxation trends in the EU, 2008

Figure 9: Structure of taxes as % of total taxation, 2006



Source: European Commission, Taxation trends in the EU, 2008

A deliberate policy of all recent governments in Estonia has been to shift the tax burden from direct taxes on labour and corporate income onto consumption (VAT and excises) as well as on the use of natural resources and pollution. Another feature of the tax system is the unified tax rate on personal and corporate income, which is being progressively reduced by 1 percentage point annually from 26% in 2004 to 18% in 2012[15], when it will equal the VAT rate.

A further characteristic is that corporate tax is levied only on distributed profits; hence, the tax rate on reinvested earning is zero. While this has likely contributed to accumulation of capital and thus speeded up catching-up process, in the longer run preferential treatment of one financing type over the others may hinder restructuring of the economy, since it favours retaining capital in already functioning enterprises.

An analysis of taxation by economic functions[16] (Figure 10) shows even more clearly that the priority lies in taxing less mobile tax bases, especially capital. This has likely contributed to attracting impressive flows of FDIs in Estonia: a synthesis of existing studies on relations between the corporate income tax and FDI suggests a semi-elasticity between corporate income tax and FDI inflows of 2.9%[17]. Indeed, in October 2008, the stock of FDIs in Estonia amounted to 8900 EUR per capita, while it was 3700 EUR in Latvia and 2900 EUR in Lithuania. However, similar share of FDI stock (1300 EUR per capita) was attributable to investments in manufacturing and real estate sector in Estonia.

In Estonia, the share of labour taxes progressively declined from 21.1% of GDP in 1995 and 17.4% in 2000 to 15.4% in 2006, while the share of consumption taxes slightly increased from

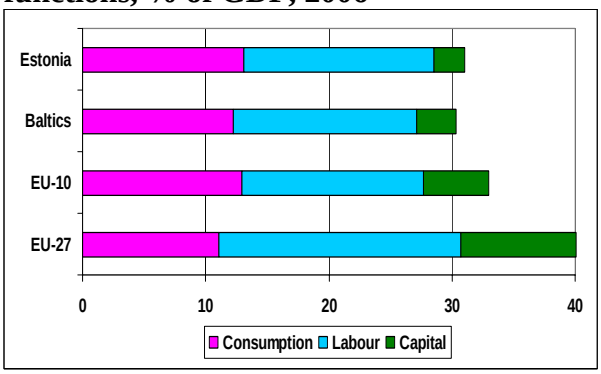
[15] The previously planned tax rate cut from 21% to 20% in 2009 has been postponed until 2010.

[16] The classification of taxes by economic functions is based on detailed revenue data and has been published in *Taxation trends in the European Union, 2008*. Taxes on capital include taxes on business income in the broad sense, including the motor vehicle tax paid by enterprises and the compulsory social contributions paid by self-employed persons. Taxes on labour comprise all taxes directly linked to wages paid by employers and employees, and mostly withheld at the source, including social contributions and taxes on non-employed labour income.

[17] Mooij, de, R., Ederveen, S., 2006, What difference does it make? Understanding the empirical literature on taxation and international capita flows, *European Economy No 261/2006.*

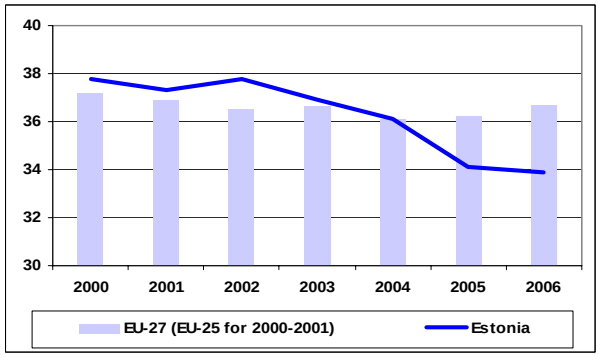
11.8% in 2000 to 13.1% in 2006[18]. This change in the composition of taxation might have been another factor contributing to Estonia's strong economic growth in recent years: as highlighted by recent research[19], shifting taxation from labour to consumption by 1% of GDP in a small open economy can increase both real GDP and employment by ca 0.2% in the long run.

Figure 10: Structure of taxes by economic functions, % of GDP, 2006



Source: European Commission, Taxation trends in the EU, 2008

Figure 11: Implicit tax rate on labour (%)



Source: European Commission, Taxation trends in the EU, 2008

Nevertheless, the taxation of labour (including personal income tax and social security contributions) remains relatively high in Estonia, even though recent tax policy changes have reduced the implicit tax[20] rate on labour (Figure 11), which is now slightly below the EU average.

Labour taxes in Estonia rely more heavily on social security contributions and, in particular, on those paid by employers. The proportion of the latter in the total tax burden is the highest in the EU and has been increasing in recent years, as an unemployment insurance premium, partly paid by employers, was introduced in 2002 and the minimum social tax duty is being gradually increased. In general, the composition of the labour taxes is relevant only in the short term, due to wage rigidities, while, in the longer run, higher labour costs paid by employers are passed on to employees in the form of lower wages.[21] Nevertheless, during recent years of labour market tightness in Estonia, the higher share of labour taxes paid by employers might have had an adverse effect on the competitiveness of the corporate sector.

2.2. Composition of public expenditure

The composition of public expenditure can influence the long-term growth. When comparing the structure of public spending in Estonia and the EU average, it clearly appears that the share of “productive” spending is somewhat higher in Estonia, while the share of "non-productive" spending is considerably lower[22]. In particular, general government’s gross fixed capital

[18] The latter increase *inter alia* reflects an obligation to comply with EU minima.

[19] Public Finances in EMU 2008, *European Economy 04/2008*

[20] Implicit tax rate is the ratio of total tax revenues of the category (consumption, labour or capital) to the potential tax base.

[21] Arpaia A., Carone G. (2004), Do labour taxes (and their composition) affect wages in the short and the long run?, *European Economy No 216/2004.*

[22] The government sector spending can be divided into “productive” spending, which increases the marginal productivity of capital and/or labour, and “non-productive” spending, which has no positive effect on

Table 1: Structure of public spending in % of GDP

	EU-25	Estonia	
	2005	2000	2006
General public services	6.6	3.7	2.6
Defence	1.6	1.4	1.4
Public order and safety	1.8	2.7	2.1
Economic affairs	3.7	3.8	4.2
Environment protection	0.7	0.6	0.7
Housing and community amenities	1.0	0.5	0.0
Health	6.5	4.3	4.0
Recreation, culture and religion	1.0	1.9	2.4
Education	5.2	6.7	6.0
Social protection	18.6	10.8	9.5
incl unemployment benefits	:	0.5	0.2
Total	**46.8**	**36.5**	**33.0**
O.w. compensation of employees	*10.8*	*10.9*	*8.8*
O.w. gross fixed capital formation	*2.2*	*3.8*	*4.5*
O.w. R&D activities	*:*	*0.4*	*0.5*

Source: Eurostat

formation is twice as high in Estonia as is the EU average, reflecting, among other things, investments related to the absorption of EU structural funds. On the other hand, spending on general public services is twice as low in Estonia as the EU average. The biggest difference in terms of total general government expenditure lies, however, in social benefits, where the difference between Estonia and the EU average is close to 10 percentage points of GDP. This low social spending results both from the comprehensive pension system reform enacted in 2002 and the rather low average benefit ratio[23], which has, however, risen somewhat in recent years due to several ad hoc pension increases and the adoption of a more generous indexation formula in 2007.

2.3. Stimulating shift to tradable and competitiveness

The role that public finances can play to support the current restructuring of the Estonian economy is first and foremost to keep the size of the public sector limited. Although a part of the windfall revenue has been saved in recent years, leading to an accumulation of general government assets, a more restrictive fiscal stance would have provided a more appropriate signal to the markets. Public sector employment and public wage growth was fast in 2005-2007, aggravating tightness on the labour market. In addition, incentives to invest into real estate, like tax deductibility of interest rate payments, have been curbed, but not completely abandoned.

The sizeable public infrastructure investment of recent years has contributed, on the other hand, to increasing the growth potential of the economy. This investment is expected to continue in the coming years, supported by the use of EU structural funds, where overall 53.3 bln kroons (more than 20% of GDP) are available in the framework of the 2007-2013 financial framework, including 9.7 bln kroons (ca 4% of GDP) for the transport sector and 1.3 bln kroons (ca ½% of GDP) for the energy sector. However, the use of resources from the EU funds and other programmes remains so far behind what had been planned: in 2007, only 57% of resources foreseen in the budget were used (partly due to delays in the signing procedure of the framework agreement for the 2007-2013 structural funds) and only 2/3 is expected to be used in 2008.[24]

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marginal productivity. The first category of spending mostly covers transport and communication, education, R&D and, in some studies, also healthcare, while the second category includes spending on general government services and social benefits. See European Commission (2004), Public Finances in EU 2004, *European Economy No 03/2004,* Office for Official Publications of the European Communities.

[23] Average pension per GDP per worker, see more on benefit ratios in "The long-term sustainability of public finances in the EU", *European Economy, 04/2006*, Office for Official Publications of the European Communities European Commission (2006).

[24] Explanatory memo accompanying 2009 draft budget.

Given the importance of competitiveness and of a reallocation of resources to the tradable sector in Estonia, the authorities are exploring some additional measures, including in the framework of the new National Reform Programme. In particular, two bodies – Enterprise Estonia and KredEx (see box) – are used as channels for funds from the European Regional Development Fund and for policies oriented at increasing productivity and export potential. In addition, the recently established Estonian Development Fund provides risk capital financing for start-ups with growth potential.

2.4. Conclusions

Estonian public finances have been generally supportive of growth, mainly due to a limited size of the general government sector and the implemented policy of shifting taxation from the production factors to a more growth-neutral taxation of consumption. At the same time labour taxes remained relatively high. The structure of the general government expenditure has been likewise oriented towards enhancing growth, with productive spending being on average somewhat higher than in the EU, and the share of non-productive spending considerably lower. Nevertheless, there is room to enhance the productivity of the economy though improving the efficiency of services provided by the public sector and by upgrading public infrastructure, where an effective use of the EU structural funds in the coming years would be advantageous. A positive impulse to increasing the competitiveness of the economy and shifting resources towards external demand can be provided through specific bodies.

Box. Enterprise Estonia, KredEx and the Estonian Development Fund

To address the need of the Estonian economy to shift production towards tradable sectors, as well as to boost competitiveness of enterprises, several micro-economic measures are elaborated in the National Reform Programme of Estonia. Implementation of those measures is to a large extent based on the use of specific bodies. The use of those ventures becomes particularly relevant in the short term, when guarantees or direct financing can help alleviate credit rationing.

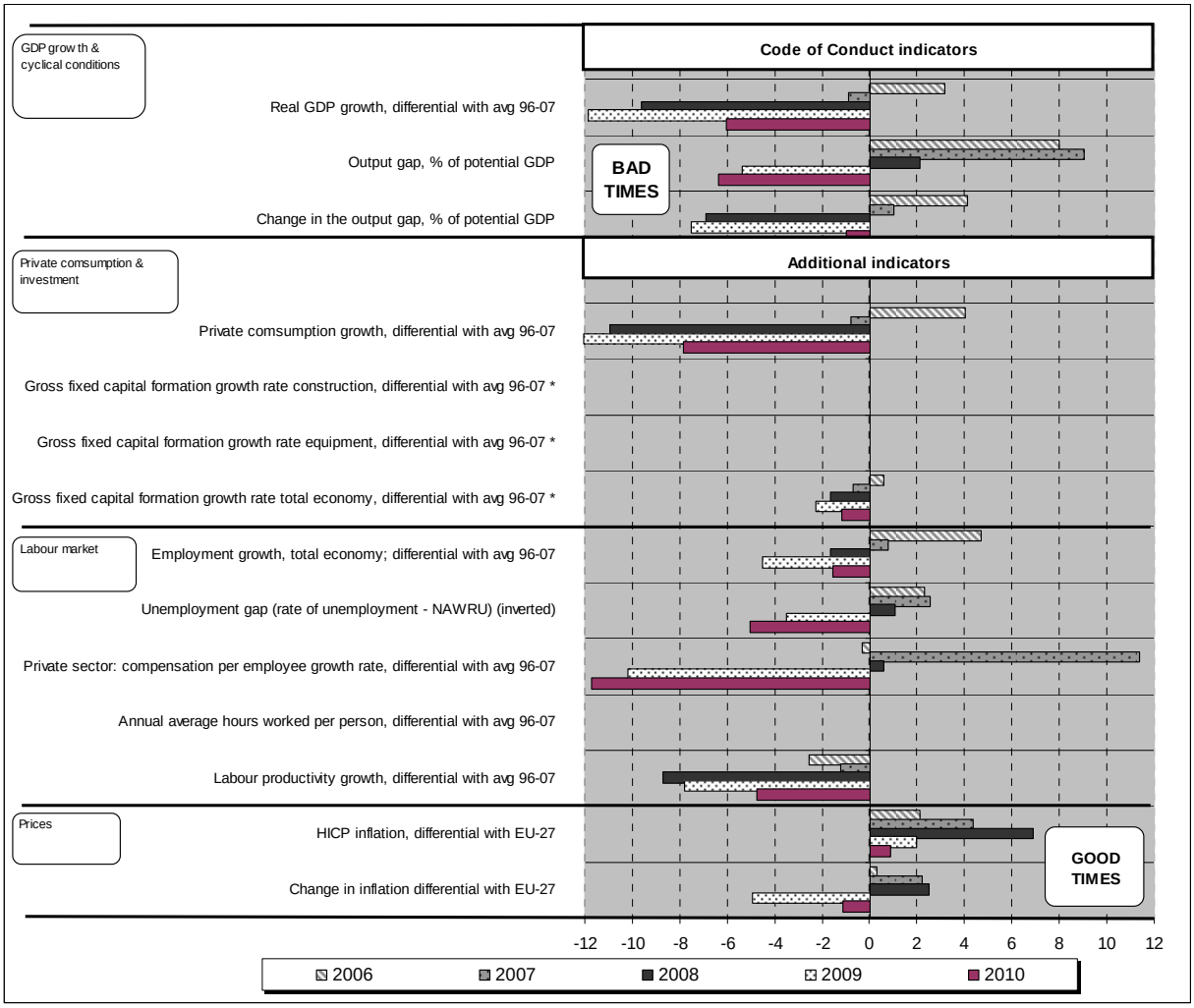
Enterprise Estonia (www.eas.ee) has representative offices in major partner countries and offers various services (marketing support, intermediation of inquiries and business contacts, data bases concerning exports and investments, training, etc) to businesses with the aim to facilitate new markets entry or to finding business partners abroad. In addition, Enterprise Estonia promotes Estonia as a business and tourism destination. Several measures of the National Reform Programme under Objective 5 "Increasing the productivity and international competitiveness of enterprises" are implemented through Enterprise Estonia.

KredEx (www.kredex.ee), the Credit and Export Guarantee Fund, offers business operators an export guarantee against the credit risks of exports, enabling companies to offer customers better terms of payment and to enter new markets. Several types of export and investment guarantees are offered. In addition to facilitating export transactions, KredEx provides start-up, investment and other types of business guarantees for new and growing enterprises. A third line of activities involves providing mortgage guarantees for certain target groups (young families who are tenants in restituted buildings). More recently, activities have been expanded to providing guarantees to apartment associations that wish to improve the energy-efficiency of the buildings, including by providing energy audit services.

The Estonian Development Fund (www.arengufond.ee) was established in 2007 with the aim to perform risk capital investments into the starting and growth-oriented technology companies, together with the private sector, and to carry out socio-economic and technology analyses.

ANNEX 2. ADDITIONAL TABLES AND FIGURES

Figure 1: Good and bad economic times



* These variables have been divided by their standard deviation over the period 2003-2010, with a view to reducing their variability relative to other variables in the graph.

Source: Commission services' January 2009 interim forecast

Table 1: Budgetary implementation in 2008

	2007		2008	
	Planned CP Nov 2007	**Outcome COM**	**Planned CP Nov 2007**	**Outcome COM**
Government balance (% of GDP)	2.6	2.7	1.3	-2.0
Difference compared to target	**0.1**		**-3.3**	
Of which : due to a different starting position end 2007			0.1	
due to different revenue / expenditure growth in 2008			-3.0	
p.m. Denominator effect and residual [2,3]			-0.3	
p.m. Nominal GDP growth (planned and outcome)			14.0	6.0
Revenue (% of GDP)	37.2	38.2	38.2	36.5
Revenue surprise compared to target [1]	**1.0**		**-1.7**	
Of which : due to a different starting position end 2007			1.0	
due to different revenue growth in 2008			-5.0	
p.m. Denominator effect [2]			2.5	
p.m. Residual [3]			-0.3	
p.m. Revenue growth rate (planned and outcome)			17.1	1.3
Expenditure (% of GDP)	34.6	35.5	36.9	38.5
Expenditure surprise compared to target [1]	**-0.9**		**-1.6**	
Of which : due to different starting position end 2007			-0.9	
due to different expenditure growth rate in 2008			2.0	
p.m. Denominator effect [2]			-2.4	
p.m. Residual [3]			-0.2	
p.m. Expenditure growth rate (planned and outcome)			21.6	14.8

Notes:

[1] A positive number implies that the outcome was better (in terms of government balance) than planned.

[2] The denominator effect captures the mechanical effect that, if GDP turns 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

[3] 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.

Source : Commission services

Table 2: Evolution of budgetary targets in successive programmes

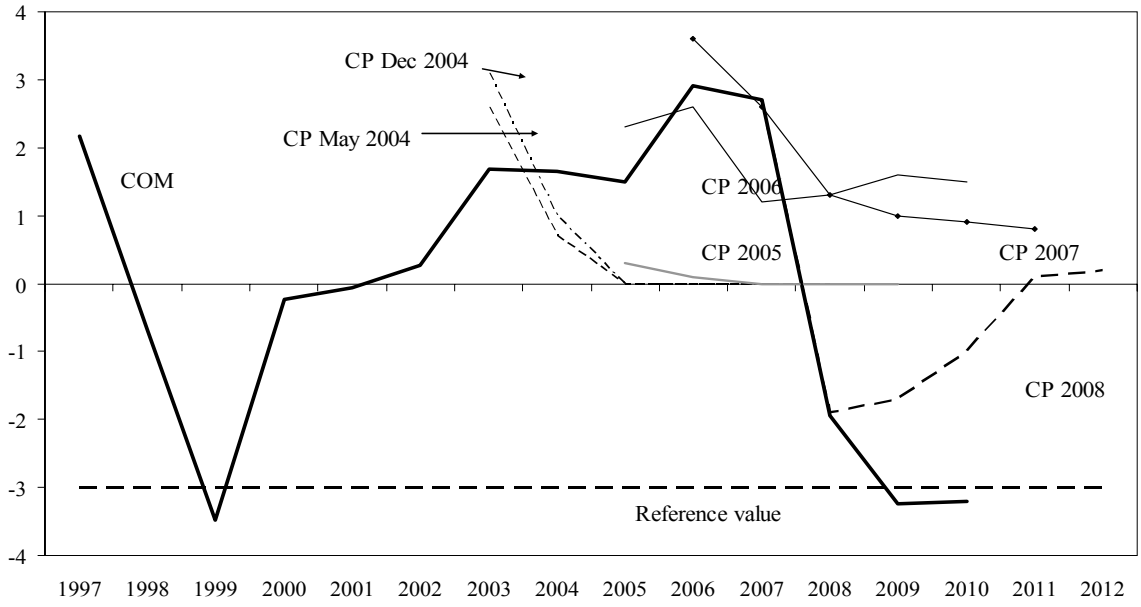
		2007	2008	2009	2010	2011	2012
General government balance (% of GDP)	**CP Dec 2008**	**2.7**	**-1.9**	**-1.7**	**-1.0**	**0.1**	**0.2**
	CP Nov 2007	*2.6*	*1.3*	*1.0*	*0.9*	*0.8*	*n.a.*
	COM Jan 2009	2.7	-2.0	-3.2	-3.2	n.a.	n.a.
General government expenditure (% of GDP)	**CP Dec 2008**	**35.5**	**38.2**	**40.6**	**38.8**	**36.4**	**35.0**
	CP Nov 2007	*34.6*	*36.9*	*37.2*	*36.5*	*35.5*	*n.a.*
	COM Jan 2009	35.5	38.5	41.4	41.6	n.a.	n.a.
General government revenue (% of GDP)	**CP Dec 2008**	**38.2**	**36.2**	**38.9**	**37.8**	**36.5**	**35.2**
	CP Nov 2007	*37.2*	*38.2*	*38.2*	*37.4*	*36.3*	*n.a.*
	COM Jan 2009	38.2	36.5	38.2	38.4	n.a.	n.a.
Structural balance[1] (% of GDP)	**CP Dec 2008**	**-0.1**	**-2.4**	**-0.1**	**0.4**	**1.2**	**0.7**
	CP Nov 2007	*1.2*	*0.8*	*1.4*	*1.3*	*1.2*	*n.a.*
	COM Jan 2009	-0.4	-2.8	-1.6	-1.3	n.a.	n.a.
Real GDP (% change)	**CP Dec 2008**	**6.3**	**-2.2**	**-3.5**	**2.6**	**4.8**	**5.0**
	CP Nov 2007	*7.4*	*5.2*	*6.1*	*6.7*	*7.0*	*n.a.*
	COM Jan 2009	6.3	-2.4	-4.7	1.2	n.a.	n.a.

Note:

[1]Cyclically-adjusted balance excluding one-off and other temporary measures. Cyclically-adjusted balances according to the programmes as recalculated by the Commission services on the basis of the information in the programmes. One-off and other temporary measures are 0.4% of GDP in 2007, 0.2% in 2008, 0.1% in 2009, 0.4% in 2010 and 0.1% in 2011; all deficit-reducing according to the most recent programme. One-offs for the period 2009-2011 are not considered to be of a one-off nature according to the Commission services' January interim forecast.

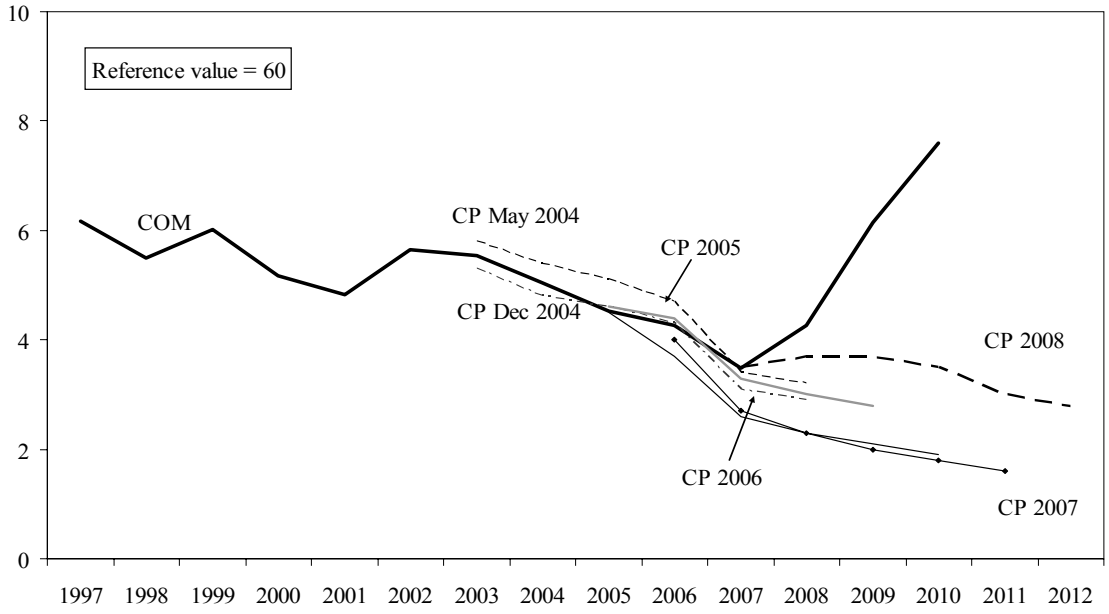
Source:
Convergence programmes (CP); Commission services' January 2009 interim forecasts (COM)

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



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

Figure 3: Debt projections in successive programmes (% of GDP)



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

Table 3: Long-term age-related expenditure: main projections

(% of GDP)	**2004**	**2010**	**2020**	**2030**	**2040**	**2050**	**Change 2010- 50**
Total age-related spending	**17.4**	**16.8**	**15.4**	**15.2**	**14.8**	**15.0**	**-1.8**
- Pensions	6.7	6.8	5.4	4.7	4.4	4.2	-2.6
- Healthcare	5.4	5.8	6.1	6.2	6.4	6.5	0.7
- Long-term care	0.3	0.3	0.4	0.4	0.5	0.6	0.3
- Education	5.0	3.8	3.5	3.8	3.5	3.6	-0.2
- Unemployment benefits	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Property income received	**1.0**	**0.8**	**0.8**	**0.7**	**0.7**	**0.7**	**-0.1**

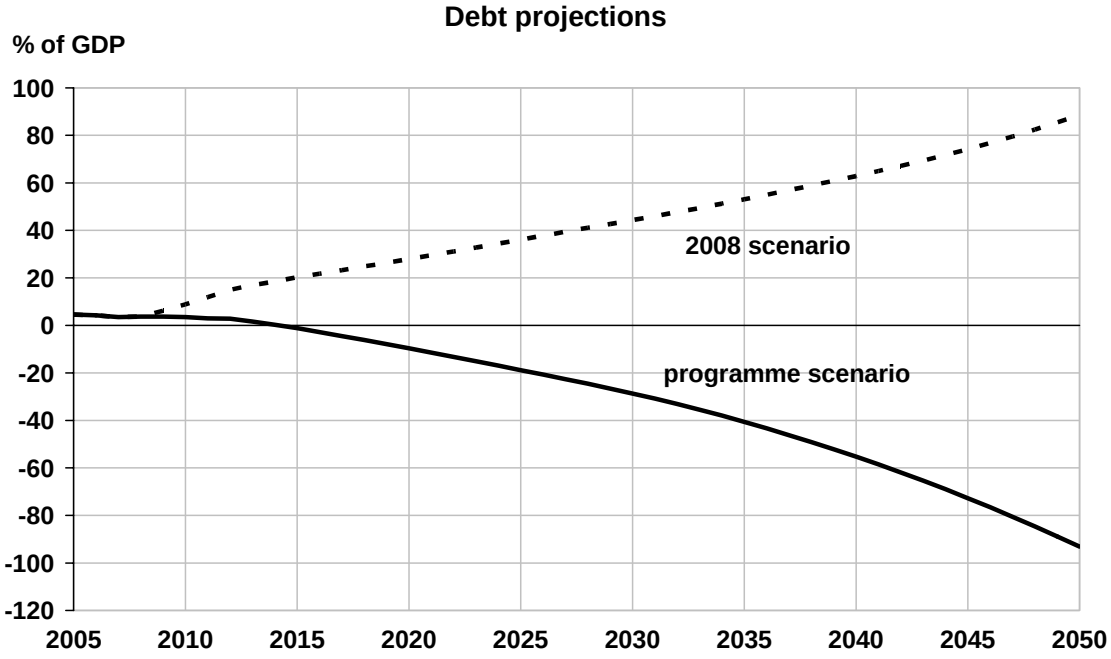
Source: Economic Policy Committee and Commission services.

Table 4: Sustainability indicators and the required primary balance

	2008 scenario			**Programme scenario**		
	S1	**S2**	**RPB**	**S1**	**S2**	**RPB**
Value	0.6	1.5	-0.3	-3.0	-2.0	-0.5
of which:						
Initial budgetary position (IBP)	2.5	2.7	-	-0.8	-0.7	-
Debt requirement in 2050 (DR)	-0.9	-	-	-1.1	-	-
Long-term change in the primary balance (LTC)	-1.1	-1.2	-	-1.1	-1.2	-

Source: Commission services.

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



Note: 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.

Table 5: Additional factors

	Impact on risk
Debt and pension assets	+
Decline in structural balance until 2010 in COM autumn forecast 2008	+
Significant revenues from pension taxation	na
Alternative projection of cost of ageing	-
Strong decline in benefit ratio	na
High tax burden	na
Non-age related budgetary measures with intertemporal effect	na

Note: '-': 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 IV of: European Commission (2006), The long-term sustainability of public finances in the European Union, European Economy No. 4/2006.
Source: Commission services.

ANNEX 3. COMPLIANCE WITH THE CODE OF CONDUCT AND TABLES FROM THE PROGRAMME

The tables on the following pages show the data presented in the December 2008 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.

The programme broadly follows the model structure outlined in the code of conduct, covering all principal sections. The programme also broadly adheres to the code of conduct as far as data requirements are concerned, although there are some gaps in the provision of both compulsory and optional data. Regarding compulsory data, in Table 8 "Basic assumptions" the line "Nominal effective exchange rate" is missing. In addition, the programme does not provide assumptions on EEK short- and long-term interest rate in Table 8 and uses instead assumptions of euro area interest rates. This can be justified by the fact that Euribor is the is the main benchmark interest rate used in Estonia, while EEK short-term interest rate indicator (Talibor) is not sufficiently representative. Due to the absence of benchmark long-term government bonds in Estonia there are likewise no sufficiently representative long-term EEK interest rates.

Table 1a. Macroeconomic prospects

	ESA Code	2007	2007	2008	2009	2010	2011	2012
		Level	rate of change	rate of change	rate of change	rate of change	rate of change	rate of change
1. Real GDP	B1*g	*163578.1*	6.3	-2.2	-3.5	2.6	4.8	5.0
2. Nominal GDP	B1*g	*238928.9*	16.5	6.3	0.8	5.6	8.3	5.0
Components of real GDP								
3. Private consumption expenditure	P.3	*100833.4*	7.8	-2.0	-2.4	2.0	5.0	5.4
4. Government consumption expenditure	P.3	*21861*	3.9	2.5	-2.2	1.3	1.4	2.2
5. Gross fixed capital formation	P.51	*57749.3*	4.8	-6.4	-12.9	5.1	4.8	4.9
6. Changes in inventories and net acquisition of valuables (% of GDP)	P.52 + P.53		5.4	3.4	3.4	3.5	3.6	3.5
7. Exports of goods and services	P.6	*134159.4*	0.0	-1.2	0.0	3.1	5.7	5.8
8. Imports of goods and services	P.7	*175276.1*	4.2	-5.7	-2.8	3.2	5.0	5.3
Contributions to real GDP growth								
9. Final domestic demand		-	6.6	-2.7	-5.3	2.7	4.3	4.7
10. Changes in inventories and net acquisition of valuables	P.52 + P.53	-	1.7	-2.3	-0.3	0.1	0.2	0.2
11. External balance of goods and services	B.11	-	-3.9	4.0	2.2	-0.2	0.3	0.2

Table 1b. Price developments

	ESA Code	2007	2007	2008	2009	2010	2011	2012
		Level	rate of change	rate of change	rate of change	rate of change	rate of change	rate of change
1. GDP deflator		*146.1*	9.6	8.8	4.4	3.0	3.3	3.4
2. Private consumption deflator		*130.7*	7.8	10.2	4.2	2.8	3.0	3.2
3. HICP[1]		*124.3*	6.7	10.6	4.2	2.8	3.0	3.2
4. Public consumption deflator		*188.3*	17.0	13.4	4.6	2.9	5.4	5.9
5. Investment deflator		*134.3*	6.5	-0.6	0.5	1.7	2.4	2.3
6. Export price deflator (goods and services)		*132.5*	7.1	7.2	2.9	2.9	3.0	3.0
7. Import price deflator (goods and services)		*116.2*	3.1	6.3	2.7	2.6	2.9	2.9

[1] Optional for stability programmes.

Table 1c. Labour market developments

	ESA Code	2007	2007	2008	2009	2010	2011	2012
		Level	rate of change	rate of change	rate of change	rate of change	rate of change	rate of change
1. Employment, persons[1]		*655.4*	1.4	-0.3	-3.4	-0.7	0.2	0.0
2. Employment, hours worked[2]		*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3. Unemployment rate (%)[3]		*n.a.*	4.7	5.3	8.6	9.3	9.0	8.8
4. Labour productivity, persons[4]		*249.6*	4.9	-2.0	-0.2	3.3	4.6	5.0
5. Labour productivity, hours worked[5]		*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
6. Compensation of employees	D.1	*116935*	25.8	14.1	1.6	4.6	8.4	8.5
7. Compensation per employee		*178.4*	24.1	14.4	5.1	5.3	8.2	8.5

[1]Occupied population, domestic concept national accounts definition.

[2]National accounts definition.

[3]Harmonised definition, Eurostat; levels.

[4]Real GDP per person employed.

[5]Real GDP per hour worked.

Table 1d. Sectoral balances

% of GDP	ESA Code	2007	2008	2009	2010	2011	2012
1. Net lending/borrowing vis-à-vis the rest of the world	B.9	-16.9	-10.5	-5.1	-5.0	-4.7	-4.7
of which :							
- Balance on goods and services		-11.3	-6.1	-3.7	-3.5	-3.0	-2.6
- Balance of primary incomes and transfers		-6.8	-6.1	-3.5	-3.7	-3.9	-4.2
- Capital account		1.1	1.6	2.1	2.2	2.2	2.1
2. Net lending/borrowing of the private sector	B.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3. Net lending/borrowing of general government	EDP B.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4. Statistical discrepancy		0.7	0.4	n.a.	n.a.	n.a.	n.a.

Table 2. General government budgetary prospects

	ESA Code	2007	2007	2008	2009	2010	2011	2012
		Level	% of GDP	% of GDP	% of GDP	% of GDP	% of GDP	% of GDP
Net lending (EDP B.9) by sub-sector								
1. General government	S.13	*6448*	2.7	-1.9	-1.7	-1.0	0.1	0.2
2. Central government	S.1311	*6236*	2.6	-1.8	-1.3	-0.3	0.6	0.5
3. State government	S.1312	*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4. Local government	S.1313	*-1131*	-0.5	-0.3	-0.1	-0.1	-0.1	-0.1
5. Social security funds	S.1314	*1343*	0.6	0.1	-0.3	-0.6	-0.5	-0.3
General government (S13)								
6. Total revenue	TR	*91225*	38.2	36.2	38.9	37.8	36.5	35.2
7. Total expenditure	TE[1]	*84770.2*	35.5	38.2	40.6	38.8	36.4	35.0
8. Net lending/borrowing	EDP B.9	*6454.8*	2.7	-1.9	-1.7	0.0	0.1	0.2
9. Interest expenditure	EDP D.41	*383.3*	0.2	0.2	0.2	0.2	0.2	0.2
10. Primary balance[2]		*6838.1*	2.9	-1.8	-1.5	0.2	0.3	0.4
11. One-off and other temporary measures[3]		*882*	0.4	0.2	0.1	0.4	0.1	0.0
Selected components of revenue								
12. Total taxes (12=12a+12b+12c)		*51742.9*	21.7	20.2	20.4	19.9	18.8	18.3
12a. Taxes on production and imports	D.2	*33018.6*	13.8	12.4	13.3	13.1	12.8	12.6
12b. Current taxes on income, wealth, etc	D.5	*18724.3*	7.8	7.8	7.0	6.8	6.0	5.7
12c. Capital taxes	D.91	*0*	0.0	0.0	0.0	0.0	0.0	0.0
13. Social contributions	D.61	*26576.2*	11.1	11.8	12.2	12.1	12.1	12.1
14. Property income	D.4	*3662.1*	1.5	0.9	1.0	0.6	0.5	0.5
15. Other[4]		*9243.8*	3.9	3.4	5.3	5.3	5.0	4.3
16=6. Total revenue	TR	*91225*	38.2	36.2	38.9	37.8	36.5	35.2
p.m.: Tax burden (D.2+D.5+D.61+D.91-D.995)[5]			33.1	32.2	32.8	32.2	31.2	30.7
Selected components of expenditure								
17. Compensation of employees + intermediate consumption	D.1+P.2	*39427.7*	**16.5**	**17.9**	**18.5**	**17.6**	**16.5**	**15.4**
17a. Compensation of employees	D.1	*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
17b. Intermediate consumption	P.2	*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
18. Social payments (18=18a+18b)		*26123.9*	10.9	12.5	14.5	14.1	13.2	12.9
18a. Social transfers in kind supplied via market producers	D.6311, D.63121, D.63131	*4631.5*	1.9	2.2	2.5	2.3	2.0	1.8
18b. Social transfers other than in kind	D.62	*21492.4*	9.0	10.3	12.0	11.8	11.2	11.1
19=9. Interest expenditure	EDP D.41	*383.3*	0.2	0.2	0.2	0.2	0.2	0.2
20. Subsidies	D.3	*1995*	0.8	1.1	1.1	1.1	1.1	1.1
21. Gross fixed capital formation	P.51	*12972.3*	5.4	5.1	5.1	5.0	5.0	5.0
22. Other[6]		*3868*	1.6	1.4	1.2	0.8	0.6	0.4
23=7. Total expenditure	TE[1]	*84770.2*	35.5	38.2	40.6	38.8	36.4	35.0
p.m.: Government consumption (nominal)	P.3	*41154*	17.2	18.6	19.2	18.3	17.0	16.1

[1] Adjusted for the net flow of swap-related flows, so that TR-TE=EDP B.9.

[2] The primary balance is calculated as (EDP B.9, item 8) plus (EDP D.41, item 9).

[3] A plus sign means deficit-reducing one-off measures.

[4] P.11+P.12+P.131+D.39+D.7+D.9 (other than D.91).

[5] Including those collected by the EU and including an adjustment for uncollected taxes and social contributions (D.995), if appropriate.

[6] 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	3.2	3.3
2. Defence	2	1.7	2.0
3. Public order and safety	3	2.3	2.2
4. Economic affairs	4	4.9	5.1
5. Environmental protection	5	1.1	1.1
6. Housing and community amenities	6	0.1	0.1
7. Health	7	5.3	5.3
8. Recreation, culture and religion	8	1.3	1.1
9. Education	9	3.8	3.9
10. Social protection	10	11.9	11.2
11. Total expenditure (=item 7=23 in Table 2)	TE[1]	35.5	35.0

[1]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	2007	2008	2009	2010	2011	2012
1. Gross debt[1]		3.5	3.7	3.7	3.5	3.0	2.8
2. Change in gross debt ratio		-0.8	0.2	0.0	-0.2	-0.5	-0.2
Contributions to changes in gross debt							
3. Primary balance[2]		2.9	-1.8	-1.5	-0.8	0.3	0.4
4. Interest expenditure[3]	EDP D.41	0.2	0.2	0.2	0.2	0.2	0.2
5. Stock-flow adjustment		2.5	-1.6	-1.7	-1.0	-0.2	0.2
of which:							
- Differences between cash and accruals[4]		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
- Net accumulation of financial assets[5]		3.0	-1.1	-1.2	-0.5	0.3	0.7
of which:		-	-	-	-	-	-
- privatisation proceeds		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
- Valuation effects and other[6]		-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
p.m.: Implicit interest rate on debt[7]		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Other relevant variables							
6. Liquid financial assets[8]		n.a.	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.	n.a.

[1]As defined in Regulation 3605/93 (not an ESA concept).

[2]Cf. item 10 in Table 2.

[3]Cf. item 9 in Table 2.

[4]The differences concerning interest expenditure, other expenditure and revenue could be distinguished when relevant.

[5]Liquid assets, assets on third countries, government controlled enterprises and the difference between quoted and non-quoted assets could be distinguished when relevant.

[6]Changes due to exchange rate movements, and operation in secondary market could be distinguished when relevant.

[7]Proxied by interest expenditure divided by the debt level of the previous year.

[8]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	2007	2008	2009	2010	2011	2012
1. Real GDP growth (%)		6.3	-2.2	-3.5	2.6	4.8	5.0
2. Net lending of general government	EDP B.9	2.7	-1.9	-1.7	-1.0	0.1	0.2
3. Interest expenditure	EDP D.41	0.2	0.2	0.2	0.2	0.2	0.2
4. One-off and other temporary measures[1]		0.4	0.2	0.1	0.4	0.1	0.0
5. Potential GDP growth (%)		5.0	3.9	2.7	2.7	2.7	2.9
contributions:							
- labour		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
- capital		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
- total factor productivity		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
6. Output gap		6.8	0.5	-5.5	-5.6	-3.7	-1.8
7. Cyclical budgetary component		2.0	0.2	-1.7	-1.7	-1.1	-0.5
8. Cyclically-adjusted balance (2 - 7)		0.7	-2.1	-0.1	0.7	1.2	0.7
9. Cyclically-adjusted primary balance (8 + 3)		0.8	-1.9	0.1	0.9	1.4	1.0
10. Structural balance (8 - 4)		0.3	-2.3	-0.1	0.3	1.1	0.7

[1]A plus sign means deficit-reducing one-off measures.

Table 6. Divergence from previous update

	ESA Code	2007	2008	2009	2010	2011	2012
Real GDP growth (%)							
Previous update		7.4	5.2	6.1	6.7	7.0	n.a.
Current update		6.3	-2.2	-3.5	2.6	4.8	5.0
Difference		-1.1	-7.4	-9.6	-4.1	-2.2	n.a.
General government net lending (% of GDP)	EDP B.9						
Previous update		2.6	1.3	1.0	0.9	0.8	n.a.
Current update		2.7	-1.9	-1.7	-1.0	0.1	0.2
Difference		0.1	-3.2	-2.7	-1.9	-0.7	n.a.
General government gross debt (% of GDP)							
Previous update		2.7	2.3	2.0	1.8	1.6	n.a.
Current update		3.5	3.7	3.7	3.5	3.0	2.8
Difference		0.8	1.4	1.7	1.7	1.4	n.a.

Table 7. Long-term sustainability of public finances

% of GDP	2000	2008*	2010	2020	2030	2050
Total expenditure	n.a.	38.2	37.8	38.6	38.3	38.0
Of which: age-related expenditures	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Pension expenditure	n.a.	7.0	7.9	6.9	6.6	6.3
Social security pension	n.a.	7.0	7.9	6.9	6.6	6.3
Old-age and early pensions	n.a.	5.9	6.7	5.8	5.6	5.4
Other pensions (disability, survivors)	n.a.	1.1	1.3	1.1	1.0	0.8
Occupational pensions (if in general government)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Health care	n.a.	4.9	5.0	4.9	4.8	4.8
Long-term care *(this was earlier included in the*	n.a.	0.1	0.1	0.1	0.1	0.1
Education expenditure	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Other age-related expenditures	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Interest expenditure	n.a.	0.2	0.2	0.2	0.2	0.2
Total revenue	n.a.	36.2	38.8	38.6	38.3	38.0
Of which: property income	n.a.	1.0	1.1	1.1	1.1	1.1
Of which : from pensions contributions (or social contributions if appropriate)	n.a.	11.8	12.1	11.9	11.7	11.5
Pension reserve fund assets	n.a.	2.4	0.0	0.0	0.0	0.0
Of which : consolidated public pension fund assets (assets other than government liabilities)	n.a.	2.4	0.0	0.0	0.0	0.0
Assumptions						
Labour productivity growth	n.a.	-2.0	3.3	3.3	2.7	1.7
Real GDP growth	n.a.	-2.2	2.6	2.6	2.2	0.6
Participation rate males (aged 20-64)	n.a.	85.9	85.7	85.2	84.3	82.4
Participation rates females (aged 20-64)	n.a.	75.7	75.3	76.4	77.1	75.8
Total participation rates (aged 20-64)	n.a.	80.6	80.3	80.7	80.6	79.1
Unemployment rate	n.a.	5.3	9.3	3.5	3.5	3.5
Population aged 65+ over total population	n.a.	17.2	17.0	18.8	21.7	27.4

Table 8. Basic assumptions

	2007	2008	2009	2010	2011	2012
Short-term interest rate[1] (annual average)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Long-term interest rate (annual average)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
USD/€ exchange rate (annual average) (euro area and ERM II countries)	0.73	0.68	0.77	0.77	0.77	0.77
Nominal effective exchange rate	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
(for countries not in euro area or ERM II) exchange rate vis-à-vis the € (annual average)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
World excluding EU, GDP growth	6.0	4.3	2.5	3.5	4.3	4.3
EU GDP growth	2.9	1.4	-0.2	1.0	1.8	1.8
Growth of relevant foreign markets	4.1	1.6	-0.1	1.0	2.5	2.5
World import volumes, excluding EU	7.2	5.2	3.0	4.3	5.3	5.3
Oil prices (Brent, USD/barrel)	72.4	99.5	65.0	75.0	80.0	85.0

[1]If necessary, purely technical assumptions.

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