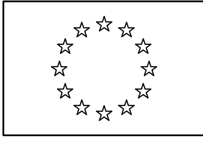

EUROPEAN COMMISSION
DIRECTORATE GENERAL
ECONOMIC AND FINANCIAL AFFAIRS

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DECEMBER 2005 UPDATE OF THE CONVERGENCE PROGRAMME OF ESTONIA (2005-2009)

AN ASSESSMENT

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SUMMARY AND CONCLUSIONS[1]

(1) The latest update of the Estonian convergence programme, covering the period 2005-2009, was submitted on 1 December 2005.[2] The updated programme broadly follows the model structure and data provision requirements for stability and convergence programmes specified in the new code of conduct[3].

(2) After reaping early benefits from bold reform and stabilisation efforts by the mid-1990s, Estonia in the wake of the 1998 Russian crisis suffered a temporary setback with a slack in growth in 1999. Owing to the comprehensive structural reforms in the financial and enterprise sector which had increased the economy's responsiveness to market forces and its international openness, growth quickly resumed as from 2000. Over the past decade, real annual GDP growth has averaged about 6%, by far outpacing the EU average of 1.7%. A high external deficit, at 10.5% of GDP in 2004, constitutes the major macroeconomic imbalance. Budgetary developments were marked by an overall prudent fiscal stance resulting in healthy fiscal surpluses.

(3) Real GDP growth in the update is estimated at 6.5% for 2005, edging up to 6.6% in 2006 and levelling off at 6.3% over the rest of the programme period 2007-2009. Overall, the macroeconomic scenario underlying the update seems markedly cautious, as compared with the Commission services' evaluation including the autumn 2005 forecast. Based on Commission services' calculations on the basis of the programme according to the commonly agreed methodology, potential GDP growth is projected to remain relatively high but on a slightly declining trend in the medium term. Consequently, the cautious outlook for real GDP growth leads to a negative output gap throughout the programme period, whereas the Commission services' autumn 2005 forecast shows a positive output gap for 2005 and 2006 with only a small amount of free capacity in the economy in 2007. Employment growth is expected to remain strong in the coming years. Inflation is projected to decrease from 3.5% in 2005 to 2.6% in 2006 and 2007, and to remain moderate at 2.7% in 2008 and 2009. Since the actual HICP increase turned out at 4.1% for 2005, reflecting accession-related base effects as well as high energy prices, the projection appears relatively optimistic for 2006, whereas for 2007 it is in line with the Commission forecast. The external deficit is estimated to have narrowed to 9% of GDP in 2005, down from 13.4% in 2003.

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1 This technical analysis which is based on information available up to 24. January 2006, accompanies the recommendation by the Commission for a Council opinion on the update of the convergence programme, which the College adopted on 1 February 2006. It has been carried out by the staff of and under the responsibility of the Directorate-General for Economic and Financial Affairs of the European Commission. Comments should be sent to Helga Vogelmann (Helga.Vogelmann@cec.eu.int). The analysis takes into account (i) the Commission services' autumn 2005 forecast, (ii) the code of conduct (Opinion of the Economic and Financial Committee on the "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), (iii) the commonly agreed methodology for the estimation of potential output and cyclically-adjusted balances and (iv) the broad economic policy guidelines for the period 2005-2008.

2 The English translation of the programme was submitted on 2 January 2006.

3 The programme provides most compulsory and optional data prescribed by the new code of conduct.

While the unwinding of this major imbalance in the Estonian economy has benefited from government finances regularly in surplus, it would, according to the programme, receive little further support in that regard in the years to come. Estonia has maintained full exchange rate stability within ERM II throughout 2005 in the context of its currency board, which it operates as a unilateral commitment within the mechanism. Money market and bank lending rates have remained low and stable through 2005, reflecting the credibility of Estonia's monetary framework.

(4) In its opinion of 17 February 2005, the Council endorsed the budgetary strategy presented in the previous update of the convergence programme, covering the period 2004-2008. As regards budgetary implementation in 2005, the general government surplus for 2005 is estimated at 1.1% of GDP in the Commission services' autumn 2005 forecast, against a target of a balanced budget set in the previous update of the convergence programme. Due to a combination of high growth, improvements in tax collection and lower-than-planned expenditure, the actual surplus for 2005 turned out much stronger, at around 2 ½% of GDP.

(5) The budgetary framework in Estonia is geared towards maintaining sound public finances in the context of sustainable high growth and rising employment. To this end it includes a balanced-budget requirement for general government and nominal ceilings for central government expenditure. The programme aims at general government accounts in balance from 2007, following surpluses of 0.3% and 0.1% of GDP in 2005 and 2006, respectively. The general government surplus targets for 2005 and 2006 are slightly higher than in the previous update, but reflect only partly the better-than-expected outcome in 2005. Both expenditure and revenue ratios are projected to decline gradually up to the programme horizon. Compared with the previous programme, the December 2005 update broadly confirms the planned fiscal strategy of annually balanced budgets, against a considerably more favourable macroeconomic scenario.

(6) Based on Commission services' calculations on the basis of the programme according to the commonly agreed methodology, the structural balance (surplus) is projected to gradually decline in the next four years from around ½% of GDP in 2005 to balance in 2009. The update sets a medium-term objective (MTO) for the budgetary position as meant in the Stability and Growth Pact of a balanced budget in structural terms, i.e. cyclically-adjusted and net of one-off and other temporary measures, As the programme's MTO is more ambitious than the minimum benchmark (estimated at a deficit of around 2% of GDP) its achievement should fulfil the aim of providing a safety margin against the occurrence of an excessive deficit. As regards appropriateness, the programme's MTO lies within the range indicated for euro area and ERM II Member States in the Stability and Growth Pact and the code of conduct and is more demanding than implied by the debt ratio and average potential output growth in the long term.

(7) Budgetary outcomes may prove significantly better than projected in the programme, even beyond 2005. The underlying economic outlook for 2006-2009 is markedly cautious. Moreover, Estonia's confirmed record of out-performing fiscal targets warrants the perception of the balance of risks being somewhat skewed to the positive side.

(8) In view of this risk assessment, the budgetary stance in the programme seems sufficient to meet the programme's MTO throughout the programme period. As the MTO is more demanding than the minimum benchmark, its achievement should fulfil the aim of providing a safety margin against breaching the 3% of GDP deficit ceiling with normal macro-economic fluctuations for the entire period. However, taking into account the likelihood of a better-than-projected outturn in 2005, targeting a budgetary surplus no higher than 0.1% of GDP in 2006 may carry the risk of pro-cyclicality in good times.

(9) Estonia's gross debt ratio is the lowest in the EU, and well below the Treaty reference value. According to the update and in line with the Commission services' forecast for 2005-2007, the debt ratio is set to decrease further, over the entire programme period, to a ratio of just 2.8% of GDP at the end of 2009.

(10) With regard to the sustainability of public finances, Estonia appears to be at low risk on grounds of the projected budgetary costs of ageing populations. The level of gross debt is currently very low and is projected to remain below the 60% reference value throughout the projection period. Estonia's strategy of putting sustainability concerns at the heart of fiscal policy making, including the pension system reform which involves the accumulation of assets, contributes positively to the outlook for the public finances. The current budgetary position in surplus contributes towards limiting the projected budgetary impact of an ageing population and the medium-term budgetary plan of maintaining balanced budgets is consistent with low risks to public finance sustainability.

(11) The envisaged measures in the area of public finances are broadly consistent with the broad economic policy guidelines included in the integrated guidelines for the period 2005-2008. In particular, large government surpluses in 2005 have indeed contributed to a significant narrowing of the external account deficit to below 10% of GDP. A prudent fiscal policy is defined as a cornerstone of the Estonian policy mix over the programme period, notably with a view to supporting a further decline in the external deficit to sustainable levels. The update also presents measures to promote a growth- and employment-oriented allocation of resources, in particular by reducing the size of the public sector in the economy and by shifting the tax burden from direct to indirect taxation.

(12) The National Reform Programme of Estonia, submitted on 15 October 2005, identifies the following challenges with significant implications for public finances: (i) sustainability of public finances; (ii) fiscal policy supportive to growth and jobs and (iii) ensuring a stable macroeconomic environment. The budgetary implications of the actions outlined in the National Reform Programme are fully reflected in the budgetary projections of the convergence programme. The measures in the area of public finances envisaged in the convergence programme are in line with the actions foreseen in the National Reform Programme. In particular, the convergence programme outlines measures to complete the 2002 pension reform, to increase consumption and environment taxes while reducing taxes on labour, and to systematically shift budget resources towards investment, promotion of R&D and vocational training. The convergence programme complements these measures with changes in the institutional arrangements for public finances, namely by completing an IT-based budgeting system connecting all line ministries to the scrutiny of the Ministry of Finance, by

further formalising the strategic planning process and by preparing new legislation to improve the financial management at local government level.

Overall, the budgetary position is sound and the budgetary strategy provides a good example of fiscal policy conducted in compliance with the Pact. Nevertheless, in view of the above assessment and of a budgetary outturn in 2005 probably significantly better than estimated in the programme, it would be appropriate for Estonia to aim for a higher budgetary surplus in 2006 and in the subsequent years in order to continue supporting the correction of the external imbalance.

Comparison of key macroeconomic and budgetary projections

		2004	2005	2006	2007	2008	2009
Real GDP (% change)	**CP Dec 2005**	**7.8**	**6.5**	**6.6**	**6.3**	**6.3**	**6.3**
	COM Nov 2005	7.8	8.4	7.2	7.4	n.a.	n.a.
	CP Nov 2004	***5.6***	***5.9***	***6.0***	***6.0***	***6.0***	***n.a.***
HICP inflation (%)	CP Dec 2005	**3.0**	**3.5**	**2.6**	**2.6**	**2.7**	**2.7**
	COM Nov 2005	3.0	4.1	3.3	2.6	n.a.	n.a.
	CP Dec 2004[1]	*3.3*	*3.2*	*2.5*	*2.8*	*2.8*	*n.a.*
Output gap (% of potential GDP)	**CP Dec 2005[2]**	**0.1**	**-0.4**	**-0.6**	**-0.7**	**-0.5**	**-0.1**
	COM Nov 2005[3]	-0.2	0.5	0.1	-0.1	n.a.	n.a.
	CP Dec 2004[2]	*-0.9*	*-1.3*	*-1.7*	*-1.2*	*-1.0*	*n.a.*
General government balance (% of GDP)	**CP Dec 2005**	**1.7**	**0.3**	**0.1**	**0.0**	**0.0**	**0.0**
	COM Nov 2005	1.7	1.1	0.6	0.4	n.a.	n.a.
	CP Dec 2004	*1.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Primary balance (% of GDP)	**CP Dec 2005**	**1.9**	**0.5**	**0.3**	**0.2**	**0.1**	**0.1**
	COM Nov 2005	1.9	1.3	0.8	0.5	n.a.	n.a.
	CP Dec 2004	*1.3*	*0.2*	*0.2*	*0.2*	*0.1*	*n.a.*
Cyclically-adjusted balance = Structural balance[4] (% of GDP)	**CP Dec 2005**	**1.7**	**0.4**	**0.3**	**0.2**	**0.1**	**0.0**
	COM Nov 2005	1.8	1.0	0.6	0.4	n.a.	n.a.
	CP Dec 2004	*n.a*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*
Government gross debt (% of GDP)	**CP Dec 2005**	**5.4**	**4.6**	**4.4**	**3.3**	**3.0**	**2.8**
	COM Nov 2005	5.5	5.1	4.0	3.1	n.a.	n.a.
	CP Dec 2004	*4.8*	*4.6*	*4.3*	*3.1*	*2.9*	*n.a.*

Notes:

[1] The December 2004 update of the convergence programme discusses national CPI definition, not HICP. Discrepancies are negligible.

[2] Commission services calculations on the basis of the information in the programme.

[3] Based on estimated potential growth of 7.2%, 7.1%, 6.7% and 6.5% respectively in the period 2004-2007.

[4] Since one-off and other temporary measures specified in the programme are not claimed to require a temporary deviation from the MTO, the cyclically-adjusted balance and the structural balance are identical.

Source:

Convergence programme (CP); Commission services' autumn 2005 economic forecasts (COM); Commission services' calculations

1. INTRODUCTION

The 2005 update of the Estonian convergence programme, covering the period 2005-2009, was adopted by the Estonian government on 1 December 2005 and submitted to the Council and the European Commission on the same day. The programme is based on the economic projections underlying the Government's Budget Bill for 2006 as presented to Parliament on 21 September 2005, and represents the country's official medium-term macro-economic framework as required by the State Budget Act. The Budget Bill for 2006 was adopted by Parliament on 7 December 2005. The present update is the second update of the Convergence Programme, submitted in May 2004.

The programme broadly follows the model structure for stability and convergence programmes specified in Annex 1 of the new code of conduct. The programme provides most compulsory[4] and optional data prescribed by the new code of conduct[5]. The analysis of the long-term sustainability of public finances is elaborate and extensive. Annex 2 provides a detailed overview of all aspects of compliance with the new code of conduct.

2. ECONOMIC OUTLOOK

Estonia's economic transition from a planned to a market economy started from a very low level with respect to GDP per capita and productivity. After reaping early benefits from bold reform and stabilisation efforts by the mid-1990s, Estonia in the wake of the 1998 Russian crisis suffered a temporary setback with a slack in growth in 1999. Owing to the comprehensive structural reforms in the financial and enterprise sectors which had increased the economy's responsiveness to market forces and its international openness, growth quickly resumed as from 2000. Over the past decade, real annual GDP growth has averaged about 6%, by far outpacing the EU average of 1.7%. A strong inflow of foreign direct investment has given strong momentum to GDP growth acceleration since 2000 and helped Estonia to rapidly converge to the EU average in terms of GDP per capita. At the same time it is the primary reason for the economy's main macroeconomic imbalance which is a high, albeit recently narrowing external account deficit of about 9% of GDP in 2005. More recently, strong credit growth, especially in the mortgage sector, has become a cause for concern. EU accession has given fresh impetus to the convergence process. In 2005, GDP per capita in purchasing power terms is projected to reach over 55% of the EU average. Labour productivity growth has been well above the EU average over the past decade. Though the employment rate of 63% in 2004 was slightly below the EU average of 63.3%, recent high employment growth has likely led

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4 Minor deviations, e.g. a definition for the unemployment rate different from the harmonised Eurostat rate is used; unemployment rate is given as a ratio instead of the required rates of change (table 1c); the external assumptions for 'nominal effective exchange rate' and 'world import volumes, excluding EU' are not specified (table 8).

5 The following optional data are not provided: 'employment, hours worked' and 'labour productivity, hours worked' (table 1c); 'net lending/borrowing of the private sector' (table 1d); contributions to potential GDP growth (table 5); the detailed breakdown of the stock-flow adjustment; 'liquid financial assets' and 'net financial debt' (table 4); the column for year 2000; the sum 'of which: age-related expenditure' (though the single items are listed); 'education expenditure'; 'other age-related expenditure' (table 7); the line for the nominal effective exchange rate (% change) is filled with the Kroon's euro exchange rate (table 8).

to a position above EU average in 2005. Nonetheless, structural problems in the labour market remain an important impediment to economic growth, in particular high structural unemployment, regional disparities and skills mismatches.

The update foresees GDP growth of 6.5% in 2005, 6.6% in 2006 and 6.3% in 2007 and the outer years of the programme period. Although slightly higher than those contained in last year's update, the growth assumptions are markedly below those of the Commission services' autumn 2005 forecast[6] for the period 2005-2007 (Table 1). For 2005, both forecasts are likely to be outperformed, since the Estonian economy has been growing at an average rate of 9.3% during the first three quarters, with no signs of slowdown during the fourth quarter of last year.

The programme projects private consumption growth to ease gently from 6.6% in 2005 to 6.3% in 2007, broadly in line with projections in the Commission services' autumn 2005 forecast, and further down to 6.1% in 2009. Also annual growth of compensation of employees is forecast to gradually decelerate from 11.7% in 2005 to 9.5% in 2007, broadly in line with the Commission services' autumn 2005 forecast, and further down to 9.4% in 2009.

Overall, the GDP growth assumption underlying the programme can be considered as markedly cautious, which based on the Commission services' calculations according to the commonly agreed methodology, based on the data provided in the programme imply a negative output throughout the programme period, vis-à-vis positive output gaps in 2005 and 2006 according to the Commission services' autumn forecast. The programme's economic projections do not account for much-stronger-than-projected real GDP growth during the first three quarters of 2005, nor for the oil price shock's impact on inflation in the second half of 2005. This has led to overly cautious assumptions with regard to growth and inflation in the programme, in particular for 2005 and 2006. For 2005, this is partly 'corrected' by references to actual developments in the text. Thus, the text differs from the tables with regard to a number of key indicators, especially for 2005.

The official government forecast based on external assumptions reflecting the situation in July 2005 could not explicitly take into account the final external assumptions underlying the Commission services' 2005 autumn forecast, as the latter where submitted to the Member States on 18 November 2005. Nonetheless, they are broadly similar. The major discrepancy is a more optimistic outlook on oil price developments which is also reflected in a lower inflation projection Since the actual HICP increase turned out at 4.1% for 2005, reflecting accession-related base effects as well as high energy prices, the programme's projection appears relatively optimistic for 2006, whereas for 2007 it is in line with the Commission forecast.

The updated programme presents a positive outlook for the labour market, against the backdrop of a favourable economic performance. Employment is expected to increase over the whole programme period, broadly in line with Commission projections. Favourable economic conditions are expected to largely contribute to the decline in the rate of unemployment which is projected to fall by nearly 1 percentage point by the end of the programme period (from 9.3% in 2005 to 8.8% in 2007 and further to 8.4% in 2009). While the overall trend of steadily falling unemployment is in line with the Commission services' forecast, with the path of decline more cautious in the programme,

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6 In the Commission services' autumn 2005 forecast, GDP growth for 2005 was projected at 8.4% and at 7.2% and 7.4% for 2006 and 2007, respectively.

the projected unemployment levels differ, since the programme does not use the harmonised Eurostat definition for this indicator, as would be required by the code of conduct.

Inflation is expected to decrease from 3.5% in 2005 to 2.6% in 2006, stabilising around that level for the remainder of the programme period. The update's projection for inflation developments in 2005 and 2006 differs considerably on the downside from the autumn forecast. The reason provided in the programme is the need to maintain the official government forecast underlying the 2006 budget, which was adopted in Parliament only a few days after submission of the programme to the Commission. HICP inflation in 2005 was 4.1%, in line with the Commission services' 2005 autumn forecast. High 2005 inflation is primarily a result of the oil price shock that set in in mid-year following the ebbing of a strong base effect from price rises following EU accession the year before. Estonia has one of the highest weights of energy in the consumer price basket in the EU. Core inflation remained low, at rates around 2-2½%. No second-round effects from the 2005 energy price increases have been observed so far, as producer prices have been rising broadly in line with core inflation throughout 2005. The update's inflation forecast for 2006 also appears rather optimistic compared with that of the Commission, which projects average annual HICP inflation of 3.3% for this year. The programme's projection for 2007 is in line with the Commission forecast. Strong wage increases are nevertheless projected to stay broadly in line with rapid productivity growth, thanks to the very flexible Estonian labour market. Further cuts in taxes on labour over the programme period are also expected to exert a dampening effect on gross labour costs from the fiscal side.

Table 1: Comparison of macroeconomic developments and forecasts

	2005		2006		2007		2008	2009
	COM	CP	COM	CP	COM	CP	CP	CP
Real GDP (% change)	8.4	6.5	7.2	6.6	7.4	6.3	6.3	6.3
Contributions:								
- Final domestic demand	7.7	6.9	7.1	6.6	6.7	6.2	6.1	6.0
- Change in inventories	-0.2	0.0	-2.8	0.1	-0.9	0.1	0.1	0.1
- External balance on g&s	2.3	0.9	3.0	0.1	1.6	0.1	0.1	0.2
Output gap[1]	0.5	-0.4	0.1	-0.6	-0.1	-0.7	-0.45	-0.1
Employment (% change)	0.4	0.6	0.6	0.6	0.8	0.8	0.7	0.4
Unemployment rate (%)[2]	7.2	9.3	6.0	9.2	5.4	8.8	8.5	8.4
Labour productivity growth (%)	7.9	5.7	6.6	5.9	6.5	5.5	5.6	5.8
HICP inflation (%)	4.1	3.5	3.3	2.6	2.6	2.6	2.7	2.7
GDP deflator (% change)	4.7	3.7	3.2	2.8	2.9	2.7	2.8	2.8
Compensation of employees (% change)	12.8	11.7	10.0	10.3	8.3	9.5	9.6	9.4
External balance (% of GDP)	-9.0	-9.0	-6.8	-8.2	-6.2	-7.4	-6.3	-5.0

Note:
[1]In percent of potential GDP, with potential GDP growth as reported in Table 2 below.
[2] CP uses national definition, COM uses Eurostat definition

Source:
Commission services' autumn 2005 economic forecasts (COM); convergence programme update (CP)

Given the strong and rapid structural changes the Estonian economy has been undergoing, together with its small size and high degree of international openness, it is difficult to determine Estonia's position in the business cycle. Therefore the calculation of potential output growth (and hence the output gap) needs to be interpreted with some caution for countries going through a rapid catching-up process. The macroeconomic scenario presented in the programme implies a negative output gap throughout the

programme period which would seem to echo the overly cautious growth assumption vis-à-vis the growth performance of the recent past. Moreover, the estimate of potential output based on Commission services' calculations according to the commonly agreed methodology and consistent with the programme's macroeconomic scenario turns out about 1 percentage point lower than the estimate of potential output implied by the Commission services' autumn 2005 forecasts.

Table 2: Sources of potential output growth

	2005		2006		2007		2008	2009
	COM	CP[2]	COM	CP[2]	COM	CP[2]	CP[2]	CP[2]
Potential GDP growth[1]	7.6	7.1	7.7	6.7	7.6	6.5	6.0	5.9
Contributions:								
- Labour	1.0	0.9	1.1	0.7	1.1	0.6	0.2	0.2
- Capital accumulation	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.6
- TFP	3.4	3.1	3.4	3.0	3.4	3.0	3.0	3.0

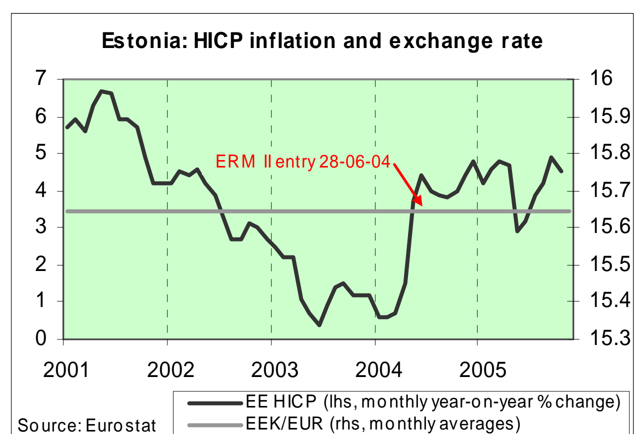
Notes:
[1]based on the production function method for calculating potential output growth
[2]Commission services' calculations on the basis of the information in the programme

Source:
Commission services' autumn 2005 economic forecasts (COM); Commission services' calculations

After peaking at 13.4% of GDP in 2003 the external deficit started to rapidly narrow, to around 9% of GDP in 2005, mainly due to an improving balance of trade in goods and services. Vigorous export growth was boosted by EU accession and is expected to continue over the next few years. Both the programme and the Commission services' autumn 2005 forecast project that declining deficits in the balance of goods and growing surpluses in the balance of services will outweigh the widening deficits in the income balance which is caused mainly by reinvested earnings and repatriated profits of foreign investors. Government surpluses are expected to contribute to the pending correction of the external imbalance in the short term, albeit to a much lower degree than was the case in the past few years. The programme justifies the Estonian government's commitment to a prudent fiscal policy over the programme period also with the need to support a further decline in the external deficit to sustainable levels during the outer years of the programme period.

3. MEDIUM-TERM MONETARY POLICY OBJECTIVES AND THEIR RELATIONSHIP TO PRICE AND EXCHANGE RATE STABILITY

Estonia continues to pursue the objective of price stability through a firm exchange rate anchor. The country's long-standing currency board was maintained as a unilateral commitment when the kroon entered into ERM II on 28 June 2004. In line with this commitment, the kroon has not deviated from its central rate through the period of ERM II participation. The peg continues to enjoy high credibility and remains supported by a reserve cover well above the statutory minimum.



The convergence programme reaffirms Estonia's aim to enter the euro area *"as soon as possible"* and notes that the authorities *"have undertaken the practical preparations to* adopt the euro on 1 January 2007". The programme stresses the authorities' commitment to sound policies, notably a prudent fiscal stance, in the run-up to euro adoption.

Following very low inflation in both 2003 and the first quarter of 2004, HICP inflation picked up strongly following EU accession, reflecting *inter alia* hikes in excise taxes and the effects of CAP introduction, to a full-year rate of 3% in 2004. After this strong base effect had abated, more recently higher energy prices drove headline inflation back up, to a peak of 4.9% year-on-year in September, with a subsequent decline towards 3.6% in December 2005. Core inflation rates (headline inflation excluding energy and unprocessed food) have remained stable and contained at around 2% for most of 2005, though a moderate pick-up towards 2½% was registered in monthly data towards the end of the year. The average annual HICP increase for 2005, which became available only after submission of the update, was 4.1%. This rate is in line with the Commission services' autumn forecast, but considerably higher than the programme's projection of just 3.5%. The convergence programme forecasts a significant decline of the HICP to 2.6% in both 2006 and 2007. This forecast appears rather optimistic for 2006 compared to the Commission autumn 2005 forecast, which projects average annual HICP inflation of 3.3% for this year. The programme's projection for 2007 is in line with the Commission forecast.

Under the currency board, the Estonian central bank does not set policy interest rates independently. Estonian money market rates have remained closely aligned to euro area rates, with spreads of 3-month rates vis-à-vis euro area rates fluctuating around 25 basis points since the beginning of 2005, and decreasing to some 15 basis points toward the end of the year. Given the low level of government debt, Estonia does not have a developed market for long-term government securities, and therefore no sovereign benchmark bond yields. Bank lending rates have remained at low levels throughout 2005.

The effective exchange rate of the kroon recorded only limited fluctuations in 2005, reflecting the strong role of the euro and euro-linked currencies in its trade-weighted reference basket. In nominal effective terms, the kroon depreciated by just over 2% between December 2004 and November 2005, while it recorded a slightly smaller real depreciation[7] of some 1½% percent during that period, reflecting somewhat higher inflation rates compared with its trading partners.

4. GENERAL GOVERNMENT BALANCE

This section is in four parts. The first briefly compares the targets for the general government balance in the new update with those presented in previous convergence programmes. It also discusses budgetary implementation in the year 2005. The second part describes the budgetary strategy in the new update, including the programme's medium-term objective. The third provides the analysis of the risks attached to the budgetary targets and assesses Estonia's position in relation to the budgetary objectives of the Treaty and the Stability and Growth Pact. The final part discusses the results of a sensitivity analysis.

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[7] CPI-deflated, against a group of 41 countries.

4.1. Targets in successive programmes and implementation in 2005

The programme aims at general government accounts in balance from 2007, following surpluses of 0.3% and 0.1% of GDP in 2005 and 2006, respectively. The general government surplus targets for 2005 and 2006 are slightly higher than in the previous update, (only partly) reflecting the better-than-expected outcome in 2005 Both expenditure and revenue ratios are projected on a gradually declining trend over the projection period. Compared with the previous programme, the December 2005 update broadly confirms the planned fiscal strategy of annually balanced budgets, against a considerably more favourable macroeconomic scenario.

The estimated general government surplus for 2005 in the present update is 0.3% of GDP (Table 3). This compares with the projection of a balanced budget projection in the previous update. On the basis of cash figures for budget execution in 2005 it is clear that the actual outcome will be much better, with a surplus of around 2.6% of GDP. The considerably higher general government surplus in 2005 compared with the forecasts in both the 2004 and 2005 updates is primarily due to stronger-than-expected economic activity, improvements in tax collection and a rise in employment which is partly also owed to a whitening of parts of the 'informal' economy and declaration of formerly grey employment contracts, leading to a high surplus in the social security accounts. In addition, further improvements in tax collection and windfall gains from inflation boosted revenues considerably.

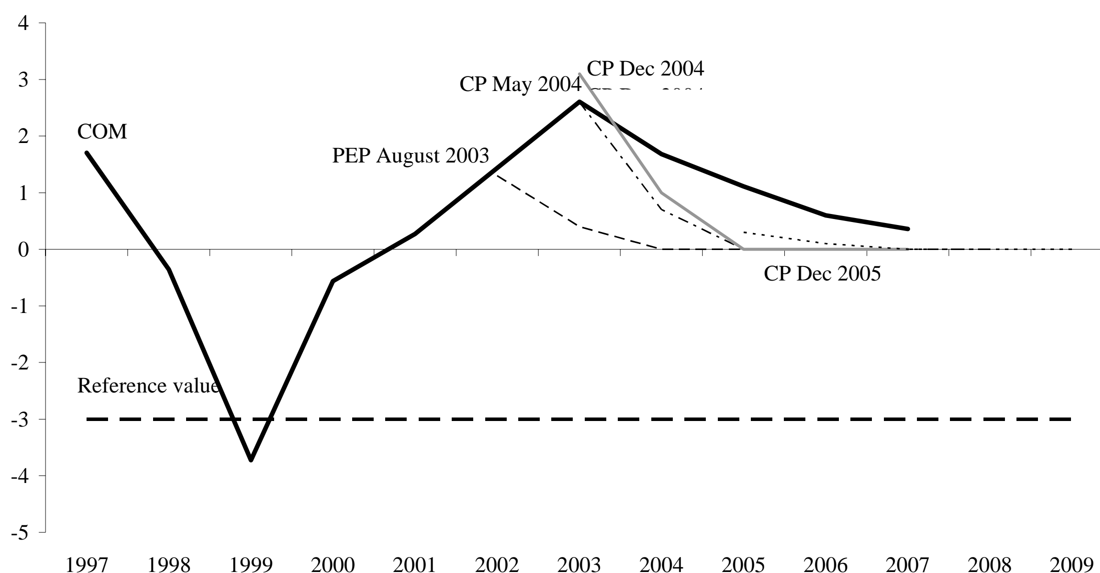
For 2006 revenues are projected to be 41.8% of GDP, compared with 39% in the 2004 update. The difference is partly due to upward level revisions in general government statistics, but mostly taking into account the higher revenues generated in 2005. Expenditure as a percentage of GDP is also projected higher in the present update, at 41.7% of GDP as compared with 39% in the previous programme. Statistical revisions and higher-than-projected growth are at the basis of these assumptions.

Table 3: Evolution of budgetary targets in successive programmes

		2004	2005	2006	2007	2008	2009
General government balance (% of GDP)	**CP Dec 2005**	**1.7**	**0.3**	**0.1**	**0.0**	**0.0**	**0.0**
	CPDec 2004	1.0	0.0	0.0	0.0	0.0	n.a.
	CP May 2004	0.7	0.0	0.0	0.0	0.0	n.a.
	COM Nov 2005	1.7	1.1	0.6	0.4	n.a.	n.a.
General government expenditure (% of GDP)	**CP Dec 2005**	**36.4**	**40.9**	**41.7**	**39.0**	**37.2**	**36.0**
	CPDec 2004	40.0	40.7	39.0	37.6	37.5	n.a
	CP May 2004	43.3	42.7	41.9	40.3	39.7	n.a
	COM Nov 2005	37.0	39.6	40.8	38.8	n.a.	n.a.
General government revenues (% of GDP)	**CP Dec 2005**	**38.1**	**41.2**	**41.8**	**39.0**	**37.2**	**36.0**
	CPDec 2004	41.0	40.7	39.0	37.6	37.5	n.a
	CP May 2004	44.0	42.7	41.9	40.3	39.7	n.a
	COM Nov 2005	38.4	40.7	41.4	39.2	n.a.	n.a.
Real GDP (% change)	**CP Dec 2005**	**7.8**	**6.5**	**6.6**	**6.3**	**6.3**	**6.3**
	CPDec 2004	5.6	5.9	6.0	6.0	6.0	n.a.
	CP May 2004	5.3	5.8	5.6	5.9	5.8	n.a
	COM Nov 2005	7.8	8.4	7.2	7.4	n.a.	n.a.

Source:
Convergence programmes (CP) and Commission services' autumn 2005 economic forecasts (COM)

Figure 1: General government balance projections in successive convergence programmes (% of GDP)



Source : Commission services' autumn 2005 forecast (COM) and successive convergence programmes

Box 1: Corporate income taxation in Estonia: flat, not low

In 1994, Estonia became the first country in Europe to introduce a so-called 'flat tax', replacing three tax rates on personal income, and another on corporate profits, with one uniform rate of 26%. In the framework of a major tax reform in 2000 the *corporate tax* on *earned* income was eliminated, and replaced by the *corporate income tax on distributed profits*. Estonia since no longer levies corporate tax on retained profits. Only distributed profits, including transactions that are considered hidden profit distributions (e.g. fringe benefits, non-business expenses, gifts and donations) are taxed at a rate of 23% of the gross amount of the distribution (26% up to 1 January 2005, 24% up to 1 January 2006). The classical corporation tax has thus been effectively abolished since 2000.

The main benefit of the current Estonian tax system is transparency and the simplicity of not having to measure profits. It is only necessary to determine that a distribution has been paid out. This adds to the advantage of the flat tax system which is very simple to understand and easy to administer. Simplicity is also supported by the tax exemption for retained corporate profits: a special treatment of losses like carry-forward is not necessary under the Estonian system because retained earnings are anyway tax exempt. Nor are there special rules for capital allowances, intangibles or the valuation of inventories for tax purposes.

The principle of a simple tax system combined with strict rules and efficient tax collection have been some of the leading factors behind the higher-than-planned surpluses that backed the impressive building up of liquid public assets in Estonia, while allowing regular year-end supplementary budgets to serve political clients and improve social conditions for the poorest parts of the population (one-off pension increases rank high on the agenda).

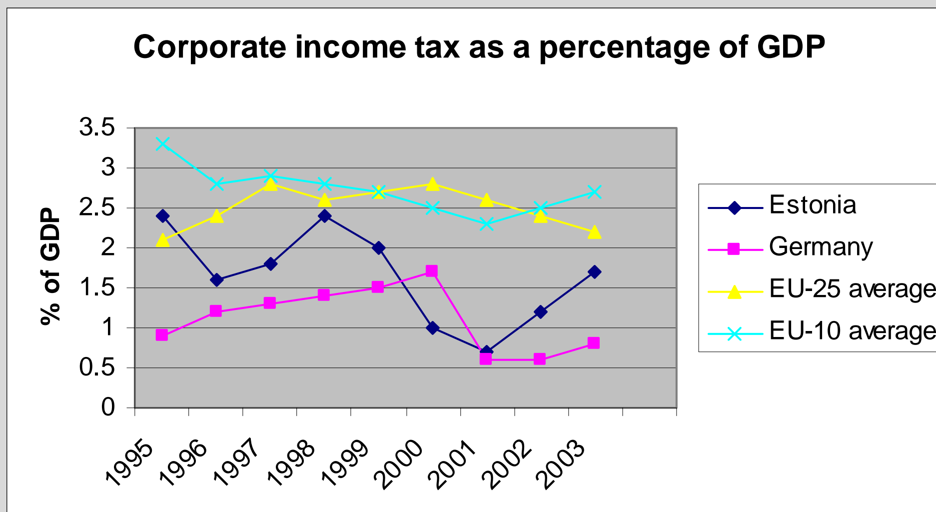
The desire on the part of Estonian policy makers to continue attracting FDI inflows which foster the transition from a relatively low to high-tech based industrial portfolio raises some concerns in the country about the planned abolition of the present corporate taxation scheme. However, the question arises of why investment financed by retained earnings should be treated more favourably than investment financed by new equity or debt finance. According to the IMF's findings on the issue[8], an incentive to retain earnings discriminates against new and expanding

8 IMF, Fiscal Affairs Department, Estonia: A Program of Tax Reform, Washington 2005.

businesses, relative to established and more static businesses. Moreover, it is not clear that favouring retained earning is attractive to potential foreign investors, as they may want to repatriate earnings to the home country without a (relative) tax penalty.

However this may be, such a deferred taxation mechanism is in contradiction with EU law, and specifically with the so-called Parent-Subsidiary directive[9]. In accordance with a judgement of the European Court of Justice in the Greek Athinaiki Case[10], the tax rate of 26% at the time[11] on distributed profits is qualified as a withholding tax, which is not in line with the Parent-Subsidiary Directive. Therefore Estonia's EU accession treaty contains a provision whereby a transitional period will be granted until 31 December 2008[12]. This means that as of 2009, corporate taxation in Estonia will have to be amended in order for the country to comply with EU norms.

A recent study by the European Commission's DG TAXUD and Eurostat[13] shows that despite the possible deference in taxation of corporate profits and the low flat tax rate tax revenues from corporate income taxation are actually quite high and increasing since the 2000 tax reform. By way of example, revenues from corporate income taxation in Estonia (not taking into account revenues from capital taxation) as a percentage of GDP are higher than those in Germany, though below EU average (see graph below). The main reason might be that while there is no tax progression, there are also little or no variations in the tax base.



Source: European Commission / DG TAXUD

In February 2005, the IMF carried out a mission to Estonia on tax reform. It considered various alternatives for the country to come into compliance with the EU Parent-Subsidiary Directive that would maintain the link between the tax rate on individuals and on company income (including distributed income) and would retain favourable tax treatment of retained earnings. The three most promising alternatives would appear to be:

- *The classical system*, with a separate tax at the company level and a withholding tax on

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9 Council Directive 90/435/EEC of 23 July 1990

10 ECJ, Athinaiki Zithopiia AE v. Elliniko Domosio, 4 October 2001, Case C-294/99 [2002] ECR I-3683

11 In the framework of an ongoing tax reform, the income and corporate flat tax rate was reduced to 24% in 2005, and to 23% in 2006, with an objective to arrive at 20% in 2009, in steps of 1 percentage point per year.

12 Annex VI, Art. 7 of the Estonian EU Accession Treaty, OJ L236, 23.9.2003

13 European Commission, Directorate-General Taxation and Customs Union, Eurostat: Structures of the taxation systems in the European Union, Research in Official Statistics, 2005 edition.

dividends, would clearly meet the requirements of the Parent-Subsidiary Directive and the EC Treaty's requirement for free movement of capital. However, under this approach the withholding tax could not be imposed on dividends paid to foreign parent companies.

- *The advanced corporate tax (ACT)* under which a tax on distributions is credited against the regular tax. The advanced tax could be imposed on distributions to foreign parents. The ACT would be less transparent than the other two options, as it would be necessary to adopt tax incentives to drive down the effective tax rate on undistributed profits, if a preference for retained earning is going to be maintained.

- *A split-rate system*, with the higher tax rate on distributed than undistributed earnings, would be more transparent than the ACT, as a low tax rate would apply to undistributed profits and special tax incentives would not be needed.

Each of these alternatives would require Estonia to introduce a tax on profits as earned or at least a tax on undistributed profits. This clearly will add complexity to the tax system although the IMF concluded that the additional complexity could be minimized. Each proposal could be designed in a revenue neutral way as compared with current law.

The government is committed to retaining favourable tax treatment of retained earnings or reinvested profits. At the same time, it plans to introduce necessary legal measures as soon as possible, since uncertainty may deter potential foreign investors who will want to know what the tax regime will be after 2008. Also, with the 2009 deadline looming, foreign subsidiaries in Estonia might have an incentive to defer payment of dividends to their parent companies on the expectation that the tax on distributions will be repealed and dividends could be distributed to the foreign parent free of tax after 2008.

All in all, under the EU accession treaty Estonia may apply its income tax on profit distributions until 31 December 2008, after which the Estonian corporate tax system must fully comply with the Parent-Subsidiary directive, meaning an elimination of the tax deference contained in the present corporate tax scheme. However, in early 2006 the Estonian government announced that it would aim at initiating amendments to the Parent-Subsidiary directive at EU level in order to maintain a tax environment supportive to corporate investment also after the end of the transitional period. If the Estonian legislation will need to be adapted to present EU norms by end-2008, as foreseen by the Accession Treaty, the authorities announced that corporate income earned in the 2000-2008 period but withdrawn after 2009 would be taxed retroactively at the rate in force at the time of the realisation of these earnings. This should avoid an incentive to postpone paying out dividends for the sole purpose of paying lower taxes, thus possibly creating a revenue vacuum following the expiry of the present legislation.

4.2. The programme's medium-term budgetary strategy

This section covers in turn the following aspects of the medium-term budgetary strategy outlined in the programme: (i) the main goal of the budgetary strategy; (ii) the composition of the budgetary adjustment, including the broad measures envisaged; and (iii) the programme's medium-term objective and the adjustment path towards it in structural terms.

4.2.1. The main goal of the programme's budgetary strategy

The main goals of the medium-term budgetary strategy embodied in the programme are to achieve balanced general government finances under normal conditions of economic growth and securing long-term sustainability of the public finances in the light of the adverse effects of population ageing. To that end, the nominal balance is set in slight

surplus in 2005 and 2006, and at balanced budgets thereafter, in line with a medium term objective of 0.0% of GDP over the entire programme period.

Compared with the previous programme, the new update broadly confirms the planned budgetary stance of annually balanced budgets, against a slightly more favourable macroeconomic scenario. There is broad consensus across the Estonian political spectrum to maintain government accounts in balance or surplus. Therefore the formation of a new government in spring 2005 did not affect adherence to the budgetary targets endorsed by the Council in its opinion on the previous programme (see also Annex 2).

Table 4: Composition of the budgetary adjustment

(% of GDP)	2004	2005	2006	2007	2008	2009	Change: 2009-2005
Revenues *of which:*	38.3	41.2	41.8	39.0	37.2	36.0	**-5.2**
- Taxes & social contributions	32.5	33.6	33.6	32.9	32.5	31.9	**-1.7**
- Other (residual)	5.8	7.6	8.2	6.1	4.7	4.1	**-3.5**
Expenditure	36.4	40.9	41.7	39.0	37.2	36.0	**-4.9**
of which:							
- Primary expenditure	36.2	40.7	41.5	38.8	37.1	35.9	**-4.8**
of which:							
Collective consumption	8.4	9.0	9.1	8.6	8.4	8.2	**-0.8**
Social transfers in kind	10.6	11.4	11.9	11.1	10.8	10.7	**-0.7**
Social transfers other than in kind	10.0	12.3	12.1	11.8	11.5	11.3	**-1.0**
Subsidies	1.5	1.6	1.6	1.4	1.3	1.3	**-0.3**
Gross fixed capital formation	3.0	3.6	3.9	3.5	2.8	2.3	**-1.3**
Other (residual)	2.8	2.8	2.8	2.5	2.1	2.1	**-0.7**
- Interest expenditure	0.2	0.2	0.2	0.2	0.1	0.1	**-0.1**
General government balance (GGB)	**1.7**	**0.3**	**0.1**	**0.0**	**0.0**	**0.0**	-0.3
Primary balance	**1.9**	**0.5**	**0.3**	**0.2**	**0.1**	**0.1**	-0.4
One-off and other temporary measures	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GGB excl. one-off & other temporary measures	**1.7**	**0.3**	**0.1**	**0.0**	**0.0**	**0.0**	-0.3
Source: *Convergence programme update; Commission services' calculations*							

4.2.2. The composition of the budgetary adjustment in the programme

The programme expects a small budget surplus to give way to balance in the period 2007-2009 (see Table 4). After remaining broadly stable in 2005 and 2006, both the revenue and expenditure-to-GDP ratio are projected to decline rather steeply from 2007, leading to a reduction of revenues by 5.2% of GDP over the programme period 2005-2009, and of expenditure by 4.9%. This is in line with the update's objective of reducing the tax burden. On the basis of continued strong growth, the nominal expenditure would be allowed to grow in levels in all expenditure categories, while declining overall as a percentage of GDP. The profile of the primary balance shows a similar picture. The already very low interest burden on the Estonian government accounts is projected to drop further in percent of GDP over the programme period to a mere 0.1%.

As in previous years, the central government and social security budgets are projected to be in surplus (0.1% of GDP each), while local governments are forecast to remain in a small deficit (0.1% of GDP). The update also proposes measures to strengthen public finances of local governments, with the aim of enabling them to record a balanced position by the end of the programme period.

Box 2: The budget for 2006

The budget for 2006 was presented by the government on 21 September 2005 and approved by parliament on 7 December 2005. The budget targets a central government surplus of 0.1% of GDP in 2006. The amount of expenditure in the central government budget totals EEK 61.4 bn or 35.3% of GDP, of which 0.2% of GDP is interest expenditure on central government debt. Overall, he budget shows a surplus of 0.1% of GDP.

The main measures in the 2006 budget are the following:

- A further reduction of the flat tax rate for personal income and corporate dividends by 1 percentage point to 23%, lowering revenues by 0.4 % of GDP.
- Reduction of the deductible amount for income tax by 50%, broadening the tax base and raising revenues by 0.05% of GDP.
- Increase to the basic untaxed allowance for income tax, cutting revenue by 0.3% of GDP.
- Increase to the untaxed allowance for income tax for families with more than two children, reducing revenues by 0.2% of GDP.
- Increase of excise duties on alcohol and tobacco, raising revenue by 0.1% of GDP.
- Increase of various environmental taxes in line with EU accession treaty, raising revenue by 0.1% of GDP.
- Increase of the minimum duty of social tax, raising revenues by 0.2% of GDP.

4.2.3. The programme's medium-term objective (MTO) and the adjustment path in structural terms

According to the Stability and Growth Pact, stability and convergence programmes should present a medium-term objective (MTO) for the budgetary position. The MTO should be differentiated for individual Member States, to take into account the diversity of economic and budgetary positions and developments as well as of fiscal risk to the sustainability of public finances. The MTO is defined in structural terms (i.e. cyclically-adjusted, net of one-off and other temporary measures) and should fulfil a triple aim, namely (i) provide a safety margin with respect to the 3% of GDP deficit limit; (ii) ensure rapid progress towards sustainability; and (iii), taking (i) and (ii) into account, allow room for budgetary manoeuvre, considering in particular the needs for government investment. The code of conduct (Section I thereof) further specifies that, as long as the methodology for incorporating implicit liabilities is not fully developed and agreed by the Council, the country-specific MTOs are set taking into account the current government debt ratio and potential growth (in a long-term perspective), while preserving a sufficient margin against breaching the deficit reference value of 3% of GDP. Member States are free to set an MTO that is more demanding than strictly required to achieve the triple aim of MTOs.

The update sets an MTO of 0% of GDP, which it aims to respect throughout the programme period. Based on Commission services' calculations on the basis of the programme according to the commonly agreed methodology, the MTO would be overachieved between 2006 and 2008, and reached in 2009. Taken at face value, the programme envisages a sizeable fiscal stimulus at a time when the economy is expected to be running above potential according to the Commission services' autumn 2005

forecast - and even more so in the light of recent growth rates around 9-10% without signs of a significant slowdown in early 2006. This would be followed by a less expansionary fiscal stance over the remainder of the programme period.

Table 5: Output gaps, cyclically-adjusted and structural balances

	2004		2005		2006		2007		2008	2009	Change: 2009-2005
	COM	CP[1]	COM	CP[1]	COM	CP[1]	COM	CP[1]	CP[1]	CP[1]	CP[1]
Gen. gov't balance	1.7	1.7	1.1	0.3	0.6	0.1	0.4	0.0	0.0	0.0	-2.6
One-offs[2]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Output gap[3]	-0.2	0.1	0.5	-0.4	0.1	-0.6	-0.1	-0.7	-0.5	-0.1	0.3
CAB[4]	1.8	1.7	1.0	0.4	0.6	0.3	0.4	0.2	0.1	0.0	-2.7
change in CAB	-0.9	-0.9	-0.8	1.0	-0.4	-2.4	-0.2	-0.1	-0.1	-0.1	0.9
CAPB[4]	2.0	1.9	1.2	0.6	0.8	0.5	0.6	0.4	0.2	0.0	-2.9
Structural balance[5]	1.8	1.7	1.0	0.4	0.6	0.3	0.4	0.2	0.1	0.0	-2.7
Change in struct. bal.	-0.9	-0.9	-0.8	1.0	-0.4	-2.4	-0.2	-0.1	-0.1	-0.1	0.9
Struct. prim. bal.[6]	2.0	1.9	1.2	0.6	0.8	0.5	0.6	0.4	0.2	0.0	-2.9

Notes:
[1]Output gaps and cyclical adjustment according to the convergence programme (CP) as recalculated by Commission services on the basis of the information in the programme
[2]One-off and other temporary measures
[3]In percent of potential GDP
[4]CAB = cyclically-adjusted balance; CAPB = cyclically-adjusted primary balance.
[5]CAB excluding one-off and other temporary measures
[6]Structural primary balance = CAPB excluding one-off and other temporary measures

Source:
Commission services' autumn 2005 economic forecasts (COM); Commission services' calculations

4.3. Assessment

This assessment is in three parts. The first assesses the appropriateness of the programme's medium-term objective. The second analyses risks attached to the budgetary targets and the third examines whether the budgetary strategy laid down in the programme is consistent with the budgetary objectives of the Treaty and the Stability and Growth Pact.

4.3.1. Appropriateness of the programme's medium-term objective

As the programme's MTO is more demanding than the minimum benchmark estimated at -2% of GDP, its achievement should fulfil the aim of providing a safety margin against the occurrence of an excessive deficit. As regards appropriateness, the programme's MTO lies within the range for euro area and ERM II Member States in the Stability and Growth Pact and the code of conduct and is significantly more demanding than implied by the debt ratio and average potential output growth in the long term.

4.3.2. Risks attached to the budgetary targets

The balance of risks attached to the targets is positive. The budgetary outturn in 2005 is likely to be better-than projected in the programme with likely carry-over effects into 2006 and beyond. This is evidenced by the Commission services' autumn 2005 forecast which projects a surplus of 1.1% of GDP vis-à-vis an official estimate of 0.3% of GDP. Based on recent cash figures the actual outturn could be even better. Moreover, Estonia has a very good track record in respecting central government expenditure ceilings. As

the financial situation at local government level is improving, the budgetary risk from this source is clearly reduced as compared with previous years.

The budgetary projections in the programme appear markedly cautious also in view of the upside risks to the macroeconomic scenario as growth is likely to be considerably higher than official projected throughout the programme period. So far, as the programme claims, fiscal policy has in practice turned out counter-cyclical, and automatic stabilisers have been allowed to play. The output gap based on Commission services' calculations on the basis of the programme according to the commonly agreed methodology is slightly positive at 0.1% in 2006, while the Commission services calculations according to the commonly agreed methodology, based on the information provided in the programme lead to a negative output gap throughout the programme period. All in all, if the fiscal stance as presented in the programme for 2006 (implying a sudden fiscal easing from a surplus of 2.6% of GDP in 2005 to just 0.1%), in combination with continued strong growth, would indeed materialise – which is unlikely given Estonia's strong track record of prudent fiscal forecasting and consequent over-performance - fiscal policies would run the risk of turning clearly pro-cyclical. In particular, fiscal developments with a view to the election year 2007 deserve some attention.

4.3.3. Compliance with the budgetary requirements of the Treaty and the Stability and Growth Pact

Taking into account the risk assessment above, the budgetary strategy outlined in the programme seems sufficient to ensure that the programme's MTO is maintained by a comfortable margin throughout the programme period. In addition, as the cyclical-adjusted balance is estimated to be clearly better than the "minimal benchmark" over the entire programme period there is a sufficient safety margin against breaching the 3% of GDP deficit ceiling with normal cyclical fluctuations for 2005-2009.

According to the update, the structural surplus eases slightly from 0.4% of GDP in 2005 to balance in 2009. However, the structural balances for 2005 (certainly) and for 2006 (most likely) are set to turn out considerably more favourable than indicated by the programme's short term projections. In any case, the MTO would be respected throughout the programme period.

The real fiscal stance is estimated to have been relatively tight in 2005, at a surplus of 2.6% of projected GDP, according to latest available information, in contrast to a projected surplus of just 0.3% of GDP in the update.

For countries that have already achieved the programme's MTO, such as Estonia, the only requirement for the "adjustment path" is that pro-cyclical fiscal policies are avoided in "good times". Given the continuous strong and rapid structural changes the Estonian economy has been undergoing, together with its small size and high degree of openness, it is difficult to determine Estonia's position in the business cycle. The output gap based on the Commission services' calculations on the basis of the programme according to the commonly agreed method is negative throughout the programme period. By contrast, the Commission services' forecast implies a slightly positive output gap in 2006. All in all, taking into account the likelihood of a better-than-projected outturn in 2005, the achievement of the budgetary target of 0.1% of GDP in 2006 could carry the risk of pro-cyclicality in good times.

The strategy for the general government balance outlined in the programme is consistent with the broad economic policy guidelines in the area of public finances (for a more detailed overview see Annex 3).

4.4. Sensitivity analysis

The sensitivity analysis is presented in the programme in the form of two alternative scenarios with respect to changes in economic activity to the baseline scenario and their potential effect on government finances. These scenarios are taking into account (i) higher-than-projected oil prices; and (ii) higher-than-projected export activity. Revenue and expenditure elasticities as estimated by the OECD are used to measure the impact of economic growth deviations on general government finances. The calculations provided in the alternative scenarios are only partial, and provide mainly for a partial correction of the clear underestimation of economic activity and budget revenues in the basic forecast for 2005. The first scenario (higher oil prices) covers the period 2005-2007. It results in higher inflation in the years 2005 to 2007, broadly in line with the Commission services' autumn 2005 forecast on the HICP. The analysis of this scenario in the programme concludes that whereas the influence on revenues in 2005 is uncertain and in any case negligible, because of off-setting effects, in 2006 and 2007 slightly higher revenues would be generated. A direct effect of inflation on budget revenues is not considered in the scenario, only effects of changes in consumption and saving behaviour on fuel tax and VAT revenues. The second scenario (higher export activity) covers only the years 2005 and 2006. It results in higher GDP growth for both years as compared with the baseline scenario and is broadly in line with the Commission services' autumn 2005 forecast. Overall, both scenarios present considerable upside risks to the baseline scenario, which indeed have already started to materialise in 2005 and are likely to continue well into 2006, according to the Commission services' autumn 2005 forecast.

Commission services' simulations of the cyclically-adjusted balance under the assumptions of (i) a sustained 1.0 percentage point deviation from the real GDP growth projections in the programme over the 2005-2009 period; (ii) trend output based on the HP-filter[14] and (iii) no policy response (notably, the expenditure level is as in the central scenario[15]), reveal that, by 2009, the cyclically-adjusted balance is about 0.7 percentage point of GDP above/below the central scenario. Hence, in the case of persistently lower real growth, additional measures of over ½ a percentage point of GDP would be necessary to keep the public finances on the path targeted in the central scenario.[16].

5. GENERAL GOVERNMENT GROSS DEBT

This section is in two parts: the first describes the debt path envisaged in the programme and the second contains the assessment.

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14 In the absence of a fully-specified macroeconomic scenario that would underlie such deviations, it is obviously impossible to derive new estimates of potential growth from the agreed production function method.

15 The effect of lower/higher growth on revenues is captured by using the conventional sensitivity parameters adopted in cyclical adjustment procedures.

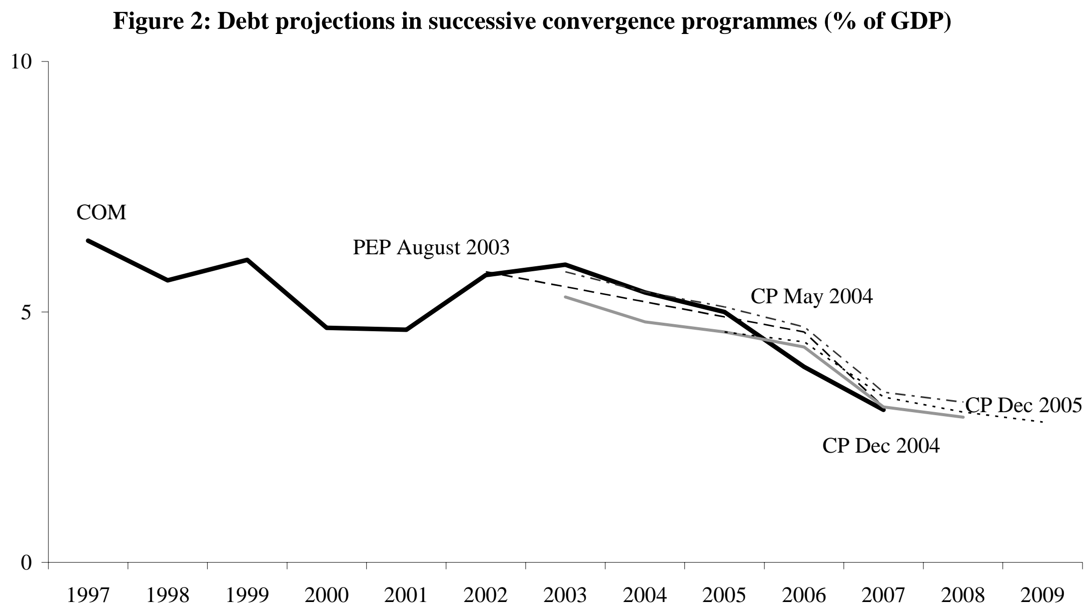
16 Unexpected changes in inflation are not assumed to affect the expenditure-to-GDP ratio as nominal expenditure should broadly move in lockstep with the price level.

5.1. Debt developments in the programme

Estonia has currently the lowest gross debt-to-GDP ratio in the EU. The update forecasts that the debt ratio is reduced progressively over the projection period to reach 2.8% of GDP in 2009, down from 4.6% at the end of 2005.

Considerable general government budget surpluses in recent years were generated primarily at the level of the central government and social security, while local governments were in deficit. By the end of 2004, the central government's liquid financial assets exceeded central government debt by a large margin.

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



Source : Commission services' autumn 2005 forecast (COM) and successive convergence

Table 6: Debt dynamics

	average 2000-2004	2005		2006		2007		2008	2009
	COM	COM	CP	COM	CP	COM	CP	CP	CP
Government gross debt ratio	**5.4**	**5.1**	**4.6**	**4.0**	**4.4**	**3.1**	**3.3**	**3.0**	**2.8**
Change in debt ratio (1 = 2+3+4)	-0.2	-0.4	-0.9	-1.1	-0.2	-0.9	-1.1	-0.3	-0.2
Contributions:									
- **Primary deficit** (2)	**-1.4**	**-1.3**	**-0.5**	**-0.8**	**-0.3**	**-0.5**	**-0.2**	**-0.1**	**-0.1**
- **"Snow-ball" effect** (3)	**-0.3**	**-0.4**	**-0.4**	**-0.3**	**-0.2**	**-0.2**	**-0.2**	**-0.2**	**-0.2**
- Interest expenditure	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
- Real GDP growth	-0.4	-0.4	-0.3	-0.3	-0.3	-0.3	-0.3	-0.2	-0.2
- Inflation (GDP deflator)	-0.2	-0.2	-0.3	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1
- **Stock-flow adjustment** (4)	**1.5**	**1.4**	**0.0**	**0.0**	**0.3**	**-0.1**	**-0.7**	**0.0**	**0.1**
- Cash/accruals	0.1								
- Accumulation of financial assets	1.4								
of which: Privatisation proceeds	-0.9								
- Valuation effects & residual adj.	0.0								

Note:
The change in the gross debt ratio can be decomposed as follows:

$$\frac{D_t}{Y_t} - \frac{D_{t-1}}{Y_{t-1}} = \frac{PD_t}{Y_t} + \left(\frac{D_{t-1}}{Y_{t-1}} * \frac{i_t - y_t}{1 + y_t} \right) + \frac{SF_t}{Y_t}$$

where t is a time subscript; D, PD, Y and SF are the stock of government debt, the primary deficit, nominal GDP and the stock-flow adjustment respectively, and i and y represent the average cost of debt and nominal GDP growth. The term in parentheses represents the "snow-ball" effect.

Sources:
Stability programme update (SP); Commission services' autumn 2005 economic forecasts (COM); Commission services' calculations

5.2. Assessment

The debt ratios foreseen in the update are broadly in line with the Commission services' autumn 2005 forecast. While for 2005 the Commission forecast projects a slightly higher debt-to-GDP ratio than the programme, mainly on the basis of an assumption for higher stock flow adjustments generated through surpluses put into financial assets, for 2006 and 2007 the Commission projects slightly lower ratios than the update. This is mainly due to higher primary (and overall) surpluses projected by the Commission services (see Section 4.1). Given the very low level of government debt in Estonia, and high swings in the GDP level due to statistical corrections, minor discrepancies in the forecasts for the debt-to-GDP ratio may be disregarded. Overall, government debt is not a cause for concern in Estonia, given its low level and the high amount of government financial assets.

6. Structural reform, the quality of public finances and institutional features

In terms of quality, Estonia's public finances appear to be sound. The update contains an overview of a number of measures, which, among other objectives, improve the quality and sustainability of public finances already in the medium term. Completion of the 2002 pension reform figures prominently.

As regards institutional features of the public finances, the quality of the budgetary process in Estonia is influenced by a number of recently introduced innovations, which

are meant to enhance budgetary discipline, namely completing an IT-based budgeting system connecting all line ministries to the scrutiny of the Ministry of Finance, and a further formalisation of the strategic planning process across all levels of central government. In addition, new legislation improving the financial management at local government level is under preparation, whereby the new Local Government Financial Management Act and the Local Government Insolvency Act are expected to further limit local governments' ability to borrow, introducing sanctions for non-compliance, and regulating a possible situation where a local government is in financial difficulty would become subjected to the supervision of the Ministry of Finance. A new government accounting system that had been introduced for Central Government ministries in 2004 was extended to Local Government and Government Foundations in 2005. In addition, the new system generates quarterly and annual data, which the Ministry of Finance then consolidates into general government accounts. The system will be extended to monthly data from 2007. These measures can be expected to improve the transparency of government operations at all levels, as well as the planning and ex-post evaluation of government revenues and expenditure.

The structural reform measures presented in the programme are clearly a step in the right direction, in particular with respect to improving the long-term sustainability and quality of public finances overall.

The envisaged measures in the area of public finances are broadly consistent with the broad economic policy guidelines included in the integrated guidelines for the period 2005-2008. In particular, large public savings in 2005 have indeed contributed to a significant narrowing of the external account deficit to below 10% of GDP. A prudent fiscal policy is defined as a cornerstone of the Estonian policy mix over the programme period, also with a view to supporting a further decline in the external deficit to sustainable levels. The update also presents measures to promote a growth- and employment-oriented allocation of resources, in particular by decreasing the weight of the state in the economy and by shifting the tax burden from direct to indirect and environmental taxation.

The above mentioned measures are also in line with the National Reform Programme, submitted on 15 October 2005 in the context of the renewed Lisbon strategy for growth and jobs. The budgetary implications of the actions outlined in the National Reform Programme are fully reflected in the budgetary projections of the convergence programme. The measures in the area of public finances envisaged in the convergence programme are in line with the actions foreseen in the National Reform Programme. In particular, the convergence programme outlines measures to complete the 2002 pension reform in order to support long-term sustainability of public finance (for more details, see Section 7 below), to increase taxes on consumption and the environment while reducing the taxation of labour and to systematically shift budget resources towards investment, promotion of R&D and vocational training. Estonia provided detailed projections on general government expenditure by function until 2008, beyond the requirements of the code of conduct (see Table 3 in Annex 1). Although the projected decline in the overall tax burden leads to a decline in expenditure as a percentage of GDP in all government functions over the period 2005-2008, nominal expenditure for education, social protection, environment and economic affairs are expected to decline much slower than overall real expenditure. This confirms the focus the programme puts on the measures and actions foreseen in the National Reform Programme.

7. THE SUSTAINABILITY OF THE PUBLIC FINANCES

The assessment of the sustainability of Estonia's public finances is based on an overall judgement of the results of quantitative indicators and qualitative features. The debt projections and sustainability indicators are calculated according to two different scenarios, to take into account different budgetary developments over the medium term. The "programme" scenario assumes that the medium-term budgetary plans set up in the programme are actually achieved. The "2005" scenario assumes that the structural primary balance[17] remains unchanged at the 2005 level throughout the programme period.

The long-term projections in the programme have been made by using the agreed assumptions in the current EPC projections from 2009 onwards. On the basis of information in the programme, age-related expenditure is foreseen to fall by 2.9% of GDP between 2008 and 2050, to which pension expenditures contribute a decline of 2.6% of GDP (see Table A2 in Annex 5). The Commission's analysis is based on the set of government expenditure items covered by the common projections carried out by the Economic Policy Committee (EPC)[18], except the education expenditure which was not available in the update. In addition to these expenditure items, the update includes a projected rise in the revenue/GDP ratio.

The gross debt-to-GDP ratio, which is currently the lowest in the EU, is projected to remain below the 60% of GDP reference value throughout the projection period up to 2050 (see Table A4 in Annex 5)[19].

Indeed, according to both sustainability indicators (S1 and S2), there is no sustainability gap for Estonia, regardless of whether the '2005' scenario or the 'programme' scenario is considered. The projected fall in age-related expenditures over the long term implies no budgetary costs of ageing. Moreover, the current and planned balanced budgetary position over the medium term contributes positively to the outlook for the public finances. The sustainability gap measured by S2 translates into a required primary balance (RPB) of around -2¼ % of GDP, lower than the structural primary balance of about 0% of GDP of the last year of the programme period[20].

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[17] The primary balance where the effect of the cycle and any one-off or temporary measures have been netted out.

[18] In the programme update, government expenditure on pension, health-care and long-term care are available. Additional information on long-term projections on unemployment benefits was obtained from the Estonian Ministry of Finance, while information on education expenditure was not available. Other expenditure items and revenues are assumed to remain constant as a share of GDP over the projection period.

[19] It should be recalled that, being a mechanical, partial equilibrium analysis, projections are in some cases bound to show highly accentuated profiles. As a consequence, the projected evolution of debt levels should not be seen as a forecast.

[20] Given that there is no sustainability gap for Estonia in the period up to 2050, there is no cost of a five-year delay in adjusting the budgetary position according to the S1 and S2 (see the sensitivity test in Table A3 in the Annex).

Table 7: Sustainability indicators and the required primary balance

	Sustainability indicators and RPB					
	2005 Scenario			Programme scenario		
	S1	S2	RPB	S1	S2	RPB
Value (of which)	**-3.9**	**-3.2**	**-2.2**	**-3.4**	**-2.7**	**-2.2**
initial budgetary position	*-0.6*	*-0.6*		*-0.1*	*-0.1*	
debt requirement in 2050	*-1.3*	*:*		*-1.3*	*:*	
future changes in budgetary position	*-2.0*	*-2.6*		*-2.0*	*-2.6*	

Note: The S1 indicator shows the difference, the sustainability gap, between the constant revenue ratio as a share of GDP required to reach a debt ratio in 2050 of 60% of GDP and the current revenue ratio. The S2 indicator, which shows the difference, the sustainability gap, between the constant revenue ratio as a share of GDP that guarantees the respect of the inter-temporal budget constraint of the government, i.e. that equates the actualized flow of revenues and expenses over an infinite horizon, and the current revenue ratio[21]. The Required Primary Balance (RPB) measures the average primary balance over the first five years of the projection period that results from a permanent budgetary adjustment carried out to comply fully with the inter-temporal budget constraint. See European Commission ((2005), European Economy, 'Public finances in EMU – 2005, Section II.3 for a further description.

In interpreting these results, several factors need to be taken into account.

The underlying assumptions used when making the long-term projections are those commonly agreed and used by the EPC in the current common projections exercise (see Table A1 in Annex 5).[22] Overall, the underlying assumptions in the programme can therefore be considered to be plausible.

The additional national long-term projections provided in the update include a projected rise in the revenue/GDP ratio. The impact on the S2 indicator of incorporating these national projections would reduce it by 1.6 percentage points of GDP[23]. On the assumption that these additional national projections will materialise, they would imply lower sustainability risks.

The implementation of the pension reform is ongoing, with the pension age increasing stepwise to 63 for both genders by 2016. Structural reform measures improving the quality of public finances and institutional framework as presented in the programme are also supportive to improving the long-term sustainability of public finances overall (for details see section 6 above).

The programme contains two scenarios for the long-term developments. Under the first 'no policy change' scenario, public finances would be sustainable in a 50-year perspective. The second 'risk' scenario assumes that the social security pension system would remain in a permanent deficit of 0.5-1.5% of GDP throughout the entire period, primarily due to adverse demographic developments while the ratio of pensions and average wage would remain as at present. In that case, the pension assets could turn into a debt of around 55% of GDP by 2050 according to the programme estimates. If such developments were to realise, including a fall in the replacement rates from public

21 The sustainability gap indicators (S1, S2) do not necessarily suggest that taxes should be increased; strengthening the fiscal position by permanently reducing the level of non-age related primary spending could be preferable and has the same impact.

22 Additional information on the assumption on the population aged 65 and more was provided by the Estonian Ministry of Finance, correcting the information provided in the programme update.

23 The impact of these additional national long-term projections over the period 2010-2050 on the S2 indicator was calculated.

pensions, the risks to sustainability would increase. The programme lists measures to increase labour supply, increasing productivity and increasing private savings as the remedies to counter-act these risks in the long run. These measures appear adequate to the challenges Estonia faces with regard to long-term sustainability of public finances.

With regard to the sustainability of public finances, Estonia appears to be at low risk on grounds of the projected budgetary costs of ageing populations. The level of gross debt is currently very low and is projected to remain below the 60% reference value throughout the projection period. Estonia's strategy of putting sustainability concerns at the heart of fiscal policy making, including the pension system reform which contains pension expenditure and involves accumulation of assets, contributes positively to the outlook for the public finances. The currently budgetary position in surplus contributes to limiting the projected budgetary impact of ageing populations and the medium-term budgetary plans are consistent with low risks to public finance sustainability.

* * *

Annex 1: Summary tables from the convergence programme update

Table 1a. Macroeconomic prospects*

	ESA Code	2004	2004	2005	2006	2007	2008	2009
		Level	rate of change	rate of change	rate of change	rate of change	rate of change	rate of change
1. Real GDP	B1*g	122,049.3	7.8	6.5	6.6	6.3	6.3	6.3
2. Nominal GDP	B1*g	141,493.4	11.1	10.4	9.5	9.1	9.3	9.3
Components of real GDP								
3. Private consumption expenditure	P.3	69,390.3	3.4	6.6	6.6	6.2	6.2	6.1
4. Government consumption expenditure	P.3	22,921.9	6.9	5.3	5.0	4.5	4.5	4.5
5. Gross fixed capital formation	P.51	36,208.4	6.0	7.2	6.1	5.8	5.5	5.5
6. Changes in inventories and net acquisition of valuables (% of GDP)	P.52 + P.53		2.8	2.5	2.3	2.2	2.1	2.0
7. Exports of goods and services	P.6	101,471.8	16.0	15.4	13.3	10.5	10.4	10.4
8. Imports of goods and services	P.7	114,870.3	14.6	12.6	11.9	9.5	9.5	9.5
Contributions to real GDP growth*								
9. Final domestic demand			5.1	6.9	6.6	6.2	6.1	6.0
10. Changes in inventories and net acquisition of valuables	P.52 + P.53		-0.1	0.0	0.1	0.1	0.1	0.1
11. External balance of goods and services	B.11		-0.6	0.9	0.1	0.1	0.1	0.2
Added value growth								
12. Primary sector**			1.6	0.2	2.7	2.6	2.5	2.8
13. Industry**	P.52 + P.53		8.6	8.5	9.2	8.6	8.8	8.5
14. Construction**	B.11		10.5	7.9	8.8	7.2	8.7	7.4
15. Other services**	B.11		7.2	5.8	5.6	5.6	5.3	5.4

** Economic forecast of 2005 of the Ministry of Finance, completed on 16 August 2005, which was the basis for compiling the state budget for 2006.*
*** Information provided in the programme that is not required by the code of conduct*

Table 1b. Price developments

	ESA Code	2004	2004	2005	2006	2007	2008	2009
		level	rate of change	rate of change	rate of change	rate of change	rate of change	rate of change
1. GDP deflator			3.1	3.7	2.8	2.7	2.8	2.8
2. Private consumption deflator			3.2	3.5	2.7	2.6	2.8	2.8
3. HICP[24]			3.0	3.5	2.6	2.6	2.7	2.7
4. Public consumption deflator			2.0	4.0	3.3	2.4	2.8	2.9
5. Investment deflator			3.1	2.8	2.3	2.1	2.1	2.1
6. Export price deflator (goods and services)			1.0	3.2	3.2	3.4	3.5	3.5
7. Import price deflator (goods and services)			2.0	3.5	3.1	2.8	2.8	2.8

Table 1c. Labour market developments

	ESA Code	2004	2004	2005	2006	2007	2008	2009
		Level	rate of change	rate of change	rate of change	rate of change	rate of change	rate of change
1. Employment, persons[25]		595.5 1)	0.2	0.6	0.6	0.8	0.7	0.4
2. Employment, hours worked[26]								
3. Unemployment rate (%)[27]			9.7	9.3	9.2	8.8	8.5	8.4
4. Labour productivity, persons [28]			7.3	5.7	5.9	5.5	5.6	5.8
5. Labour productivity, hours worked[29]								
6. Compensation of employees	D.1	65,763 2)	10.1	11.7	10.3	9.5	9.6	9.4

1) Thousand people.
2) Million EEK.

Table 1d. Sectoral balances

% of GDP	ESA Code	2004	2005	2006	2007	2008	2009
1. Net lending/borrowing vis-à-vis the rest of the world	B.9	-11.8	-9.0	-8.2	-7.4	-6.3	-5.0
1.a Current account*		-12.7	-10.4	-9.6	-8.6	-7.4	-6.0
of which: - Balance on goods and services		-7.8	-6.3	-5.4	-4.2	-2.8	-1.3
- Balance of primary incomes and transfers		-4.9	-4.1	-4.2	-4.4	-4.6	-4.6
- Capital account		0.7	1.4	1.4	1.2	1.2	1.0
2. Net lending/borrowing of the private sector	B.9						
3. Net lending/borrowing of general government	B.9/ EDP B.9	1.7	0.3	0.1	0.0	0.0	0.0
4. Statistical discrepancy		-0.7**					

** Information provided in the programme that is not required by the code of conduct*
*** apparent inconsistency in this table, given that net lending/ borrowing of the private sector is not specified in line 2.*

25 Occupied population, domestic concept national accounts definition.
26 National accounts definition.
27 Harmonised definition, Eurostat; levels.
28 Real GDP per person employed.
29 Real GDP per hour worked.

Table 2. General government budgetary prospects

	ESA code	2004	2004	2005	2006	2007	2008	2009
		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	**2,380.0**	**1.7**	**0.3**	0.1	0.0	0.0	0.0
2. Central government	S.1311	1,936.0	1.4	0.2	0.1	0.0	0.0	0.0
3. State government	S.1312	-	-	-	-	-	-	-
4. Local government	S.1313	-235.0	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1
5. Social security funds	S.1314	679.0	0.5	0.3	0.1	0.1	0.1	0.1
General government (S13)								
6. Total revenue	TR	53,892.3	38.1	41.2	41.8	39.0	37.2	36.0
7. Total expenditure	TE[30]	51,512.3	36.4	40.9	41.7	39.0	37.2	36.0
8. Net lending/borrowing	EDP B.9	2,380.0	1.7	0.3	0.1	0.0	0.0	0.0
9. Interest expenditure (incl. FISIM)	EDP D.41 incl. FISIM	348.1	0.2	0.2	0.2	0.2	0.1	0.1
pm: 9a. FISIM		0.0	0.0	0.0	0.0	0.0	0.0	0.0
10. Primary balance	[31]	2,728.1	1.9	0.5	0.3	0.2	0.1	0.1
Selected components of revenue								
11. Total taxes (11=11a+11b+11c)		30,117.9	21.3	22.3	22.2	21.4	21.1	20.6
11a. Taxes on production and imports	D.2	18,078.1	12.8	14.5	14.5	14.4	14.1	14.1
11b. Current taxes on income, wealth, etc	D.5	12,037.8	8.5	7.8	7.7	7.0	7.0	6.6
11c. Capital taxes	D.91	2.0	0.0	0.0	0.0	0.0	0.0	0.0
12. Social contributions	D.61	15,812.9	11.2	11.3	11.4	11.5	11.4	11.3
13. Property income	D.4	1,579.2	1.1	1.2	1.2	1.1	1.1	1.1
14. Other (14=15-(11+12+13))		6,622.0	4.7	6.4	6.9	5.0	3.6	3.1
15=6. Total revenue	TR	54,132.0	38.3	41.2	41.8	39.0	37.2	36.0
p.m.: Tax burden (D.2+D.5+D.61+D.91-D.995)[32]* *Data in this line seem not in line with the required inclusion of collected EU taxes in the tax burden according to Eurostat definition.		45,930.8	32.5	33.6	33.6	33.0	32.5	32.0
Selected components of expenditure								
16. Collective consumption	P.32	11,940.2	8.4	9.0	9.1	8.6	8.4	8.2
17. Total social transfers	D.62 + D.63	29,016.0	20.5	23.7	24.0	23.0	22.3	22.0
17a. Social transfers in kind	P.31 =D.63	14,929.9	10.6	11.4	11.9	11.1	10.8	10.7
17b. Social transfers other than in kind	D.62	14,086.1	10.0	12.3	12.1	11.8	11.5	11.3
18.=9. Interest expenditure (incl. FISIM)	EDP D.41 ncl. FISIM	348.1	0.2	0.2	0.2	0.2	0.1	0.1
19. Subsidies	D.3	2,065.6	1.5	1.6	1.6	1.4	1.3	1.3
20. Gross fixed capital formation	P.51	4,177.3	3.0	3.6	3.9	3.5	2.8	2.3
21. Other (21=22-(16+17+18+19+20))		3,965.1	2.8	2.8	2.8	2.5	2.1	2.1
22=7. Total expenditure	TE[33]	51,512.3	36.4	40.9	41.7	39.0	37.2	36.0
Pm: compensation of employees	D.1	14,519.0	10.3	10.1	10.1	10.0	9.6	9.4

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

31 The primary balance is calculated as (EDP B.9, item 8) plus (EDP D.41 + FISIM recorded as intermediate consumption, item 9).

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

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

Table 3. General government expenditure by function*

% of GDP	COFOG Code	2003	2004	2005	2006	2007	2008
1. General public services	1	3.4	3.7	4.0	4.0	3.8	3.6
2. Defence	2	1.6	1.5	1.6	1.6	1.5	1.4
3. Public order and safety	3	2.6	2.7	2.6	2.5	2.3	2.2
4. Economic affairs	4	3.7	5.4	6.5	6.6	6.2	5.9
5. Environmental protection	5	0.8	1.2	1.6	1.6	1.5	1.4
6. Housing and community amenities	6	0.6	0.5	0.5	0.5	0.5	0.5
7. Health	7	4.2	4.2	4.8	5.1	4.8	4.5
8. Recreation, culture and religion	8	2.1	1.9	2.3	2.2	2.1	2.0
9. Education	9	7.2	5.6	5.9	5.8	5.5	5.2
10. Social protection	10	10.6	9.7	11.1	11.7	10.9	10.4
11. Total expenditure (= item 7=26 in Table 2)	TE[34]	**36.7**	**36.4**	**40.9**	**41.7**	**39.0**	**37.2**

** Although the code of conduct would require only the figures for years 2003 and 2008, the programme provides the full breakdown over that period.*

Table 4. General government debt developments

% of GDP		2004	2005	2006	2007	2008	2009
1. Gross debt[35]		**5.4**	**4.6**	**4.4**	**3.3**	**3.0**	**2.8**
2. Change in gross debt ratio		-0.5	-0.8	-0.2	-1.1	-0.3	0.2
Contributions to changes in gross debt							
3. Primary balance[36]		-1.9	-0.5	-0.3	-0.2	-0.1	-0.1
4. Interest expenditure (incl. FISIM) [37]		0.2	0.2	0.2	0.2	0.1	0.1
5. Stock-flow adjustment		1.7	0.6	0.3	-0.8	0.0	0.0
of which: - Differences between cash and accruals[38]							
- Net accumulation of financial assets[39] *of which:* *privatisation proceeds*							
- Valuation effects and other[40]							
p.m. implicit interest rate on debt[41]		**4.6**	**3.7**	**4.3**	**4.5**	**3.0**	**3.3**
Other relevant variables							
6. Liquid financial assets[42]							
7. Net financial debt (7=1-6)							

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

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

[36] Cf. item 10 in Table 2.

[37] Cf. item 9 in Table 2.

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

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

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

[41] Proxied by interest expenditure (incl. FISIM recorded as consumption) divided by the debt level of the previous year.

[42] 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	2004	2005	2006	2007	2008	2009
1. Real GDP growth (%)		7.8	6.5	6.6	6.3	6.3	6.3
2. Net lending of general government	EDP B.9	1.7	0.3	0.1	0.0	0.0	0.0
3. Interest expenditure (incl. FISIM recorded as consumption)	EDPD.41+ FISIM	0.2	0.2	0.2	0.2	0.1	0.1
4. Potential GDP growth (%) (1)		11.0	11.0	10.2	9.6	9.1	8.9
contributions: - labour - capital - total factor productivity							
5. Output gap		0.3	-0.3	-0.9	-1.3	-1.1	-0.7
6. Cyclical budgetary component		0.3	-0.3	-0.8	-1.2	-1.0	-0.7
7. Cyclically-adjusted balance (2-6)		1.4	0.6	0.9	1.2	1.0	0.7
8. Cyclically-adjusted primary balance (7-3)		1.6	0.8	1.1	1.4	1.1	0.8

(1) Until an agreement on the Production Function Method is reached, Member States can use their own figures (SP)

Table 6. Divergence from previous update

	ESA Code	2004	2005	2006	2007	2008	2009
Real GDP growth (%)							
Previous update		5.6	5.9	6.0	6.0	6.0	-
Current update		7.8	6.5	6.6	6.3	6.3	6.3
Difference		2.2	0.6	0.6	0.3	0.3	-
General government net lending (% of GDP)	EDP B.9						
Previous update		1.0	0.0	0.0	0.0	0.0	-
Current update		1.7	0.3	0.1	0.0	0.0	0.0
Difference		0.7	0.3	0.1	0.0	0.0	-
General government gross debt (% of GDP)							
Previous update		4.8	4.6	4.3	3.1	2.9	-
Current update		5.4	4.6	4.4	3.3	3.0	2.8
Difference		0.6	0.0	0.1	0.2	0.1	-
Consumer price index (%)*							
Previous update		3.3	3.2	2.5	2.8	2.8	-
Current update		3.0	3.6	2.6	2.6	2.8	2.8
Difference		-0.3	0.4	0.1	-0.2	0.0	-
Current account (% of GDP)*							
Previous update		-10.8	-9.1	-7.7	-6.8	-5.6	-
Current update		-12.7	-10.4	-9.6	-8.6	-7.4	-6.0
Difference		-1.9	-1.4	-1.9	-1.8	-1.8	-

** Information provided in the programme that is not required by the code of conduct*

Table 7. Long-term sustainability of public finances

% of GDP	2000	2005	2010	2020	2030	2050
Total expenditure		40.9	36.6	36.5	36.8	37.9
Of which: age-related expenditures						
Pension expenditure		7.1	6.7	5.4	4.7	4.2
Social security pension		7.1	6.7	5.4	4.7	4.2
Old-age and early pensions		6.2	5.8	4.6	4.1	3.7
Other pensions (disability, survivors)		1.0	1.0	0.7	0.6	0.5
Occupational pensions (if in general government)		-	-	-	-	-
Health care		4.8	4.7	4.6	4.4	4.4
Long-term care *(this was earlier included in the health care)*		0.1	0.1	0.1	0.1	0.1
Education expenditure						
Other age-related expenditures						
Interest expenditure		0.2	0.1	0.1	0.1	0.1
Total revenue		41.2	36.6	36.5	36.8	37.9
Of which: property income		1.3	1.3	1.5	2.2	3.4
of which: from pensions contributions (or social contributions if appropriate)		11.5	11.3	11.0	10.6	10.5
Pension reserve fund assets		0.5	0.0	3.4	14.2	42.5
Of which: consolidated public pension fund assets (assets other than government liabilities)		0.5	0.0	3.4	14.2	42.5
Assumptions						
Labour productivity growth		5.5	5.1	3.6	2.7	1.7
Real GDP growth		6.3	5.6	2.7	2.3	0.6
Participation rate males (aged 20-64)		83.9	85.3	87.4	87.6	85.8
Participation rates females (aged 20-64)		73.9	75.4	79.5	79.8	77.6
Total participation rates (aged 20-64)		78.7	80.1	83.3	83.6	81.7
Unemployment rate		8.9	7.8	7.0	7.0	7.0
Population aged 65+ over total population		10.9	16.7	18.7	21.2	25.7

Table 8. Basic assumptions

	2003**	2004	2005	2006	2007	2008	2009
Short-term interest rate[43] (annual average)	2.3	2.1	2.1	2.2	2.5	2.9	3.3
Long-term interest rate (annual average)	4.1	4.1	4.1	4.2	4.4	4.6	4.8
USD/€exchange rate (annual average) (euro area and ERM II countries)	1.13	1.24	1.26	1.24	1.20	1.15	1.10
Nominal effective exchange rate	15.6	15.6	15.6	15.6	15.6	15.6	15.6
(for countries not in euro area or ERM II) exchange rate vis-à-vis the €(annual average)							
World excluding EU, GDP growth*	3.9	4.6	4.5	4.3	3.8	3.8	3.8
EU GDP growth *	0.9	2.2	2.0	2.3	2.0	2.0	2.0
Growth of relevant foreign markets	2.3	3.3	2.8	3.0	2.7	2.7	2.7
World import volumes, excluding EU	-	-	-	-	-	-	-
Oil prices, (Brent, USD/barrel)	28.8	38.2	54.0	53.1	51.1	50.1	49.0

** In assumptions of the MoF, GDP growth has been corrected with the number of workdays and on seasonal basis.*
*** Information provided in the programme that is not required by the code of conduct*

[43] If necessary, purely technical assumptions.

Annex 2: Compliance with the code of conduct

The table below provides a detailed assessment of whether the programme respects the requirements of Section II of the new code of conduct. It is in four parts, covering compliance with (i) the window for the date of submission of the programme; (ii) the model structure (table of contents) in Annex 1 of the code; (iii) the data requirements (model tables) in Annex 2 of the code; and (iv) other information requirements. In the main text, points (ii) and (iii) are grouped into the "format" requirements of the code, whereas point (iv) refers to its "content" requirements.

Guidelines in the new code of conduct	Yes	No	Comments
1. Submission of the programme			
Programme was submitted not earlier than mid-October and not later than 1 December[1].	X		
2. Model structure			
The model structure for the programmes in Annex 1 of the code of conduct has been followed.	X		Minor deviations, e.g. differing titles.
3. Model tables (so-called data requirements)			
The quantitative information is presented following the standardised set of tables (Annex 2 of the code of conduct).	X		
The programme provides all compulsory information in these tables.		X	Minor deviations, e.g. in table 1c for 2004 a different definition for the level of the unemployment rate is used; unemployment rate is given in levels instead of the required rate of change; in table 8 'basic assumptions' for nominal effective exchange rate and for world import volumes, excluding EU, are not provided.
The programme provides all optional information in these tables.		X	Employment, hours worked; productivity, hours worked (Table 1c); net lending/ borrowing of the private sector and of general government (Table 1d) are not provided.
The concepts used are in line with the European system of accounts (ESA).	X		The unemployment rate is used according to the national definition instead of Eurostat.
4. Other information requirements			
a. Involvement of parliament			

Guidelines in the new code of conduct	Yes	No	Comments
The programme mentions its status vis-à-vis the national parliament.		X	
The programme indicates whether the Council opinion on the previous programme has been presented to the national parliament.		X	
b. Economic outlook			
Euro area and ERM II Member States uses the "common external assumptions" on the main extra-EU variables.		X	Explained in the programme by different timing of forecasts.
Significant divergences between the national and the Commission services' economic forecasts are explained[12].	X		
The possible upside and downside risks to the economic outlook are brought out.	X		
The outlook for sectoral balances and, especially for countries with a high external deficit, the external balance is analysed.		X	Private and public savings are not discussed, whereas the external balance is analysed in great detail.
c. Monetary/exchange rate policy			
The convergence programme presents the medium-term monetary policy objectives and their relationship to price and exchange rate stability.	X		
d. Budgetary strategy			
The programme presents budgetary targets for the general government balance in relation to the MTO, and the projected path for the debt ratio.	X		
In case a new government has taken office, the programme shows continuity with respect to the budgetary targets endorsed by the Council.	X		
When applicable, the programme explains the reasons for possible deviations from previous targets and, in case of substantial deviations, whether measures are taken to rectify the situation, and provide information on them.	X		The deviations took the form of out-performance in the case of Estonia.
The budgetary targets are backed by an indication of the broad measures necessary to achieve them and an assessment of their quantitative effects on the general government balance is analysed.	X		
Information is provided on one-off and other temporary measures.	X		
The state of implementation of the measures (enacted versus planned) presented in the programme is specified.	X		
For a country that uses the transition period for the classification of second-pillar funded pension schemes, the programme presents information on the impact on the public finances.			not applicable
e. "Major structural reforms"			
If the MTO is not yet reached or a temporary deviation is planned from the achieved MTO, the programme includes comprehensive information on the economic and budgetary effects of possible 'major structural reforms' over time.			not applicable
The programme includes a quantitative cost-benefit analysis of the short-term costs and long-term benefits of such reforms.			not applicable
f. Sensitivity analysis			

Guidelines in the new code of conduct	Yes	No	Comments
The programme includes comprehensive sensitivity analyses and/or develops alternative scenarios showing the effect on the budgetary and debt position of: a) changes in the main economic assumptions b) different interest rate assumptions c) for non-participating Member States, different exchange rate assumptions d) if the common external assumptions are not used, changes in assumptions for the main extra-EU variables.	X		Sensitivity analysis is not very detailed, mainly concentrating on changes in the main macroeconomic assumptions.
In case of such "major structural reforms", the programme provides an analysis of how changes in the assumptions would affect the effects on the budget and potential growth.			not applicable
g. Broad economic policy guidelines			
The programme provides information on the consistency with the broad economic policy guidelines of the budgetary objectives and the measures to achieve them.	X		
h. Quality of public finances			
The programme describes measures aimed at improving the quality of public finances on both the revenue and expenditure side (e.g. tax reform, value-for-money initiatives, measures to improve tax collection efficiency and expenditure control).	X		
i. Long-term sustainability			
The programme outlines Estonia's strategies to ensure the sustainability of public finances, especially in light of the economic and budgetary impact of ageing populations.	X		
Common budgetary projections by the AWG are included in the programme. The programme includes all the necessary additional information. (…) To this end, information included in programmes should focus on new relevant information that is not fully reflected in the latest common EPC projections.	X		
j. Other information (optional)			
The programme includes information on the implementation of existing national budgetary rules (expenditure rules, etc.), as well as on other institutional features of the public finances, in particular budgetary procedures and public finance statistical governance.	X		
Notes: [1]The code of conduct allows for the following exceptions: (i) Ireland should be regarded as complying with the deadline in case of submission on "budget day", i.e. traditionally the first Wednesday of December, (ii) the UK should submit as close as possible to its autumn pre-budget report; and (iii) Austria and Portugal cannot comply with the deadline but will submit no later than 15 December. [2]To the extent possible, bearing in mind the typically short time period between the publication of the Commission services' autumn forecast and the submission of the programme.			

Annex 3: Consistency with the broad economic policy guidelines

The table below provides an overview of whether the strategy and policy measures in the programme are consistent with the broad economic policy guidelines in the area of public finances included in the integrated guidelines for the period 2005-2008.

Integrated guidelines	Yes	No	Not applicable
1. To secure economic stability			
– Member States should respect their medium-term budgetary objectives. As long as this objective has not yet been achieved, they should take all the necessary corrective measures to achieve it[1].	X		
– Member States should avoid pro-cyclical fiscal policies[2].		X	
– Member States in excessive deficit should take effective action in order to ensure a prompt correction of excessive deficits[3].			X
– Member States posting current account deficits that risk being unsustainable should work towards (…), where appropriate, contributing to their correction via fiscal policies.	X		
2. To safeguard economic and fiscal sustainability In view of the projected costs of ageing populations,			
– Member States should undertake a satisfactory pace of government debt reduction to strengthen public finances.			X
– Member States should reform and re-enforce pension, social insurance and health care systems to ensure that they are financially viable, socially adequate and accessible (…)	X		
3. To promote a growth- and employment-orientated and efficient allocation of resources			
Member States should, without prejudice to guidelines on economic stability and sustainability, re-direct the composition of public expenditure towards growth-enhancing categories in line with the Lisbon strategy, adapt tax structures to strengthen growth potential, ensure that mechanisms are in place to assess the relationship between public spending and the achievement of policy objectives and ensure the overall coherence of reform packages.	X		
Notes: [1]As further specified in the Stability and Growth Pact and the new code of conduct, i.e. with an annual 0.5% of GDP minimum adjustment in structural terms for euro area and ERM II Member States. [2]As further specified in the Stability and Growth Pact and the new code of conduct, i.e. Member States that have already achieved the medium-term objective should avoid pro-cyclical fiscal policies in "good times". [3]As further specified in the Estonia-specific Council recommendations and decisions under the excessive deficit procedure.			

Annex 4: Assessment of tax projections

Table 6 compares the tax projections of the programme with those of the Commission services' autumn 2005 forecast and Table 7 those of the Commission services' autumn forecast with tax projections obtained by using standard ex-ante elasticities, as estimated by the OECD. The tables summarise the results for the total tax-to-GDP ratio. The underlying analysis is carried out exploiting information for the four major tax categories, i.e. indirect taxes, corporate and private income taxes and social contributions (see tables below)[44]. Conceptually, the analysis draws on the definition of a semi-elasticity, which measures the change in a ratio vis-à-vis the relative change in the denominator. The semi-elasticity of the tax-to-GDP ratio of the *i-th* tax $\frac{T_i}{Y}$ can be written as:

$$\eta_i = \frac{d\left(\frac{T_i}{Y}\right)}{dY}Y = \left(\frac{dT_i}{dY}\frac{Y}{T_i} - 1\right)\frac{T_i}{Y} = \left(\frac{dT_i}{dB_i}\frac{B_i}{T_i}\frac{dB_i}{dY}\frac{Y}{B_i} - 1\right)\frac{T_i}{Y} = (\varepsilon_{T_i,B_i}\varepsilon_{B_i,Y} - 1)\frac{T_i}{Y}$$

where ε_{T_i,B_i} and $\varepsilon_{B_i,Y}$ denote the elasticity of the *i-th* tax T_i relative to its tax base B_i and the elasticity of the tax base B_i relative to aggregate GDP Y respectively.

To the extent that ε_{T_i,B_i} is derived from observed or projected data, it will typically reflect (i) the effect of discretionary measures (including one-offs) and (ii) the tax elasticity[45]. By contrast, if ε_{T_i,B_i} is the standard *ex-ante* elasticity, as estimated by the OECD, it will be net of discretionary measures.

The second elasticity $\varepsilon_{B_i,Y}$ can be used as an indicator of the tax intensity of GDP growth; for instance, a higher elasticity of consumption relative to GDP means that for the same GDP growth indirect taxes will be higher.

The definition of a semi-elasticity has two practical implications. First, any change in the tax-to-GDP ratio of the *i-th* tax can be written as the product of the semi-elasticity and GDP growth:

$$d\left(\frac{T_i}{Y}\right) = \eta_i \cdot \frac{dY}{Y}$$

and the change in the total tax-to-GDP ratio is the sum:

$$\sum_i d\left(\frac{T_i}{Y}\right) = \sum_I \eta_i \frac{dY}{Y}.$$

44 Private and corporate income taxes are generally not provided, neither in the programme nor in the Commission services' autumn 2005 forecast. Only the aggregate, direct income taxes, is given. For the purpose of this exercise the breakdown is obtained using the average shares over the past ten years, i.e. the composition of direct taxes is assumed to stay constant.

45 The observed or projected elasticity (ex-post elasticity) of the *i*-th tax also includes the effect of other factors (OF) such as discretionary measures:

$$\frac{\Delta T_i}{T_i} = \varepsilon_{T_i,B_i exante}\frac{dB_i}{B_i} + \frac{OF_i}{T_i} = \varepsilon_{T_i,B_i ex post}\frac{dB_i}{B_i}.$$

Second, differences between two tax projections can be decomposed into an elasticity component and a composition component:

$$d\left(\frac{T_i}{Y}\right)^{'} - d\left(\frac{T_i}{Y}\right) = \left[\left(\varepsilon^{'}_{T_i,B_i}\varepsilon^{'}_{B_i,Y} - 1\right)\frac{T_i}{Y} - \left(\varepsilon_{T_i,B_i}\varepsilon_{B_i,Y} - 1\right)\frac{T_i}{Y}\right]\frac{dY}{Y} \ .$$

If $(\varepsilon^{'}_{T_i,B_i} - \varepsilon_{T_i,B_i}) = \alpha_i; \quad (\varepsilon^{'}_{B_i,Y} - \varepsilon_{B_i,Y}) = \beta_i$,

then $d\left(\frac{T_i}{Y}\right)^{'} - d\left(\frac{T_i}{Y}\right) = \left[\left(\alpha_i\varepsilon_{B_i,Y} + \beta_i\varepsilon_{T_i,B_i} + \alpha_i\beta_i\right)\frac{T_i}{Y}\right]\frac{dY}{Y}$

where $\alpha_i\varepsilon_{B_i,Y}\frac{T_i}{Y}\frac{dY}{Y}$ determines the elasticity component and $\beta_i\varepsilon_{T_i,B_i}\frac{T_i}{Y}\frac{dY}{Y}$ the composition component. The third component in the equation $\alpha_i\beta_i\frac{T_i}{Y}\frac{dY}{Y}$ measures the interaction of the elasticity and the composition components. It is generally small but can become important in some cases. The tax elasticity relative to GDP of total taxes is obtained as $\varepsilon = \sum_i w_i\varepsilon_{T_iB_i}\varepsilon_{B_iY}$ with w_i the share of the *i-th* tax in the overall tax burden.

The tables below report the results of the assessment of the tax projections presented in the programme by major tax category, which, as mentioned above, are the basis for the aggregated results reported in Tables 6 and 7.

Assessment of tax projections by major tax category

	2006		2007		2008	2009	p.m.:
	COM	CP	COM[2]	CP	CP	CP	OECD[1]
Taxes on production and imports: Change in tax-to-GDP ratio	-0.3	0.0	-0.5	-0.1	-0.3	0.0	/
Difference *of which[3]: - elasticity component* *- composition component*	0.3 -0.2 0.5		0.4 0.0 0.4		/ / /	/ / /	/ / /
p.m.: Observed elasticity: - of taxes to tax base[4] - of tax base[4] to GDP	0.8 0.9	0.7 1.4	0.6 0.9	0.6 1.4	0.5 1.4	0.7 1.4	1.0 1.0
Social contributions: Change in tax-to-GDP ratio	-0.3	0.2	0.1	0.1	-0.1	-0.1	/
Difference *of which[3]: - elasticity component* *- composition component*	0.4 -0.1 0.5		-0.1 -0.6 1.0		/ / /	/ / /	/ / /
p.m.: Observed elasticity: - of taxes to tax base[5] - of tax base[5] to GDP	0.8 1.0	0.7 1.6	1.3 0.9	0.8 1.5	0.6 1.5	0.6 1.5	1.0 0.7
Personal income tax[6]: Change in tax-to-GDP ratio	0.2	-0.1	-0.3	-0.6	0.0	-0.3	/
Difference *of which[3]: - elasticity component* *- composition component*	-0.2 -0.5 0.5		-0.3 -0.6 0.2		/ / /	/ / /	/ / /
p.m.: Observed elasticity: - of taxes to tax base[5] - of tax base[5] to GDP	1.2 1.0	0.5 1.6	0.6 0.9	-0.4 1.5	0.7 1.5	0.0 1.5	1.1 0.7
Corporate income tax[6]: Change in tax-to-GDP ratio	0.0	0.0	-0.1	-0.1	0.0	-0.1	/
Difference *of which[3]: - elasticity component* *- composition component*	-0.1 0.1 -0.1		-0.1 -0.3 0.0		/ / /	/ / /	/ / /
p.m.: Observed elasticity: - of taxes to tax base[7] - of tax base[7] to GDP	1.2 1.0	1.7 0.5	0.5 1.1	-1.1 0.5	2.3 0.4	0.1 0.4	1.0 1.4

Notes:
[1]OECD ex-ante elasticities
[2]On a no-policy change basis
[3]The decomposition is explained in the text above
[4]Tax base = private consumption expenditure
[5]Tax base = compensation of employees
[6]Taxes on income and wealth are split into private and corporate income tax using the average tax share over the past ten years. i.e. the share is assumed to be constant over the programme period
[7]Tax base = gross operating surplus

Source:
Commission services' autumn 2005 economic forecasts (COM); Commission services' calculations and OECD (N. Girouard and C. André (2005). "Measuring Cyclically-Adjusted Budget Balances for the OECD Countries". OECD Working Paper No. 434)

Assessment of tax elasticities by major tax category

	2006		2007	
	COM (observed)	**ex-ante**[1]	**COM**[2] **(observed)**	**ex-ante**[1]
Taxes on production and imports:				
Change in tax-to-GDP ratio	-0.3	0.0	-0.5	0.0
Difference	-0.3		-0.5	
of which[3]*: - elasticity component*	-0.2		-0.4	
- composition component	-0.1		-0.1	
p.m.: Observed elasticity:				
- of taxes to tax base[4]	0.8	1.0	0.6	1.0
- of tax base[4] to GDP	0.9	1.0	0.9	1.0
Social contributions:				
Change in tax-to-GDP ratio	-0.3	-0.2	0.2	-0.2
Difference	0.0		0.4	
of which[3]*: - elasticity component*	-0.3		0.3	
- composition component	0.3		0.3	
p.m.: Observed elasticity:				
- of taxes to tax base[5]	0.8	1.0	1.3	1.0
- of tax base[5] to GDP	1.0	0.7	0.9	0.7
Personal income tax[6]**:**				
Change in tax-to-GDP ratio	0.2	-0.1	-0.3	-0.1
Difference	0.3		-0.2	
of which[3]*: - elasticity component*	0.1		-0.3	
- composition component	0.3		0.1	
p.m.: Observed elasticity:				
- of taxes to tax base[5]	1.2	1.1	0.6	1.1
- of tax base[5] to GDP	1.0	0.7	0.9	0.7
Corporate income tax[6]**:**				
Change in tax-to-GDP ratio	0.0	0.0	-0.1	0.0
Difference	0.0		-0.1	
of which[3]*: - elasticity component*	0.0		-0.1	
- composition component	-0.1		0.0	
p.m.: Observed elasticity:				
- of taxes to tax base[7]	1.2	1.0	0.5	1.0
- of tax base[7] to GDP	1.0	1.4	1.1	1.4

Notes:
[1]Tax projections obtained by applying ex-ante standard tax elasticities estimated by the OECD
[2]On a no-policy change basis
[3]The decomposition is explained in the text above
[4]Tax base = private consumption expenditure
[5]Tax base = compensation of employees
[6]Taxes on income and wealth are split into private and corporate income tax using the average tax share over the past ten years. i.e. the share is assumed to be constant over the programme period
[7]Tax base = gross operating surplus

Source:
Commission services' autumn 2005 economic forecasts (COM); Commission services' calculations and OECD (N. Girouard and C. André (2005). "Measuring Cyclically-Adjusted Budget Balances for the OECD Countries". OECD Working Paper No. 434)

Annex 5: Indicators of long-term sustainability

Table A1: Underlying assumptions compared

% of GDP	2010		2020		2030		2050	
	EPC	SCP	EPC	SCP	EPC	SCP	EPC	SCP
Labour productivity growth	5.1	5.3	3.6	3.6	2.7	2.7	1.7	1.7
Real GDP growth	5.6	5.8	2.7	2.6	2.3	2.3	0.6	0.6
Participation rate males (aged 20-64)	85.3	85.3	87.4	87.4	87.6	87.6	85.8	85.8
Participation rates females (aged 20-64)	75.4	75.4	79.5	79.5	79.8	79.8	77.6	77.6
Total participation rates (aged 20-64)	80.1	80.1	83.3	83.3	83.6	83.6	81.7	81.7
Unemployment rate	7.8	7.7	7.0	6.9	7.0	6.6	7.0	6.8
Population aged 65+ over total population	16.9	16.9	18.7	18.7	21.2	21.2	25.7	25.7

Table A2: Long-term projections

Main assumptions - programme scenario (as % GDP)	2009	2010	2020	2030	2040	2050	changes	Impact on S2
Total age-related spending	11.7	11.6	10.2	9.3	9.0	8.8	-2.9	-2.6
Pensions	6.8	6.7	5.4	4.7	4.5	4.2	-2.6	-2.3
Health care	4.7	4.7	4.6	4.4	4.4	4.4	-0.3	-0.3
Long-term care	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
Unemployment benefits	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
Total primary non age-related spending	24.2	24.2	24.2	24.2	24.2	24.2	0.0	0.0
Total revenues	36.0	36.0	36.0	36.0	36.0	36.0	0.0	0.0

Table A3: The cost of a five-year delay in adjusting the budgetary position according to the S1 and S2

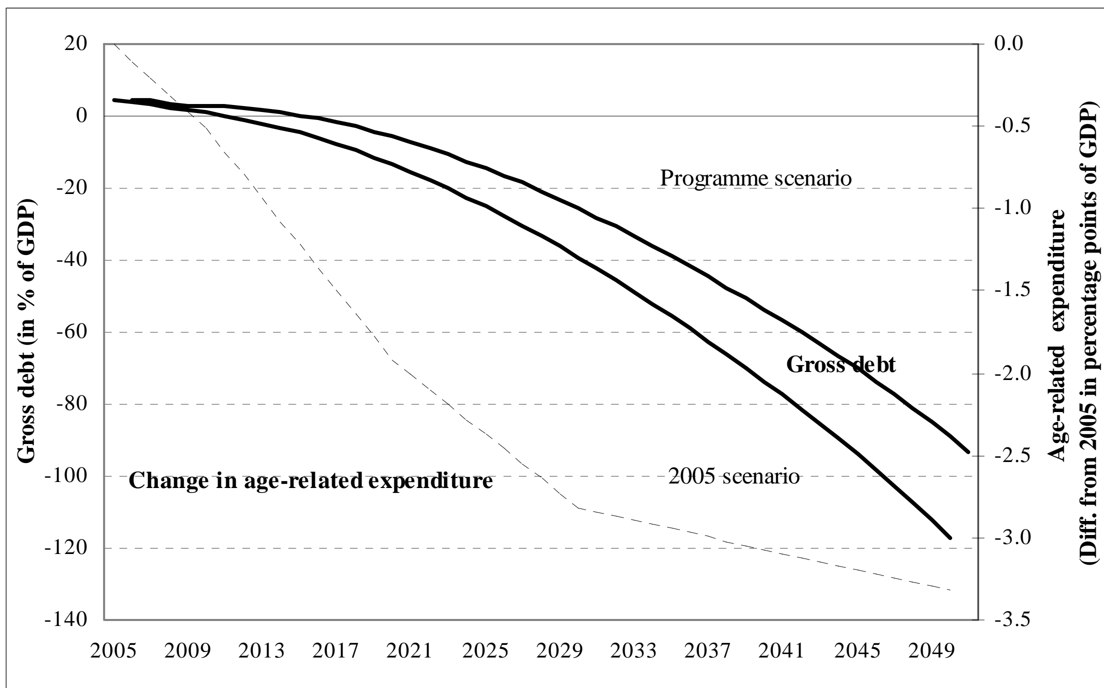
	S1	S2
2005 scenario	**-0.5**	**-0.1**
Programme scenario	**-0.4**	**-0.1**

Note: the cost of a delay shows the increase of the S1 and S2 indicators if they were calculated five years later.

Table A4: Debt development

Results (as % GDP)	2009	2010	2020	2030	2040	2050	changes
Programme scenario							
Gross debt	2.8	2.5	-7.3	-28.2	-56.8	-93.2	-96.0
*Gross debt, i + 1**	*2.8*	*2.5*	*-7.3*	*-29.8*	*-62.9*	*-108.1*	*-110.9*
*Gross debt, i - 1**	*2.8*	*2.5*	*-7.2*	*-26.7*	*-51.6*	*-80.9*	*-83.7*
2005 Scenario							
Gross debt	1.6	0.9	-13.4	-39.3	-73.6	-117.0	-118.6
*Gross debt, i + 1**	*1.6*	*0.9*	*-13.9*	*-42.1*	*-82.4*	*-137.3*	*-139.0*
*Gross debt, i - 1**	*1.6*	*0.9*	*-13.0*	*-36.7*	*-66.1*	*-100.5*	*-102.1*

* *i + 1* and *i + 1* represents the evolution of debt under the assumption of the nominal interest rate being 100 basis points higher or lower throughout the projection period.



20
0
-20
-40
-60
-80
-100
-120
-140
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
-3.0
-3.5
2005
2009
2013
2017
2021
2025
2029
2033
2037
2041
2045
2049
Gross debt (in % of GDP)
Age-related expenditure
(Diff. from 2005 in percentage points of GDP)
Programme scenario
Gross debt
Change in age-related expenditure
2005 scenario