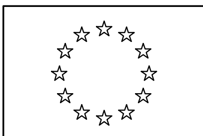

EUROPEAN COMMISSION
DIRECTORATE GENERAL
ECONOMIC AND FINANCIAL AFFAIRS

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NOVEMBER 2005 UPDATE OF THE STABILITY PROGRAMME OF LUXEMBOURG (2005-2008)

AN ASSESSMENT

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SUMMARY AND CONCLUSIONS [1]

The 7th update of the convergence programme of Luxembourg was submitted to the Commission on November 28, 2005. It covers the period 2005-2008. The programme broadly follows the model structure and data provision requirements for stability and convergence programmes specified in the new code of conduct.[2]

The economic performance of Luxembourg has been remarkably bright in the last 20 years, with real GDP growing at 5½% a year on average and domestic employment by 3¼%. Growth slowed down strongly in 2001 but recovered quickly, reaching 4.4% in 2004. The financial position of the Luxembourg government has traditionally been very sound, with recurrent surpluses since the beginning of the 1990's and a very low public debt. However, due to the very strong rise in expenditure, these surpluses rapidly declined since the beginning of this decade and turned into a deficit in 2004.

According to the programme's macroeconomic scenario, real GDP growth should accelerate from an estimated 4.0% in 2005 to 4.4% in 2006 and to 4.9% in both 2007 and 2008. This growth scenario seems plausible, though slightly favourable in the outer years when compared with the Commission services' autumn 2005 forecasts and the estimates of potential output growth implied by the same forecasts. The inflation outlook presented in the programme seems plausible. It is significantly lower than the inflation projections from the Commission services' autumn 2005 forecasts but rests on different assumptions, especially a lower oil price. Oil products have an unusually large weight in the Luxembourg HICP due to the big purchases of car fuel by non-residents.

In its opinion of 18 January 2005, the Council endorsed the budgetary strategy presented in the previous update of the stability programme, covering the period 2004-2007. As regards budgetary implementation in 2005, the general government deficit is currently estimated at -2.3% of GDP in the Commission services' autumn 2005 forecast as against a -1.0% of GDP target set in the previous update of the stability programme [3]. While government revenues, which were projected by the previous update to increase by 1.2 percentage point of GDP, actually rose by only 0.2 percentage point of GDP, for a part due to large and unexpected VAT reimbursements, government expenditure increased by

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[1] This technical analysis, which is based on information available up to January 24, 2006, accompanies the recommendation by the Commission for a Council opinion on the update of the stability programme, which the College adopted on 14 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 Jean Luc Annaert (Jean-Luc.Annaert@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] It has gaps in the compulsory and optional data prescribed by the code of conduct.

[3] Note that the two deficit figures for 2005 are not strictly comparable as public expenditure data have been revised as a result of the Eurostat decision on the statistical treatment of projects financed by PPP's. For 2005, this results in an upward revision of public expenditure and consequently of the public deficit by 0.6 percentage point of GDP.

1.4 percentage point of GDP (of which 0.8 percentage point of GDP is accounted for by public investment) instead of 0.8 percentage point of GDP as planned.

The programme aims at reducing the general government deficit from -2.3% of GDP in 2005 to -0.2% of GDP in 2008 in order to achieve a medium-term objective (hereafter MTO) of -0.8% of GDP in the same year. The time profile and the level of the primary balance are similar to those of the total balance, with an improvement from a -2.1% of GDP primary deficit in 2005 to a balanced budget at the end of the period. The budgetary strategy has been adapted since the submission of the previous programme, which was based on less optimistic, though still strong macroeconomic assumptions and projected the general government deficit to improve from -1.4% of GDP in 2004 to -1.0% in 2005 and then to remain broadly at the same level in 2006 and 2007. Although GDP growth in 2005 was even slightly stronger than expected, the deficit, instead of improving surged from a revised level of -1.2% of GDP in 2004 to -2.3% in 2005. The budgetary strategy has thus been adapted in the current programme in order to cope with this unexpectedly deteriorated situation. The budgetary adjustment planned by the programme is expenditure-based, as total government expenditure is projected to decline by 2.5 percentage points of GDP over the period while the revenue ratio should decrease by 0.4 percentage point of GDP. The reduction in the expenditure ratio should mostly occur in current expenditure, especially in collective government consumption and in social transfers. The adjustment effort is back-loaded since the projected reduction in both the nominal and the cyclically-adjusted deficits is planned to significantly accelerate in 2007.

The cyclically-adjusted balance (as calculated by the Commission services using the commonly agreed methodology and based on the information provided in the programme) is projected to improve from a 1½ % of GDP deficit in 2005 to a broadly balanced position in 2008. In the absence of one-off or other temporary measures, the structural balance follows the same path. The budgetary improvement takes place against the background of a negative but narrowing (from -1¾% of GDP in 2005 to - ½ % in 2008) output gap in the light of the very high potential output growth estimated for Luxembourg. The programme's MTO is a structural (i.e. cyclically-adjusted, net of one-off and other temporary measures) deficit of -0.8% of GDP, similar to the estimated minimum benchmark aiming at providing a sufficient safety margin in order to guarantee that the 3% threshold set for the general government deficit will not be breached. Hence, its achievement should fulfil the aim of providing this safety margin. Moreover, it can be considered as appropriate under the current assessment because it 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 adequately reflects the debt ratio and average potential output growth in the long term.

There is some downside risk attached to the budgetary targets of the programme: first, the macroeconomic projections presented by the programme might be slightly optimistic in the last years of the period covered. Second, the expenditure reduction measures announced for 2007 and 2008 have not yet been specified. The respect of the budgetary projections of the programme thus depends on the condition that the measures to be taken for 2007 and 2008 are specified and properly implemented.

Taking into account this risk assessment, the budgetary strategy outlined in the programme seems sufficient to ensure that the programme's MTO will be reached by the end of the programme period on the condition that the measures for 2007 and 2008 are specified and properly implemented. The risk of breaching the 3% of GDP threshold for the deficit cannot be excluded in 2006 since the cyclically adjusted deficit (as calculated

by the Commission services on the basis of the programme and according to the commonly agreed methodology) will still amount to 1¼ % of GDP, which is higher than the minimum benchmark. Although from 2007 onwards the planned structural deficit is lower than the minimum benchmark, the safety margin may also not be sufficient unless the expenditure-reducing measures announced for that year are specified and implemented. Finally, the adjustment path (in structural terms) towards the programme's MTO is appropriate, except perhaps in 2006 when the reduction in the cyclically-adjusted deficit only amounts to 0.3% of GDP. This is less than the 0.5 percentage point of GDP average annual improvement in the structural balance requested by the Pact while, in spite of a negative yet closing output gap, overall economic conditions may be regarded as good.

The general government debt is estimated at 6.4% of GDP in 2005. It is projected in the programme to rise to 10.2% of GDP in 2008, with the main part of this increase occurring in 2006. The main factors behind this rise are the planned issue of new loans aiming at financing expenditure in road and railways infrastructure as well as some large investment projects based on a public-private partnership for which the Luxembourg government provides a financial guarantee to the promoter.

With regard to the sustainability of public finances, Luxembourg appears to be at medium risk on grounds of the projected budgetary costs of ageing populations. The current level of debt is certainly very low and the planned consolidation over the medium term should contribute to partly alleviate the risk to public finances sustainability. However, Luxembourg has experienced, over the last two decades, a period of exceptionally strong employment growth which will progressively translate into a similar increase in the number of pensioners and into a large increase in pension expenditure. While it contributes significantly to public finances sustainability, the current size of pension fund assets will not be sufficient and, as recognised by the programme, some changes in the pensions schemes will prove necessary at some point to contain future increase in public expenditure and reduce the risk to long-term sustainability.

The programme's strategy in the area of public finances is broadly consistent with the broad economic policy guidelines included in the integrated guidelines for the period 2005-2008. It is in particular in line with the integrated guideline on securing economic stability by maintaining the medium-term budgetary objective over the economic cycle and, as long as this objective has not yet been achieved, taking all the necessary corrective measures in line with the Stability and Growth Pact. It also complies with the integrated guideline on safeguarding economic sustainability in view of the projected costs of ageing population.

The National Reform Programme of Luxembourg, submitted on 17 November 2005 in the context of the renewed Lisbon strategy for growth and jobs identifies securing economic stability and safeguarding economic sustainability as challenges with significant implications for public finances. It also identifies challenges in other areas that have a significant impact on public finances, especially the need to significantly increase public R&D. The budgetary implications of the actions outlined in the National Reform Programme are reflected in the budgetary projections of the stability programme and the measures in the area of public finances envisaged in the stability programme are in line with the actions foreseen in the National Reform Programme. The stability programme complements these measures with changes in the institutional features of the public finances, especially the postponement of the submission of the budget from August to October, in order to increase data availability and to improve the quality of

budgetary projections. The programme also announces the introduction of a more in-depth analysis of the cost of investment projects, including the consideration of their operating costs from the first planning phase.

In view of this assessment, while the global strategy of deficit reduction through expenditure restraint presented in the programme is commendable, it would be appropriate for the Luxembourg authorities

- to strengthen the effort of budgetary adjustment in 2006 and identify and implement the necessary measures for 2007 and 2008, and

- to address the long-term budgetary implications of ageing populations.

Comparison of key macroeconomic and budgetary projections

		2004	2005	2006	2007	2008
Real GDP (% change)	**SP Dec 2005**	**4.4**	**4.0**	**4.4**	**4.9**	**4.9**
	COM Nov 2005	4.5	4.2	4.4	4.5	n.a.
	SP Dec 2004	*4.4*	*3.8*	*3.3*	*4.3*	*n.a.*
HICP inflation (%)	**SP Dec 2005**	**3.2**	**3.7**	**2.6**	**2.0**	**1.8**
	COM Nov 2005	3.2	4.1	4.4	2.2	n.a.
	SP Dec 2004	*2.6*	*3.2*	*1.5*	*1.7*	*n.a.*
Output gap (% of potential GDP)	**SP Dec 2005**[1]	**-1.7**	**-1.7**	**-1.3**	**-0.7**	**-0.6**
	COM Nov 2005[2]	-1.8	-1.6	-1.3	-1.2	n.a.
	SP Dec 2004[1]	*-1.2*	*-2.2*	*-3.8*	*-5.0*	*n.a.*
General government balance (% of GDP)	**SP Dec 2005**	**-1.2**	**-2.3**	**-1.8**	**-1.0**	**-0.2**
	COM Nov 2005	-1.2	-2.3	-2.0	-2.2	n.a.
	SP Dec 2004	*-1.4*	*-1.0*	*-0.9*	*-1.0*	*n.a.*
Primary balance (% of GDP)	**SP Dec 2005**	**-0.9**	**-2.1**	**-1.7**	**-0.7**	**0.1**
	COM Nov 2005	-0.9	-2.1	-1.8	-2.0	n.a.
	SP Dec 2004	*-1.2*	*-0.9*	*-0.8*	*-0.9*	*n.a.*
Cyclically-adjusted balance= Structural balance[3] (% of GDP)	**SP Dec 2005**[1]	**-0.3**	**-1.5**	**-1.2**	**-0.6**	**0.1**
	COM Nov 2005	-0.4	-1.5	-1.4	-1.6	n.a.
	SP Dec 2004[1]	*-0.7*	*0.3*	*1.4*	*2.0*	*n.a.*
Government gross debt (% of GDP)	**SP Dec 2005**	**6.6**	**6.4**	**9.6**	**9.9**	**10.2**
	COM Nov 2005	6.6	6.8	7.1	7.3	n.a.
	SP Dec 2004	*5.0*	*5.0*	*4.6*	*4.5*	*n.a.*

Notes:
[1]Commission services calculations on the basis of the information in the programme.
[2]Based on estimated potential growth of 4.1% 4.0%, 4.1% and 4.3% respectively in the period 2004-2007.
[3]Since there are no one-off and other temporary measures specified in the programme, the cyclically-adjusted balance and the structural balance are identical.
Source:
Stability programme (SP); Commission services' autumn 2005 economic forecasts (COM); Commission services' calculations

1. INTRODUCTION

The 7th update of the convergence programme of Luxembourg was submitted to the Commission on November 28, 2005[4]. It covers the period 2005-2008. The programme incorporates the 2006 budget. It was discussed and approved by the government on November 25, 2005 and communicated to the Parliament.

The programme broadly follows the model structure and data provision requirements for stability and convergence programmes specified in the new code of conduct. However, it has gaps in the compulsory and optional data prescribed by the new code of conduct.[5]. Annex 2 provides a detailed overview of all aspects of compliance with the new code of conduct.

2. ECONOMIC OUTLOOK

The economic performance of Luxembourg has been remarkably bright since the first half of the 1980s, with real GDP growth reaching about 5½% a year on average. Employment growth was very strong too, reaching about 3¼% a year over the same period. After very strong GDP and employment growth in the last four years of the 1990s, output growth decelerated to 1.5% in 2001, but quickly recovered to 2.5% in 2002, 2.9% in 2003, 4.4% in 2004 and an estimated 4.0% in 2005. Employment followed output with a lag, slowing down to 1.9% in 2003 but reaccelerating to 2.6% in 2004 and an estimated 2.9% in 2005. However, residents' unemployment, though still low by EU standards, has been on the rise since 2002, as more than two thirds of the newly created jobs have been occupied by non-residents, who now represent more than one third of total domestic employment.

According to the programme's macroeconomic scenario, real GDP growth is expected to accelerate from an estimated 4.0% in 2005 to 4.4% in 2006 and to 4.9% both in 2007 and 2008 (see Table 1). The contribution of final domestic demand to GDP growth is projected to increase significantly over the period covered, while that of external trade should progressively weaken. The output gap, while narrowing significantly, is projected to remain negative all over the period covered. The Commission services' autumn 2005 forecasts project GDP growth to speed up from 4.2% in 2005 to 4.4% in 2006 and 4.5% in 2007. The Commission services' forecasts only cover the period up to 2007, but the Commission services estimate potential growth in Luxembourg between 4% and 4¼ % for the period 2006-2007. The macroeconomic assumptions on which the programme is based thus seem plausible, though slightly favourable in the outer years.

The external outlook behind the programme's macroeconomic scenario is close to the external assumptions underlying the Commission services' autumn 2005 forecasts. The main differences are that the programme assumes slightly lower short-term interest rates, a significantly slower growth in the EU export markets and a lower price of oil (USD

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[4] The English translation of the programme was transmitted to the Commission services on December 13, 2005.

[5] In particular, data on government collective and individual consumption expenditure are not provided in the programme However, they were provided later to the Commission services by the Luxembourg authorities.

58.8 from 2006 to 2008, instead of 61.4 in 2006 and 60.3 in 2007 in the Commission services' forecasts).

As far as developments in private consumption and imports are concerned, which constitute the largest part of the base of indirect taxes, the programme's projections and the Commission services' autumn 2005 forecasts are very close: according to the programme, private consumption should accelerate from 1.2% in 2005 to 3.0% in 2008, while the Commission services forecast it to speed up to 3.0% in 2007. Similarly, the programme projects the growth in imports of goods and services between 6.8% and 8.1% over the period, while the Commission services forecast it between 7.6% and 8.1%. Projections of employment growth and wage increases in the programme are very similar to the Commission services' forecasts, so that the programme's and the Commission services' projections of the increase in the total compensation of employees, which constitute the main component of the base of direct taxes, are very close to each other, with a difference of less than 0.4% in each of the years 2005-2007. According to the programme's macroeconomic scenario, employment growth should progressively accelerate from 2.9% a year in 2005 to 3.2% in 2008, while the Commission services project it to speed up to 3.2% in 2006 and 3.4% in 2007. The labour content of GDP growth is thus slightly lower in the programme than in the Commission services' forecasts, but the difference is minimal. However, despite this strong growth in employment, the programme, like the Commission services, forecast unemployment to keep rising over the period covered, albeit at a slowing pace, which is in line with the experience of recent years: as newly created jobs are mostly occupied by non residents, domestic employment seems to require a larger increase than 3½% in Luxembourg for residents' unemployment to recede.

Table 1: Comparison of macroeconomic developments and forecasts

	2005		2006		2007		2008
	COM	**SP**	**COM**	**SP**	**COM**	**SP**	**SP**
Real GDP (% change)	4.2	4.0	4.4	4.4	4.5	4.9	4.9
Contributions:							
- Final domestic demand	1.6	1.7	2.3	2.6	3.2	3.5	3.5
- Change in inventories	-0.1	0.0	0.2	0.0	0.0	0.0	0.0
- External balance on g&s	2.6	2.3	1.8	1.9	1.2	1.4	1.5
Output gap[1]	-1.6	-1.7	-1.3	-1.3	-1.2	-0.7	-0.6
Employment (% change)	3.0	2.9	3.2	2.9	3.4	3.1	3.2
Unemployment rate (%)	5.3	4.7	5.6	5.0	5.8	5.2	5.3
Labour productivity growth (%)	1.2	0.6	1.2	1.2	1.1	1.5	1.3
HICP inflation (%)	4.1	3.7	4.4	2.6	2.2	2.0	1.8
GDP deflator (% change)	1.6	2.7	2.3	2.4	2.3	2.4	2.8
Compensation of employees (% change)	6.7	3.5	6.6	3.1	6.6	3.0	3.4
External balance (% of GDP)	22.2	n.a.	22.8	n.a	23.4	n.a.	n.a.

Note:
[1]In percent of potential GDP, with potential GDP growth as reported in Table 2 below.

Source:
Commission services' autumn 2005 economic forecasts (COM); stability programme update (SP)

Inflation projections, especially changes in the HICP, are quite different in the Commission services' forecasts and in the programme, although projected developments in wages and productivity are fairly close. The main reason for this difference is that the programme incorporates a more than 1% month-on-month fall in the HICP that occurred in November as a result of declining oil prices. Because of the smaller carry over for 2006 and also the lower oil price assumption for both 2006 and 2007, the rise in the

HICP is significantly more moderate in the programme than in the Commission services' forecasts. The Luxembourg HICP is extremely sensitive to developments in oil prices because of the exceptional weight of oil products due to the large purchases of car fuel by non residents. Developments in the national CPI, which excludes these purchases by non-residents, are much more limited than fluctuations in the HICP. The programme projects the national CPI to rise by 2.4% in 2006 and 2.0% in both 2007 and 2008, while the Commission services forecast it to increase by 2.6% and 2.7% respectively. The difference between the two projections is also mostly due to lower oil prices in the programme's assumptions.

According to Commission services' calculations using the commonly agreed methodology and based on the information provided in the programme, the potential output growth consistent with the programme's macroeconomic scenario should amount to about 4¼ % throughout the period covered. This estimate is very close to that made by the Commission services based on their own autumn 2005 forecasts (4.0% in 2005, 4.1% in 2006 and 4.3% in 2007) and thus seems plausible. Due to this high potential growth estimated for Luxembourg and the fact that real GDP growth has recently been somewhat slower than in the last two decades, the output gap remains negative over the period covered, both according to the Commission services' own estimates and to their recalculations using the information provided by the programme. However, in both cases, the output gap narrows significantly over the period covered.

Table 2: Sources of potential output growth

	2005		2006		2007		2008
	COM	SP[2]	COM	SP[2]	COM	SP[2]	SP[2]
Potential GDP growth[1]	4.0	4.0	4.1	4.1	4.3	4.3	4.8
Contributions:							
- Labour	1.6	1.4	1.5	1.3	1.5	1.2	1.5
- Capital accumulation	1.3	1.3	1.3	1.4	1.5	1.5	1.7
- TFP	1.1	1.2	1.2	1.3	1.3	1.5	1.7

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

3. 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 stability 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 the country'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.

3.1. Targets in successive programmes and implementation in 2005

The programme projects the general government deficit to be progressively brought down from an estimated level of -2.3% of GDP in 2005 to -0.2% in 2008. As shown in Table 3, the previous programme, which was based on a less optimistic (though still

rather buoyant) macroeconomic scenario, projected the deficit to decrease to -1.0% of GDP in 2005 from -1.4%, the level estimated at that moment for the 2004 deficit, and to remain stable at about the same level in 2006 and 2007.

It should be noted that, since the submission of the previous update, the time series for the general government deficit and debt have been revised upwards as a result of the implementation of a Eurostat decision on the classification of investment projects based on a public-private partnership and of the related debt. With the exception of 2005, where the effect on the deficit amounts to 0.6 percentage point of GDP, this operation had variable although generally limited effects on the deficit but more important ones on the level of the debt, which has been revised upwards by about 1½ percentage point of GDP (see section 4).

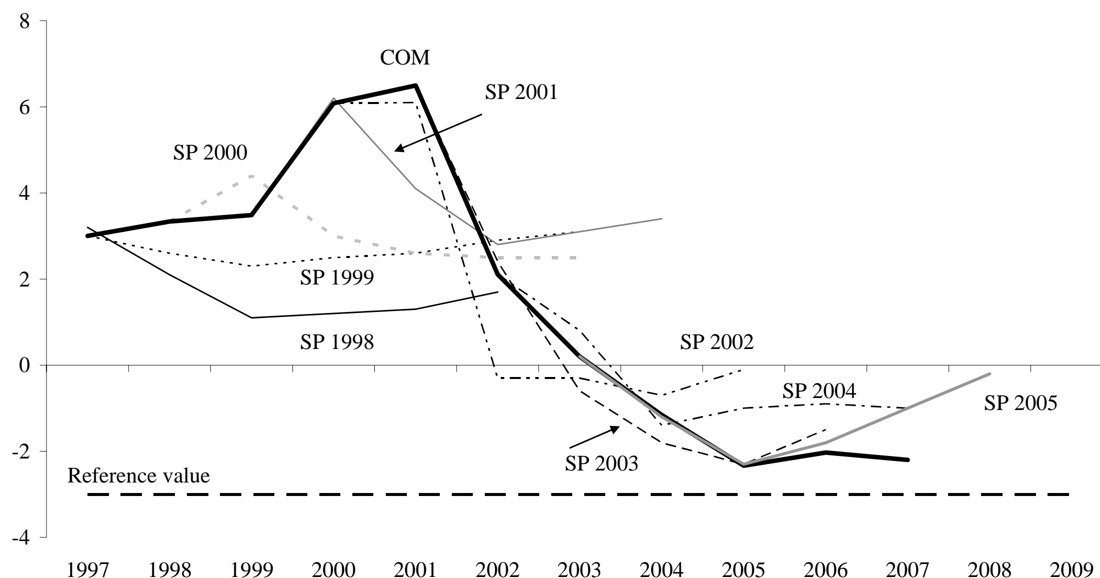
Table 3: Evolution of budgetary targets in successive programmes

		2004	2005	2006	2007	2008
General government balance (% of GDP)	**SP Dec 2005**	**-1.2**	**-2.3**	**-1.8**	**-1.0**	**-0.2**
	SP Dec 2004	-1.4	-1.0	-0.9	-1.0	n.a.
	SP Dec 2003	*-1.8*	*-2.3*	*-1.5*	*n.a*	*n.a.*
	COM Nov 2005	-1.2	-2.3	-2.0	-2.2	n.a.
General government expenditure (% of GDP)	**SP Dec 2005**	**45.6**	**47.0**	**46.3**	**45.1**	**44.5**
	SP Dec 2004	44.8	45.6	45.5	45.7	n.a.
	SP Dec 2003	*47.5*	*47.2*	*46.4*	*n.a.*	*n.a.*
	COM Nov 2005	45.6	46.3	46.1	45.9	n.a.
General government revenues (% of GDP)	**SP Dec 2005**	**44.5**	**44.7**	**44.5**	**44.1**	**44.3**
	SP Dec 2004	43.4	44.6	44.6	44.7	n.a.
	SP Dec 2003	*45.7*	*44.9*	*44.9*	*n.a.*	*n.a.*
	COM Nov 2005	44.5	43.9	44.1	43.7	n.a.
Real GDP (% change)	**SP Dec 2005**	**4.4**	**4.0**	**4.4**	**4.9**	**4.9**
	SP Dec 2004	4.4	3.8	3.3	4.3	n.a.
	SP Dec 2003	*2.0*	*3.0*	*3.8*	*n.a.*	*n.a.*
	COM Nov 2005	4.5	4.2	4.4	4.5	n.a.

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

Regarding the budgetary implementation, in 2005 the general government deficit rose from a revised level of -1.2% of GDP reached in 2004 to -2.3%, instead of decreasing from -1.4% to -1.0% of GDP as projected in the previous update. Large unexpected VAT reimbursements amounting to 2 percentage points of GDP, which were not known when the previous programme was drafted, resulted in a slower-than-expected rise in revenues. The programme also states that the long-term effects of the 2001-2003 growth slowdown are still visible, especially in the field of direct taxes, since revenues from the corporate tax are not only related to the profits of the current year but also to those of the last 4 or 5 years. These factors explain why the revenues ratio did not increase in 2005 by 1.2 percentage point of GDP, as expected, but only by 0.2. The share of direct taxes remained constant at 13.9% of GDP, while indirect taxes still rose from 14.4% to 14.7% of GDP, despite the exceptional VAT reimbursements. On the other hand, total government expenditure, which was projected in the previous update to rise by 0.8 percentage point of GDP, in fact increased by 1.4 percentage point of GDP, of which 0.8 percentage point of GDP is accounted for by public investment. In other words, the deficit increased in 2005 because revenues did not rise as much as expected and could consequently not match the rapid (and even faster than planned) increase in expenditure.

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



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

3.2. The programme's medium-term budgetary strategy

This section covers 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.

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

The programme aims at achieving a medium-term objective (MTO) of -0.8% of GDP in structural terms, i.e. cyclically- adjusted and net of one off and other temporary measures. To that end the programme foresees the general government deficit to gradually decline from -2.3% of GDP in 2005 to -1.8% in 2006, -1.0% in 2007 and -0.2% in 2008. The adjustment is thus somewhat back-loaded since the improvement in the nominal balance (and also in the structural one) is planned to increase from 0.5 percentage point of GDP in 2006 to 0.8 percentage point of GDP both in 2007 and 2008. The time profile and the level of the primary balance are similar to those of the total balance, with an improvement from a -2.1% of GDP primary deficit in 2005 to a 0.1% primary surplus at the end of the period.

In the previous update, which was based on less optimistic, though still rather buoyant macroeconomic assumptions, the general government balance was projected to improve from -1.4% of GDP in 2004 to -1.0% in 2005, and then to remain broadly at the same level in 2006 and 2007. However, as already stated, although GDP growth in 2005 was even slightly stronger than expected, the deficit, instead of improving by 0.4% percentage point of GDP as planned, slipped by 1.1 percentage point of GDP, surging from -1.2% of GDP in 2004 to -2.3% in 2005. The budgetary strategy of the new programme has thus been adapted in order to cope with an unexpectedly deteriorated situation.

3.2.2. The composition of the budgetary adjustment in the programme

The adjustment planned by the programme is exclusively expenditure-based. The 2.1 percentage point of GDP decline in the nominal deficit projected over the period 2005-2008 is planned to result from a 2.5 percentage points of GDP reduction in the share of government expenditure, while the revenues ratio is also forecast to decrease but by a much lesser extent (0.4 percentage point of GDP). The tax burden is expected to remain broadly constant, as the largest part of the decline in public revenues results from a relative decrease in government receipts other than taxes and social contributions.

Table 4: Composition of the budgetary adjustment

(% of GDP)	2004	2005	2006	2007	2008	Change: 2008-2005
Revenues	44.5	44.7	44.5	44.1	44.3	**-0.4**
of which:						
- Taxes & social contributions	40.6	41.0	40.4	40.5	40.9	**-0.1**
- Other (residual)	3.9	3.7	4.1	3.6	3.4	**-0.3**
Expenditure	45.6	47.0	46.3	45.1	44.5	**-2.5**
of which:						
- Primary expenditure	45.4	46.8	46.1	44.8	44.2	**-2.6**
of which:						
Collective consumption	7.1	7.3	6.8	6.6	6.5	**-0.8**
p.m. compensation of employees	*8.7*	*8.7*	*8.6*	*8.4*	*8.2*	***-0.5***
Transfers	26.5	26.5	26.2	25.8	25.4	**-1.1**
- in kind	10.8	10.7	10.6	10.4	10.2	**-0.5**
- other than in kind	15.7	15.8	15.6	15.4	15.2	**-0.6**
Gross fixed capital formation	4.7	5.5	5.5	5.3	5.2	**-0.3**
Other (residual)	7.2	7.5	7.6	7.1	7.1	**-0.4**
- Interest expenditure	0.2	0.2	0.2	0.3	0.3	**+0.1**
General government balance (GGB)	**-1.2**	**-2.3**	**-1.8**	**-1.0**	**-0.2**	+**2.1**
Primary balance	-0.9	-2.1	-1.7	-0.7	0.1	+**2.2**
One-off and other temporary measures	0.0	0.0	0.0	0.0	0.0	0.0
GGB excl. one-off & other temporary measures	**-1.2**	**-2.3**	**-1.8**	**-1.0**	**-0.2**	+**2.1**

Source:
Stability programme update and Commission services' calculations based on revised data provided by the Luxembourg authorities

The 2.5 percentage points of GDP decrease in the expenditure ratio over the programme period is supposed to come exclusively from primary expenditure. Due to the very low level of the government debt, interest payments are negligible. Moreover, they are projected to slightly rise, by 0.1 percentage point of GDP, over the period covered by the programme. From 2005 to 2008 general government collective consumption should decline by 0.8 percentage point of GDP and total social transfers by 1.1 percentage point of GDP (of which 0.5 for transfers in kind and 0.6 for other transfers). Subsidies are projected to decrease by 0.2 percentage point of GDP, government investment by 0.3 and the rest of public expenditure by 0.5 percentage point.

The bulk of the consolidation is thus planned to take place in current government spending, which is also where the deterioration in the general government balance occurred in recent years. The main factor behind the rise in spending in recent years were social transfers, which increased by 4.3 percentage points of GDP from 2000 to 2005 (of

which 2.2 points for transfers in cash and 2.0 for transfers in kind). Although public investment in Luxembourg is very high by EU standards (5½ % of GDP in 2005 compared to an average of about 2½ % for the EU-25 and the euro zone), it is not the main factor explaining the recent deterioration in the government financial position (with the exception of 2005 when, as already stated, public investment accounted for more than the half of the rise in government expenditure). It has always amounted to about 5% of GDP in the last 15 years and it is projected to stay in 2006 at 5.5% of GDP and to only decline to 5.2% in 2008. By contrast, government collective consumption is planned to decline by half a percentage point of GDP in 2006 and total social transfers by 0.3 percentage point of GDP (see Box 1).

Box 1: The budget for 2006

The draft budget for 2006 was presented on October 19, 2005 and was approved by parliament on December 14, 2005. It targets a general government deficit of -1.8% of GDP in 2006. The central government deficit is planned to decrease from an estimated level of -4.2% of GDP in 2005 to -3.8%, while the social security surplus should improve from 1.9% of GDP to 2.0% and the local authorities finances should remain balanced.

The consolidation planned for 2006 is supposed to occur exclusively on the expenditure side since the budget projects revenues to rise by 6½ % with respect to 2005, slightly declining in percentage of GDP, from 44.7% to 44.5%. Indirect taxes should fall by 1 percentage point of GDP, from 14.7% to 13.7% but this decline is expected to be for a large part compensated by a 10.5% rise in direct taxes, which would increase from 13.9% of GDP in 2005 to 14.3%. Receipts from direct taxes are expected to keep recovering from the last lagged effects of the 2001-2003 slowdown and to be boosted by buoyant profits in the financial sector. Moreover, the introduction of a withholding tax on savings income should yield additional revenues for about 0.3 percentage point of GDP. Social contributions are expected to increase broadly in line with nominal GDP, while the programme projects other current revenues to rise from 3.7% of GDP in 2005 to 4.1%, without specifically indicating the factors behind this increase.

On the other hand, public expenditure is planned to decrease by 0.7 percentage point of GDP in 2006, with more than half of this decrease coming from a decline in the share of social transfers, thanks to the effects of reforms initiated in recent years in the fields of disability and health expenditure. The programme states the government's intention to prevent in any case the rise in spending from exceeding the increase in nominal GDP. Government investment is kept at the high level reached in 2005 (5.5% of GDP).

The measures envisaged after 2006 still need to be specified. While the programme states that "*the Government is clearly committed to implement in 2007 and 2008 the fiscal consolidation measures necessary in order to reach the medium term objective*" and that "*the Government is committed to reduce the structural deficit by 0.5% of GDP in both 2007 and 2008*", it contains little information on the contents of these measures for the years 2007 and 2008, as would have been required by the new code of conduct. The information provided is summarized in Box 2. It is worth recalling that the adjustment planned by the programme is back-loaded in terms both of nominal and cyclically-adjusted deficits: significantly more than two-thirds of the total adjustment (1.3 out of the 1.6 percentage point of GDP reduction projected in the structural deficit) are due to take place in 2007 and 2008. In other words, the measures which are supposed to engineer the greater part of the adjustment effort have not yet been decided nor even defined.

Box 2: Measures for 2007 and 2008

The government announced in its declaration on the general political orientations, made on October 12, 2005, the development of a medium-term framework to consolidate public finances. To that effect, the programme indicates that a review will take place during the first semester of 2006 in order to identify the causes of the recent deterioration in public finance. Measures will be enacted to correct this deterioration and incorporated in the 2007 draft budget. The measures aiming at continuing the adjustment effort in 2007 and 2008 will thus only be defined and decided in the course of this year.

The stability programme provides some useful information on the possible scope of these measures: as developments in government expenditure are deeply influenced by the current wage indexation mechanism, the government is considering adjustments to that system in order to avoid excessive automatic increases in public expenditure. In the same vein, the government intends to discuss with the social partners possible changes in the current adaptation mechanism of social benefits to developments in inflation and wages. Similarly, the government intends to favour moderate wage developments in the public sector when the current wage agreement comes to an end at the end of this year. It also intends to organise a general discussion on the public sector's wage policy.

The programme also identifies three domains where public spending should in principle not be reduced (even in relative terms) or should even be increased. First, public investment should be kept at a high level, but a new financing mechanism relying on public-private partnership should be developed. Second, the government intends to raise total expenditure in R&D to 2.4% of GDP in 2008 and to 3% in the long-term, especially through the development of the new University of Luxembourg. Finally, expenditure related to cooperation, to development and to defence should be brought to 1% of GDP. Although these intentions are certainly commendable, it is clear that they will make a slowdown in the other public expenses even more necessary if the programme's objectives are to be carried out.

The consolidation effort projected by the programme should exclusively occur in the central government sub-sector, where the recent deterioration also took place, despite the fact that this deterioration was for a large part caused by the increase in social spending. As a large part of the resources of the social security come from transfers from the central government, the level of which is determined by law, the rise in social spending translated into a deterioration of the central government accounts, not those of the social security institutions. The deficit of the central government is projected by the programme to decrease from an estimated -4.2% of GDP in 2005 to -2.1% in 2008. The finances of local authorities, which recorded a -0.1% of GDP deficit in 2005, should remain balanced over the programme period, while the surplus of the social security should slightly rise from 1.9% of GDP in 2005 to 2.0% in 2006 and remain stable at that level up to 2008.

In order for government expenditure to decline by 2.5 percentage points of GDP as planned, its yearly increase should not exceed about 5½ % a year on average over the period 2006-2008. This would entail a significant slowdown with respect to recent years, since total expenditure rose by about 9% a year on average over the period 2001-2005 and current expenditure by 8¾ %, but it would nevertheless allow public spending to grow by about 2½ % to 3% a year in real terms in the three coming years[6].

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[6] According to the programme, the deflator of government consumption should rise on average by about 3% a year and the GDP deflator by around 2.5% over the period 2006 – 2008.

3.2.3. 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 country-specific 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 public 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 -0.8% of GDP, which it aims to achieve by 2008, the final year of the programme period. Based on Commission services' calculations on the basis of the programme according to the commonly agreed methodology, the adjustment path described in the programme implies that the structural balance[7] would improve from a deficit of -1.5% of GDP in 2005 to a surplus of 0.1% of GDP in 2008 (see Table 5).The programme's MTO would be reached by 2007, one year before the end of the programme period, when the structural deficit is estimated to decline from -1.2% of GDP to -0.6%. The structural balance is thus planned to improve on average by slightly more than half a percentage point of GDP per year, with an intensification of the adjustment effort over the period, since the reduction in the structural deficit is projected to increase from 0.3 percentage point of GDP in 2006 to 0.6 in 2007 and 0.7 in 2008. The fiscal effort planned in the programme is thus mostly concentrated in 2007 and 2008, when the still negative output gap narrows from -1.3% in 2006 to -0.8% and -0.6%, respectively.

However, it should be stressed that, in the case of Luxembourg, cyclically-adjusted and structural balances need to be interpreted with particular caution, as the estimates of output gaps and hence of cyclically-adjusted balances present unusually large margins of uncertainty, due to the specific features of the Luxembourg economy[8], which calls for a very prudent use of such indicators.

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

% of GDP	**2004**	**2005**	**2006**	**2007**	**2008**	**Change: 2008-2005**

[7] Which, in the case of Luxembourg, is equal to the cyclically-adjusted one as the programme does not mention any one-off or other temporary measures.

[8] For instance, the existence of a large pool of unemployed persons in the neighbouring regions, which makes labour supply virtually unlimited.

	COM	SP[1]	COM	SP[1]	COM	SP[1]	COM	SP[1]	SP[1]	SP[1]
Gen. gov't balance	-1.2	-1.2	-2.3	-2.3	-2.0	-1.8	-2.2	-1.0	-0.2	2.1
One-offs[2]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
Output gap[3]	-1.8	-1.7	-1.6	-1.7	-1.3	-1.3	-1.2	-0.8	-0.6	-
CAB[4]	-0.4	-0.3	-1.5	-1.5	-1.4	-1.2	-1.6	-0.6	0.1	1.6
change in CAB	-1.6	-1.5	-1.1	-1.2	0.1	0.3	-0.2	0.6	0.7	-
CAPB[4]	-0.1	-0.1	-1.3	-1.3	-1.2	-1.0	-1.4	-0.3	0.4	1.7
Structural balance[5]	-0.4	-0.3	-1.5	-1.5	-1.4	-1.2	-1.6	-0.6	0.1	1.6
change in struct. bal.	-1.6	-1.5	-1.1	-1.2	0.1	0.3	-0.2	0.6	0.7	-
Struct. prim. bal.[6]	-0.1	-0.1	-1.3	-1.3	-1.2	-1.0	-1.4	-0.3	0.4	1.7

Notes:
[1]Output gaps and cyclical adjustment according to the stability/convergence programme (SP/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. See Table 1 above.
[4]CAB = cyclically-adjusted balance; CAPB = cyclically-adjusted primary balance. If relevant, add: COM figures exclude UMTS receipts of x.x% of GDP in Year.
[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

3.3. 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.

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

As the programme's MTO is equal to the minimum benchmark (estimated at a deficit of around ¾% of GDP), its achievement should fulfil the aim of providing a sufficient safety margin against the occurrence of an excessive deficit. Moreover, it is at an appropriate level because it lies within the range indicated for euro area and ERM II Member States in the Stability and Growth Pact and the code of conduct (between -1% of GDP and balance or surplus) and adequately reflects the debt ratio and average potential output growth in the long term.

3.3.2. Risks attached to the budgetary targets

There appear to be two main negative risks attached to the programme's budgetary targets.

(i) There is first a relatively limited downside macroeconomic risk: as stated above, the macroeconomic projections presented by the programme, though broadly plausible, might be slightly optimistic in the last years of the period covered.

(ii) Second, as already stated in section 3.2.2, the main risk facing the programme's budgetary strategy is the lack of information on the measures envisaged after 2006 which still need to be specified

On the other hand, there is no apparent risk with the tax projections of the programme, which appear plausible. As table 6 shows, for 2006 they are markedly more cautious than the projections from the Commission services' autumn forecasts and, for 2007 and 2008, they imply a tax-to-GDP elasticity which is in line with the one computed by the OECD.

Table 6: Assessment of tax projections

	2006		2007		2008	p.m.:
	COM	SP	COM[2]	SP	SP	OECD[1]
Total taxes Change in tax-to-GDP ratio	0.2	-0.7	-0.3	0.1	0.3	/
Difference	-1.0		0.4		/	/
of which[3]*: - elasticity component*	-0.8		0.6		/	/
- composition component	-0.2		-0.2		/	/
p.m.: Observed elasticity to GDP	1.1	0.7	0.9	1.0	1.1	1.14

Notes:
[1]OECD ex-ante elasticity relative to GDP
[2]On a no-policy change basis
[3]The decomposition is explained in Annex 4

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)

To conclude, the budgetary outcomes could be worse than projected in the programme, particularly if the budgetary consolidation measures envisaged after 2006 are not fully and rigorously implemented.

3.3.3. *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 will be reached by the end of the programme period. However, its achievement could occur somewhat later than planned and requires that the additional measures, announced in the programme, to be taken for 2007 and 2008 are effectively specified and properly implemented.

The risk of breaching the 3% of GDP threshold for the deficit with normal cyclical fluctuations cannot be excluded for 2006. The minimum benchmark aiming at providing a sufficient safety margin against the occurrence of an excessive deficit is 0.8% of GDP for Luxembourg, while the structural deficit, as calculated by the Commission services on the basis of the programme and according to the commonly agreed methodology, is estimated at to 1.2% of GDP in 2006. Although from 2007 onwards the structural deficit is lower than the minimum benchmark, the safety margin may not be sufficient in 2007, unless the expenditure-reducing measures announced for that year are specified and implemented.

The adjustment path (in structural terms) towards the programme's MTO is appropriate, although in 2006 it might be regarded as rather slow. According to the Stability and Growth Pact, for euro area and ERM-II Member States, the annual improvement in the structural balance should at least amount to 0.5% of GDP on average over the programme period, which is the case, since the total adjustment amounts to 1.6% of GDP in three years. However, in 2006, the improvement in the structural deficit (as calculated

by the Commission services on the basis of the programme according to the commonly agreed methodology) only amounts to 0.3% of GDP, while, despite a still negative output gap, the economic situation taken as a whole may be regarded as very good (real GDP growth is projected at 4.4% and employment is expected to increase). According to the programme's own figures, the adjustment in the structural deficit in 2006 is slightly higher than according to the Commission services calculations but still slightly less than the benchmark.

Table 7: Assessment of tax elasticities

	2006		2007	
	COM (observed)	**ex-ante**[1]	**COM**[2] **(observed)**	**ex-ante**[1]
Total taxes Change in tax-to-GDP ratio	0.2	0.3	-0.3	0.4
Difference	-0.1		-0.7	
of which[3]*: - elasticity component*	-0.9		-1.3	
- composition component	0.2		0.0	
p.m.: Elasticity to GDP	1.1	1.1	0.9	1.1

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 Annex 4

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)

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 and especially with integrated guideline No 1 (see Annex 3).

3.4. Sensitivity analysis

The programme presents a "no policy change" scenario, where the decisions announced for the Spring of 2006 and aiming at limiting the rise in expenditure are assumed not to be taken and public expenditure remains on its current trend. Under that scenario the general government deficit, after declining from -2.3% of GDP in 2005 to -1.8% in 2006, increases again in 2007, reaching -2.1% in 2008, with the structural deficit climbing to 2.5% of GDP and the debt increasing to about 15% of GDP. Such a scenario is plausible: it is very close (at least as far as the deficit path is concerned) to the Commission services' autumn 2005 forecasts, which were also made under a "no-policy change" assumption for 2007 and where the general government deficit is forecast to decrease from -2.3% of GDP in 2005 to -2.0% in 2006 before rising again to -2.2% of GDP in 2007. However, this exercise is made under the same set of macroeconomic assumptions as the adjustment scenario. The programme does not as such present a genuine sensitivity analysis that would estimate the reaction of revenues and expenditure to changes in economic variables and conditions, as required by the new code of conduct.

Commission services' simulations of the cyclically-adjusted balance under the assumptions of (i) a sustained 0.5 percentage point deviation from the real GDP growth projections in the programme over the 2005-2008 period; (ii) trend output based on the

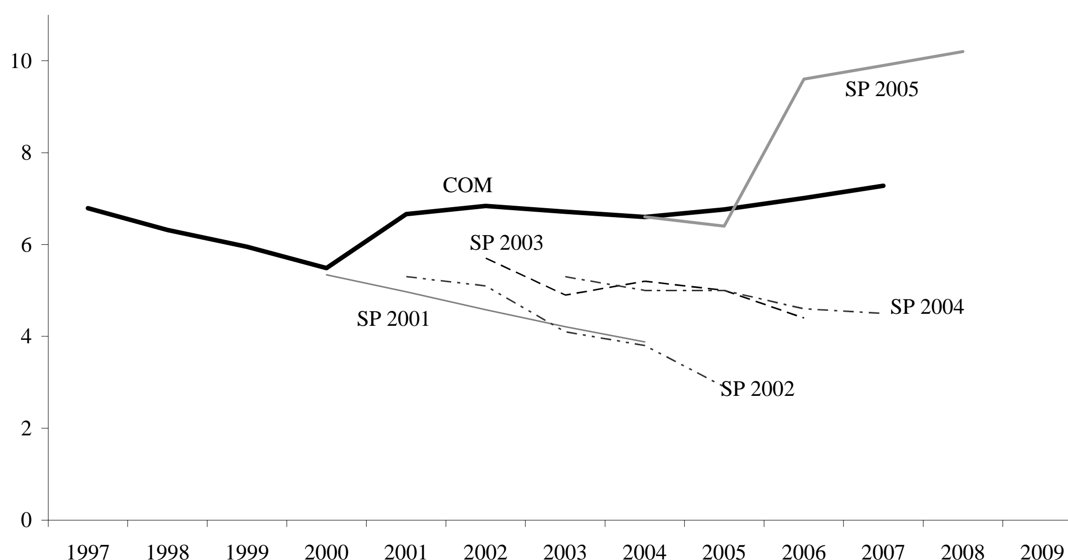
HP-filter[9] and (iii) no policy response (notably, the expenditure level is as in the central scenario[10]), reveal that, by 2008, the cyclically-adjusted balance is 0.5 percentage point of GDP below the central scenario. Hence, in the case of persistently lower real growth, additional measures of around half a percentage point of GDP would be necessary to keep the public finances on the path targeted in the central scenario[11].

4. GENERAL GOVERNMENT GROSS DEBT

As already stated, since the presentation of the previous update, the level of the general government debt has been revised upwards by about 1½ percentage point of GDP in order to take into account the effects of a Eurostat decision on the classification of investment projects based on public-private partnerships (PPPs) and of the debt related to these projects (see above 3.2.1). The debt data of the present programme are thus not directly comparable with those presented in the previous updates.

The general government gross debt amounted to 6.4% of GDP in 2005, down from 6.6% in 2004. The debt is projected by the programme to rise to 9.6% of GDP in 2006, 9.9% in 2007 and 10.2% in 2008.

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



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

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[9]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.

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

[11]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.

There are two main explanations for the relatively large increase in the debt ratio forecast for 2006: first, the government intends to issue new bonds in order to finance projects in the fields of roads and railways infrastructure, while taking advantage of the currently low interest rates. Although the central government has been recording deficits since 2002, these deficits have been financed with the reserves accumulated during the surplus years and no new debt has been issued since 1998. Second, the Luxembourg government provides a financial guarantee to promoters realising projects of general interest (e.g. buildings designed to house government services or EU institutions). As a result of the Eurostat decision on the statistical treatment of projects financed by PPPs, these guarantees must now be integrated in the government debt and several large projects will be financed via this mechanism in 2006.

Table 8: Debt dynamics

	average 2000-2004	**2005**		**2006**		**2007**		**2008**
	COM	**COM**	**SP**	**COM**	**SP**	**COM**	**SP**	**SP**
Government gross debt ratio	**6.7**	**6.8**	**6.4**	**7.0**	**9.6**	**7.3**	**9.9**	**10.2**
Change in debt ratio (1 = 2+3+4)	-0.1	0.2	-0.2	0.2	3.2	0.3	0.3	0.3
Contributions:								
- **Primary balance** (2)	**-3.1**	**2.1**	**2.1**	**1.8**	**1.6**	**2.0**	**0.7**	**-0.1**
- **“Snow-ball” effect** (3)	**-0.1**	**-0.2**	**-0.2**	**-0.3**	**-0.2**	**-0.3**	**-0.4**	**-0.4**
- Interest expenditure	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3
- Real GDP growth	-0.3	-0.3	-0.2	-0.3	-0.3	-0.3	-0.4	-0.4
- Inflation (GDP deflator)	-0.2	-0.1	-0.2	-0.2	-0.1	-0.2	-0.2	-0.3
- **Stock-flow adjustment** (4)	**3.1**	**-1.8**	**-2.1**	**-1.3**	**1.8**	**-1.4**	**0.0**	**0.8**
- Cash/accruals	-0.4							
- Accumulation of financial	3.5							
assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
of which: Privatisation proceeds	0.0							
- Valuation effects & residual adj.								

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.

Source:
Stability/Convergence programme update (SP/CP); Commission services’ autumn 2005 economic forecasts (COM); Commission services’ calculations

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

As already stated, the programme announces the intention of the government, after a wide consultation among others with the social partners, to take a series of measures with effect in the years 2007 and 2008 aiming at achieving the programme’s budgetary objectives. However, this consultation has not yet taken place, these measures have not yet been taken and their content is not yet known. Consequently, the programme only lists some possible fields where these measures could be taken like the indexation of public sector wages and social benefits (see above 3.3.2, ii and Box 2). It also lists three types of expenditure that should not bear the burden of adjustment, namely public

investment, R&D and external relations, especially cooperation to development as well as defence. As already stated, public investment in Luxembourg is extremely high by European standards (more than twice the EU average) and is set to remain more or less at the same level throughout the programme period.

The programme also stresses the existence of a “budgetary reserve” of the central government, amounting to more than 8% of GDP. This reserve was for a large part used in previous years to feed several special investment funds in order to finance investment expenditure without having recourse to borrowing (there was no new central government borrowing from 1998 to 2005). Similarly, the programme underlines the large assets held by the social security institutions, the level of which is currently 24.5% of GDP. As a result, the net financial position of Luxembourg’s general government is widely positive.

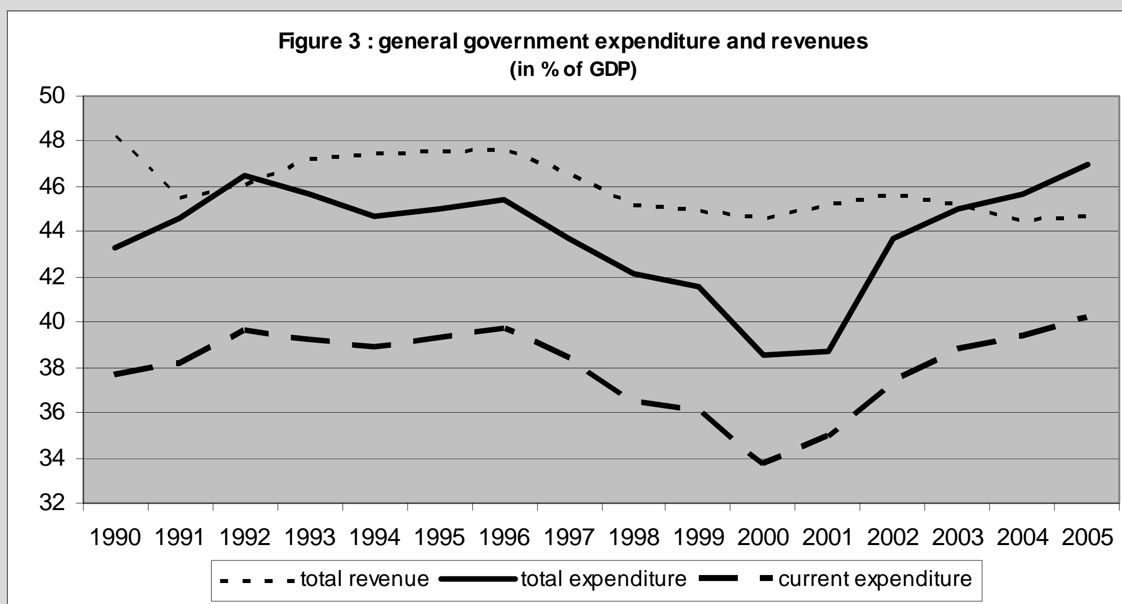
Finally, the programme indicates some reforms that have been introduced in 2005 to ensure better budgetary management, especially the postponement of the approval of the draft budget by the cabinet from August to October in order to be able to incorporate additional information like the latest forecasts of international organisations and to improve the quality of budgetary projections. In the same vein, the programme indicates that all public investment projects will be submitted to a more detailed analysis aimed at reducing their cost and the functioning costs of the new infrastructures will be taken into account from the initial planning phase.

The measures specified in the programme are consistent with the broad economic policy guidelines in the area of public finances. However, as already stated, as far as 2007 and 2008 are concerned, the programme announces that reform measures will be taken without specifying them.

The measures described in the programme are also in line with the National Reform Programme of Luxembourg (hereafter NRP) submitted on 17 November 2005 in the context of the renewed Lisbon strategy for growth and jobs, which identifies as challenges public finance consolidation (integrated guideline No 1) and long-term sustainability (integrated guideline No 2). Like the stability programme, the NRP stresses the need for corrective measures and announces that a comprehensive strategy in the field of social security will be elaborated in the first part of this year but does not indicate the possible content of these measures. Moreover the stability programme mentions the public finance implications of the actions envisaged in the NRP, especially the intention to increase R&D expenditure to 2.4% of GDP in 2008 and 3% in 2010.

Box 3: The level and composition of government expenditure in Luxembourg since 1990

As chart 3 clearly shows, developments in the general government balance in Luxembourg since 1990 have been much more determined by fluctuations in the expenditure ratio than by changes in the revenues ratio. This was especially true in the last five years when the record surplus recorded in 2001 (6.5% of GDP) began to fade away and eventually turned into a deficit: from 2001 to 2005, the general government balance deteriorated by 8.8 percentage points of GDP, as a result of a 8.3 percentage points of GDP surge in expenditure and a 0.5 decrease in revenues, which means that nearly 95% of this deterioration is imputable to the increase in expenditure. This rise in spending was due both to current expenditure, which increased by 8.7% a year on average in nominal terms (and by 5.3 percentage points of GDP in total over the last 4 years), and to capital expenditure, which rose by 11.5% on average (and by 2.9 percentage points of GDP over the same period).



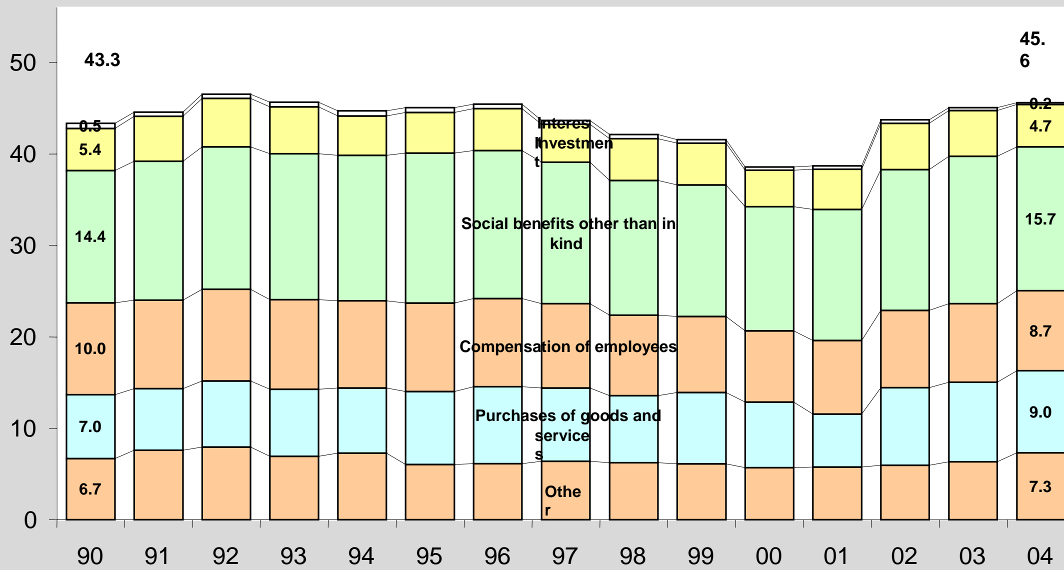
Source: Commission services

Chart 4 presents developments in the main categories of government expenditure, classified from an economic point of view, since 1990. It clearly shows the important role of social benefits in the rise in expenditure in recent years: from 2000 to 2005, social transfers rose by 4.3 percentage points of GDP, nearly 0.9 point per year. Social transfers in kind accounted for 2.0 percentage points of GDP in this increase and other transfers for 2.3. Similarly, chart 5 shows from a functional point of view the large increase in social protection spending, which rose by nearly 3 percentage points of GDP from 2000 to 2003.[12]

This surge in the expenditure ratio in recent years also implies that government spending, which used to be significantly lower in Luxembourg than in most other EU member states (38.6% of GDP in 2000 compared to 46.5% in the euro area and 45.3% both in the EU-15 and the EU-25), is now more or less at the same level (47.0% of GDP in 2005 compared to 48.0% in the euro area and 47.7% in the EU-25). However, current government expenditure remains significantly lower in Luxembourg (40.1% of GDP in 2005 compared to 43.6% for the euro area and 43.5% for the EU-25) and capital expenditure higher (6.8% of GDP in 2005 compared to 3.9% for the euro area and 3.8% for the EU-25).

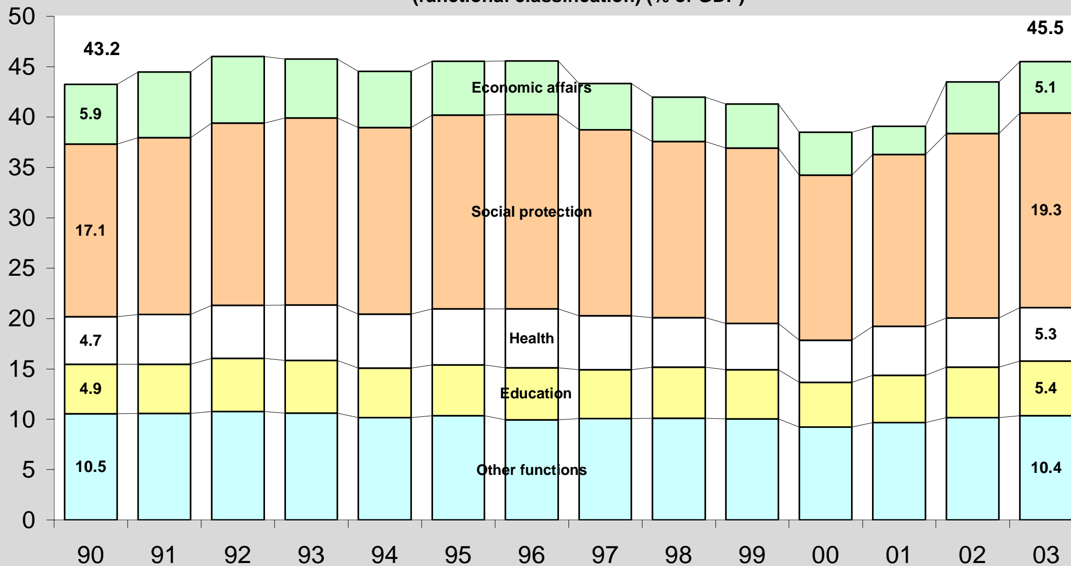
[12] No data on the functional classification of public expenditure after 2003.

Chart 4: The evolution of government expenditure (economic classification) (% of GDP)



Note: "Other" includes subsidies and other current and capital transfers.
Source : Commission services

Chart 5: The evolution of government primary expenditure (functional classification) (% of GDP)



Note: "Other functions" include general services, defence, environment, culture, public order and housing.
Source : Commission services

As shown by Table 9**,** total government consumption (both collective consumption and social transfers in kind), social transfers (both in kind and other) and interest expenditure remain significantly lower in Luxembourg than in neighbouring countries, as well as in the EU and the euro area on average. On the other hand, subsidies, other current spending and capital expenditure, especially government investment are significantly higher.

Table 9 : composition of government expenditure (economic classification) in % of GDP						
YEAR 2004	LUX	BEL	GER	FRA	EU 12	EU 25
Final consumption of which compensation of employees	17,9 8.7	22,9 12.0	18,6 7.6	24,0 13.5	20,3 10.5	20,8 10.8
- Collective consumption	7,1	8,7	7,9	9,4	n.a.	n.a.
- Social transfers in kind	10,8	14,3	10,8	14,6	n.a.	n.a.
Social transfers other than in kind	15,7	16,0	19,1	18,1	16,8	16,2
Total social transfers	**26,5**	**30,3**	**29,8**	**32,7**	**n.a.**	**n.a.**
Interest payments	0,2	4,9	2,8	2,8	3,2	2,9
Subsidies	1,7	1,2	1,3	1,3	1,3	1,2
Other current expenditure	3,9	2,3	1,7	1,9	1,8	2,1
Total current expenditure	**39,3**	**47,3**	**43,6**	**48,1**	**43,4**	**43,0**
Gross fixed capital formation	4,7	1,6	1,4	3,3	2,5	2,4
Other capital expenditure	1,6	0,6	1,9	2,4	1,9	2,0
Total expenditure	**45,6**	**49,5**	**46,9**	**53,8**	**47,8**	**47,4**

Source: Commission services

6. THE SUSTAINABILITY OF PUBLIC FINANCE

The assessment of the sustainability of Luxembourg'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[13] remains unchanged at the 2005 level throughout the programme period.

Luxembourg's programme only includes long-term projections of pension expenditure, which is foreseen to rise by 6.5 percentage points of GDP between 2008 and 2050 (see table A2 in Annex 5). In addition to public pension expenditure, Luxembourg's programme includes a small projected rise in the revenue/GDP ratio.

The gross debt-to-GDP ratio is projected to remain below 60% of GDP up to 2030 in the "2005" scenario and up to 2040 in the "programme" scenario[14]. By taking into account the assets accumulated by social security, the adjusted gross debt[15]/GDP ratio is projected to remain below 60% a bit longer but would nevertheless breach the 60% reference value before 2050 (see Table A4 in Annex 5).

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[13] This refers to the primary balance where the effects of the cycle and of any one-off or temporary measures have been netted out.

[14] 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.

[15] In 2005, assets in public pension schemes amount to 24.5% of GDP, which is deducted from gross debt (at 6.4% of GDP in 2005)

Table 10: Sustainability indicators and the required primary balance

	Sustainability indicators and RPB					
	2005 Scenario			Programme scenario		
	S1	S2	RPB	S1	S2	RPB
Value (of which)	**2,4**	**7,8**	**6,6**	**0,6**	**6,1**	**6,6**
initial budgetary position	*1,3*	*1,3*		*-0,3*	*-0,4*	
debt requirement in 2050	*-1,8*	*:*		*-1,9*	*:*	
future changes in budgetary position	*2,8*	*6,5*		*2,8*	*6,5*	

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[16]. 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 the European Commission ((2005), European Economy, 'Public finances in EMU – 2005, Section II.3 for a further description.

Indeed, according to the S1 indicator, there is a sustainability gap of 2½ % of GDP for Luxembourg in the '2005' scenario. If, however, the planned budgetary consolidation were to materialise, there would be no sustainability gap (½ % of GDP), indicating that a significant part of the budgetary challenge posed by ageing population could be dealt with by sticking to the medium-term budgetary plans as set down in the stability programme. However, S1 only takes into account changes in the primary balance up to 2050, which underestimates the cost of ageing.

A more demanding measure is the government's inter-temporal budget constraint, captured by the S2 indicator, according to which a sustainability gap of 7¾% of GDP emerges in the '2005' scenario and around 6% of GDP in the programme scenario. This sustainability gap translates into a required primary balance (RPB) of about 6.6% of GDP, much higher than the structural primary balance close to balance in the last year of the programme period (+½ % of GDP).

Moreover, the sustainability gap, as measured by S1, would increase by up to ¼% GDP if the (budgetary or structural) adjustment were to be postponed by five years (see table A3 in Annex 5).

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

First, the outlook on future increase in public pension expenditure has substantially changed since the last year's assessment: between 2005 and 2050 the forecasted increase in pension expenditure is much higher in the stability programme (+6.3 points of GDP) than in the 2001 EPC projection (+1.9 points of GDP). The 2002 revalorisation of social security pensions and the inclusion of civil servants' pensions may explain part of this greater increase. Moreover, since the previous exercise, further analysis has been carried out at the national level to better take into account cross-borders workers and lengthening careers of women. Lastly, less favourable growth assumptions than in the 2001 exercise may have played an important role. Still, GDP grows somewhat faster in the programme

[16] 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.

up to the 2020s than in the EPC projections and thereafter develops broadly in line, at around 3% per year, up to 2050. Should growth not be as solid over the period, the increase in pension expenditure relative to GDP could be sharper, adding further pressure on public finances sustainability.

Second, no information is available in the update on age-related expenditures other than pensions. This could significantly underestimate the impact of ageing population.

Third, the update projects a rise in the revenue/GDP ratio, which amounts to 0.4% of GDP over the all period. The impact on the S2 indicator of incorporating these national projections would reduce it by 0.4 percentage points of GDP. On the assumption that this increase will materialise, it would imply marginally lower sustainability risks.

Finally, it should be borne in mind that real GDP growth in Luxembourg is projected to be higher than in the rest of the EU up to 2050, which implies that the differential between interest rate[17] and growth rate is particularly low. In the calculation of S2, this mechanically gives no weight to the current level of debt, since it is very low, while it gives a large weight to the latest year of the long-term projection, which displays a large increase in expenditure compared to the base year.

With regard to the sustainability of public finances, Luxembourg appears to be at medium risk on grounds of the projected budgetary costs of ageing populations. The current level of debt is certainly very low and the planned consolidation over the medium term should contribute to partly alleviate the risk to public finances sustainability. However, Luxembourg has experienced, over the last two decades, a period of exceptionally strong employment growth which will progressively translate into a similar increase in the number of pensioners and into a large increase in pension expenditure. While the current size of pension fund assets contributes significantly to public finances sustainability, it will not be sufficient and, as recognised by the programme, some changes in the pensions schemes will prove necessary at some point to contain future increase in public expenditure and reduce the risk to long-term sustainability.

* * *

[17] The real interest rate is assumed to be 3% for all countries over the projection period, according to the commonly agreed underlying assumptions made by the EPC. In the case of Luxembourg, real GDP growth is projected to be 3% between 2030 and 2050.

Annex 1: Summary tables from the stability programme update

Table 1a. Macroeconomic prospects

	ESA Code	2004	2004	2005	2006	2007	2008
		mio. €	%	%	%	%	%
Real GDP	**B1*g**	20 803	4.4	4.0	4.4	4.9	4.9
Nominal GDP	**B1*g**	25 664	7.1	6.8	6.9	7.5	7.9
		Components of real GDP					
Private consumption expenditure	**P.3**	8 766	1.5	1.2	2.4	3.2	3.0
Government consumption expenditure	**P.3**	3 693	6.0	4.0	2.7	3.2	4.1
Gross fixed capital formation	**P.51**	4 406	3.5	2.1	5.4	7.8	7.3
Changes in inventories	**P.52 + P.53**	0.8	-0.7	0.0	0.0	0.0	0.0
Exports of goods and services	**P.6**	29 994	7.5	7.7	7.2	7.7	8.0
Imports of goods and services	**P.7**	26 231	6.3	6.9	6.8	7.8	8.1
		Contributions to real GDP growth					
Final domestic demand		…	1.7	1.7	2.6	3.5	3.5
Changes in inventories	**P.52 + P.53**	…	-0.7	0.0	0.0	0.0	0.0
External balance of goods and services	**B.11**	…	2.7	2.3	1.9	1.4	1.5

Table 1b: Price developments

	2004	2005	2006	2007	2008
	%	%	%	%	%
GDP deflator	2.6	2.7	2.4	2.4	2.8
Private consumption deflator (NIPC)	2.1	2.5	2.4	2.0	2.0
HIPC	3.2	3.7	2.6	2.0	1.8
Public consumption deflator	1.9	4.6	3.1	3.0	2.8
Investment deflator	1.2	1.7	1.4	0.9	1.1
Export price deflator (goods and services)	6.0	4.0	2.4	2.7	2.8
Import price deflator (goods and services)	5.7	4.4	2.6	2.4	2.6

Table 1c: Labour market developments

	ESA Code	2004	2004	2005	2006	2007	2008
		x 1000	%	%	%	%	%
Employment, persons		301	2.6	2.9	2.9	3.1	3.2
Employment, hours worked		…	1.2	2.1	2.4	2.6	2.8
Unemployment rate		…	4.2	4.7	5.0	5.2	5.3
Labour productivity, persons		…	0.8	0.6	1.2	1.5	1.3
Labour productivity, hours worked		…	2.2	1.5	1.7	1.9	1.8
Compensation of employees	D.1	…	2.6	3.5	3.1	3.0	3.4

Table 1d sectoral balances - *not provided*

Table 2 : General government budgetary prospects

	ESA Code	2004	2004	2005	2006	2007	2008
		mio €	**% GDP**	**% GDP**	**% GDP**	**% GDP**	**% GDP**
		Net lending by sub-sector					
General government	S.13	**-297**	**-1.2**	**-2.3**	**-1.8**	**-1.0**	**-0.2**
Central government	S.1311	-703	-2.7	-4.2	-3.8	-3.0	-2.1
Local government	S.1313	-32	-0.1	0.0	0.0	0.0	0.0
Social security	S.1314	438	1.7	1.9	2.0	2.0	2.0
Total revenue	TR	11 412	44.5	44.7	44.5	44.1	44.3
Total expenditure	TE	11 709	45.6	47.0	46.3	45.1	44.5
Net lending/borrowing	EDP B.9	-297	-1.2	-2.3	-1.9	-1.0	-0.2
Interest expenditure	EDP D.41	58	0.2	0.2	0.2	0.3	0.3
Primary balance		-239	-0.9	-2.1	-1.7	-0.7	0.1
		Components of revenue					
Total taxes		7 249	28.2	28.5	28.0	28.3	28.7
Taxes on production and imports	D.2	3 683	14.4	14.7	13.7	13.8	13.9
Current taxes on income and wealth, and capital taxes	D.5 + D.91	3 566	13.9	13.9	14.3	14.5	14.8
Social contributions	D.61	3 170	12.4	12.5	12.4	12.2	12.1
Property income	D.4	307	1.2	1.2	1.3	1.2	1.2
Other		685	2.7	2.5	2.8	2.4	2.3
Total revenue	TR	**11 412**	**44.5**	**44.7**	**44.5**	**44.1**	**44.3**
Tax burden		…	40.6	41.0	40.4	40.5	40.9
		Components of expenditure					
Compensation of employees	D.1	2 242	8.7	8.7	8.6	8.4	8.2
Intermediate consumption	P.2	900	3.5	3.7	3.7	3.6	3.6
Total social transfers		5 438	21.2	21.4	21.0	20.7	20.4
Social transfers in cash	D.62	4 030	15.7	15.8	15.6	15.4	15.2
Social transfers in kind	D.63	1 408	5.5	5.6	5.4	5.2	5.2
Interest expenditure	EDP D.41	58	0.2	0.2	0.2	0.3	0.3
Subsidies	D.3	437	1.7	1.8	2.2	1.7	1.6
Gross fixed capital formation	P.51	1 197	4.7	5.5	5.5	5.3	5.2
Other		1 437	5.6	5.7	5.3	5.3	5.2
Total expenditure	TE	**11 709**	**45.6**	**47.0**	**46.3**	**45.1**	**44.5**

Table 3 General government expenditure by function - *not provided*

Table 4: General government debt developments

in % of GDP	**2004**	**2005**	**2006**	**2007**	**2008**
Gross debt	6.6	6.4	9.6	9.9	10.2
Central government	4.2	4.0	7.3	7.7	8.2
Local government	2.3	2.4	2.3	2.2	2.0
Social security	0.0	0.0	0.0	0.0	0.0
Change in gross debt ratio	-0.1	-0.2	+3.2	+0.3	+0.3
	Contribution to changes in gross debt				
Primary surplus	-0.9	-2.2	-1.6	-0.7	0.1
Interest expenditure	0.2	0.2	0.2	0.3	0.3
Stock-flow adjustment	1.5	2.5	5.4	2.0	1.1
Implicit interest rate on debt	3.6	3.0	3.7	3.2	3.1
	Other relevant variables				
Liquid financial assets	39.5	35.9	…	…	…
Net financial debt	-32.9	-29.5	…	…	…

Table 5 code of conduct = Table 3: Cyclical developments

in % of GDP	**ESA Code**	**2004**	**2005**	**2006**	**2007**	**2008**
Real GDP growth		4.4	4.0	4.4	4.9	4.9
Net lending of general government	EDP B.9	**-1.2**	**-2.3**	**-1.8**	**-1.0**	**-0.2**
Interest expenditure	EDP D.41	0.2	0.2	0.2	0.3	0.3
Potential GDP growth		3.9	4.3	4.3	4.3	4.3
Output gap		-0.3	-0.6	-0.4	0.2	0.9
Cyclical budgetary components		-0.2	-0.3	-0.2	0.1	0.4
Cyclically-adjusted balance		**-1.0**	**-2.0**	**-1.6**	**-1.1**	**-0.6**
Change in the cyclically-adjusted balance		-1.5	-1.0	+0.4	+0.5	+0.5
Cyclically-adjusted primary balance		-0.8	-1.9	-1.4	-0.9	-0.3

***Note** : The cyclically-adjusted budget balance is computed under the assumption that the budgetary sensitivity parameter (ε) is equal to 0.49. The output gap is estimated by Statec using a Cobb-Douglas production function. Production factors (with the exception of the capital stock) are adjusted by using an H-P filter and the labour input takes into account hours worked.*

Table 6 Code of conduct = Table 5: Divergence from previous update

	2004	2005	2006	2007
Real GDP growth (%)				
6th update	4.4	3.8	3.3	4.3
7th update	4.4	4.0	4.4	4.9
Difference	**0.0**	**0.2**	**1.1**	**0.6**
General government net lending (% of GDP)				
6th update	-1.4	-1.0	-0.9	-1.0
7th update	-1.2	-2.3	-1.8	-1.0
Difference	**0.2**	**-1.3**	**-0.9**	**0.0**
General government gross debt (% of GDP)				
6th update	5.0	5.0	4.6	4.5
7th update	6.6	6.4	9.6	9.9
Difference	**1.6**	**1.4**	**5.0**	**5.4**

Table 7 Code of conduct = Table 6: Long term sustainability of public finances

in % of GDP	2005	2010	2020	2030	2050
Total pension expenditure	**10.0**	**9.6**	**10.3**	**12.7**	**16.3**
Old-age and early pensions	6.1	6.0	6.8	9.1	12.5
Other pensions (disability, survivors)	3.9	3.6	3.6	3.6	3.8
Occupational pensions	0.0	0.0	0.0	0.0	0.0
Pension contributions	**9.6**	**9.6**	**9.7**	**9.7**	**10.0**
Pension reserves	**24.5**	**30.0**	**39.4**	**33.3**	**-49.6**
Assumptions:					
Labour productivity growth	+1.3 %	+1.9 %	+1.8 %	+1.7 %	+1.7 %
Real GDP growth	+4.1 %	+4.3 %	+3.6 %	+3.0 %	+3.0 %

Table 8 Code of conduct = Table 0: Basic assumptions

	2004	2005	2006	2007	2008
Short term interest rate (annual average)	2.1	2.1	2.2	2.4	3.0
Long term interest rate (annual average)	4.1	3.4	3.5	3.7	4.0
Exchange rate €/USD (annual average)	1.24	1.25	1.20	1.20	1.20
Nominal effective exchange rate (in %, increase = appreciation)	0.63	0.24	-0.02	-0.29	0.00
World GDP growth (excluding EU-15)	…	…	…	…	…
EU-15 GDP growth	2.2	1.5	2.2	2.4	2.4
Growth of relevant foreign markets	5.1	4.3	5.7	5.4	5.4
World import volumes (excluding EU-25)	…	…	…	…	…
Oil prices (Brent, USD/barrel)	38.3	55.0	58.8	58.8	58.8

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		
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 number of the tables sometimes differs from the model
The programme provides all compulsory information in these tables.		X	
The programme provides all optional information in these tables.		X	
The concepts used are in line with the European system of accounts (ESA).	X		
4. Other information requirements			
a. Involvement of parliament			
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		Minor differences
Significant divergences between the national and the Commission services' economic forecasts are explained[12].			Not applicable
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	Sectoral balances are not yet available in Luxembourg except for the general government and its sub-sectors.

c. Monetary/exchange rate policy			
The convergence programme presents the medium-term monetary policy objectives and their relationship to price and exchange rate stability.	Not applicable		
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	The situation of public finance is markedly different (worse) from the projections of the previous update
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		For 2007 and 2008, the programme only announces the intention to take (unspecified) measures in 2006
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	Only for 2006.For 2007 and 2008, see above
Information is provided on one-off and other temporary measures.	There are no one-offs or other temporary measures known		
The state of implementation of the measures (enacted versus planned) presented in the programme is specified.	X		See above for 2007 and 2008
If 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.	The programme does not invoke major structural reforms for justifying a deviation from the adjustment path		
The programme includes a quantitative cost-benefit analysis of the short-term costs and long-term benefits of such reforms.			
f. Sensitivity analysis			
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	The programme only presents a "no-policy change" scenario where no corrective measure is taken after 2006
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 the country'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

This table 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 (not yet in MTO)
– 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			X

Integrated guidelines	Yes	No	Not applicable
finances.			
– 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		Some measures already taken. Other ones (unspecified) announced for 2006.
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 country-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)[18]. 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.

[18]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.

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[19]. 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:

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

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

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.

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

Assessment of tax projections

	2006		2007		2008	p.m.:
	COM	**SP**	**COM**[2]	**SP**	**SP**	**OECD**[1]
Total taxes Change in tax-to-GDP ratio	0.2	-0.7	-0.3	0.1	0.3	/
Difference	-1.0		0.4		/	/
of which[3]*: - elasticity component*	1.1		2.5		/	/
- composition component	-0.9		-0.8		/	/
p.m.: Observed elasticity to GDP	1.1	0.7	0.9	1.0	1.1	1.14

Notes:
[1]OECD ex-ante elasticity relative to GDP
[2]On a no-policy change basis
[3]The decomposition is explained in Annex 4

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

	2006		2007	
	COM (observed)	**ex-ante**[1]	**COM**[2] **(observed)**	**ex-ante**[1]
Total taxes Change in tax-to-GDP ratio	0.2	0.3	-0.3	0.4
Difference	-0.1		-0.7	
of which[3]*: - elasticity component*	-0.9		-1.3	
- composition component	0.2		0.0	
p.m.: Elasticity to GDP	1.1	1.1	0.9	1.1

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 Annex 4

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	2,3	1,9	1,9	1,8	1,7	1,7	1,7	1,7
Real GDP growth	3,9	4,3	2,7	3,6	3,0	3,0	3,0	3,0
Participation rate males (aged 20-64)	75,6	0	75,0	0	74,3	0	74,8	0
Participation rates females (aged 20-64)	58,6	0	60,8	0	61,3	0	61,7	0
Total participation rates (aged 20-64)	67,2	0	67,9	0	67,9	0	68,3	0
Unemployment rate	4,2	0	4,2	0	4,2	0	4,2	0
Population aged 65+ over total population	14,6	0	16,5	0	19,8	0	22,1	0

Table A2: Long-term projections

Main assumptions - programme scenario (as % GDP)	2008	2010	2020	2030	2040	2050	changes	Impact on S2
Total age-related spending	9,8	9,6	10,3	12,7	14,5	16,3	6,5	6,5
Pensions	9,8	9,6	10,3	12,7	14,5	16,3	6,5	6,5
Health care	:	:	:	:	:	:	:	:
Care of the elderly	:	:	:	:	:	:	:	:
Education	:	:	:	:	:	:	:	:
Unemployment benefits	:	:	:	:	:	:	:	:
*Total primary non age-related spending***	34,4	34,4	34,4	34,4	34,4	34,4	0,0	0,0
*Adjusted total revenues***	44,6	44,6	44,6	44,6	44,6	44,6	0,0	0,0

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

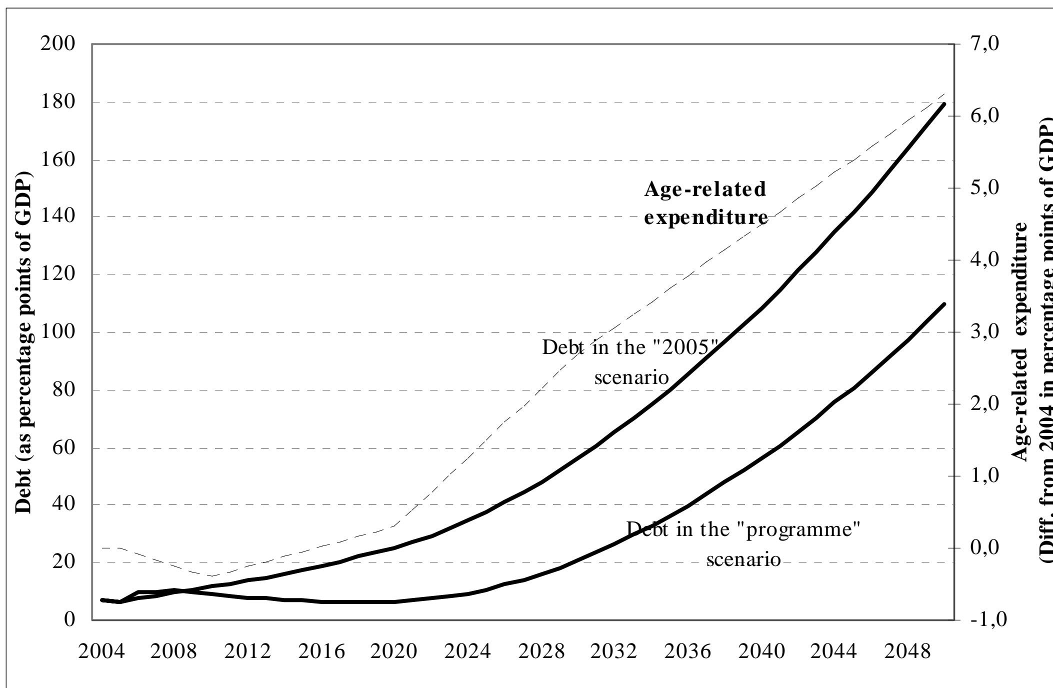
	S1	S2
2005 scenario	**0.3**	**0.0**
Programme scenario	**0.1**	**0.0**

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)	2008	2010	2020	2030	2040	2050	changes
Programme scenario							
Gross debt	10,2	8,9	6,5	20,9	56,2	109,7	99,5
*Gross debt, i + 1*** **	*10,2*	*9,1*	*7,3*	*22,9*	*61,9*	*123,7*	*113,5*
*Gross debt, i - 1*** **	*10,2*	*8,7*	*5,7*	*19,2*	*51,4*	*98,1*	*87,9*
Adjusted gross debt	-17,8	-18,3	-18,4	-3,4	31,9	85,4	103,2
2005 Scenario							
Gross debt	9,4	11,5	25,3	56,1	108,5	179,1	169,7
*Gross debt, i + 1*** **	*9,4*	*11,7*	*27,1*	*61,7*	*122,4*	*208,2*	*198,7*
*Gross debt, i - 1*** **	*9,4*	*11,3*	*23,6*	*51,2*	*96,9*	*155,8*	*146,4*
Adjusted gross debt	-14,3	-11,5	4,3	35,6	88,0	158,5	172,8

* *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.



Debt (as percentage points of GDP)
Age-related expenditure
(Diff. from 2004 in percentage points of GDP)
Age-related
expenditure
Debt in the "2005"
scenario
Debt in the "programme"
scenario
200
180
160
140
120
100
80
60
40
20
0
7,0
6,0
5,0
4,0
3,0
2,0
1,0
0,0
-1,0
2004
2008
2012
2016
2020
2024
2028
2032
2036
2040
2044
2048