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ECONOMIC ASSESSMENT OF THE STABILITY PROGRAMME OF LUXEMBOURG (UPDATE OF NOVEMBER 2006)

The Stability and Growth Pact requires each EU Member State to present an annual update of its medium-term fiscal programme, called "stability programme" for countries that have adopted the euro as their currency and "convergence programme" for those that have not. The most recent update of Luxembourg's stability programme was submitted on 24 November 2006.

The attached technical analysis of the programme, prepared by the staff of, and under the responsibility of, the Directorate-General for Economic and Financial Affairs of the European Commission, was finalised on February 26, 2007. Comments should be sent to Jean-Luc Annaert (jean-luc.annaert@ec.europa.eu). The main aim of the technical analysis is to assess the realism of the budgetary strategy presented in the programme as well as its compliance with the requirements of the Stability and Growth Pact. However, the analysis also looks at the overall macro-economic performance of the country and highlights relevant policy challenges.

Based on this technical analysis, the European Commission adopted a recommendation for a Council opinion on the programme on 7 February 2007. The ECOFIN Council is expected to adopt its opinion on the programme on 27 February 2007.

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

http://ec.europa.eu/economy_finance/about/activities/sgp/main_en.htm

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SUMMARY AND CONCLUSIONS[1]

As part of the preventive arm of the Stability and Growth Pact, each Member State that uses the single currency, such as Luxembourg, has to submit a stability programme and annual updates thereof. The most recent programme, covering the period 2006-2009, was submitted on 27 October 2006.

The macroeconomic performance of Luxembourg in the last 25 years has been impressive both in terms of output and employment growth. Even if Luxembourg experienced small deficits in recent years, the situation of public finance remains fundamentally sound, with a very low government debt and sizeable reserves held by the public sector. However, despite the strong job creation, the labour market situation is less favourable than appears at first sight. Unemployment, though still rather low, has been on the rise since 2002, with residents facing intense competition from non-residents. Moreover, the employment rate of older residents, although it rose in recent years, remains one of the lowest in the EU. The burden on public finances constituted by these unemployed and additional retirees has so far been easily sustained thanks to the buoyancy in revenues but it should nevertheless not be understated. Moreover, the large projected increase in ageing-related expenditure over the coming decades is a source of concern for the long-term sustainability of public finance.

Against this background, Luxembourg faces the following challenges in the area public finances, especially in the long-term. First, given that Luxembourg's comparatively sound public finances have essentially, if not exclusively, been the result of the buoyancy in revenues and not of a moderation in spending, which has increased very rapidly in recent years, large budgetary slippages could occur in case of an extended slowdown unless expenditure patterns are significantly and swiftly modified. Second, in the area of long-term sustainability, up to now, the strong employment growth improved the situation of the pension system by increasing the number of contributors but it will inevitably translate in the coming years into a corresponding rise in the number of retirees. The ratio between contributors and retirees will thus necessarily deteriorate in the future, even if employment keeps growing at the current pace. Moreover, while many non-resident workers were so far only entitled to relatively low pensions due to incomplete careers in the country, increasingly, non-resident retirees will have worked in Luxembourg for the largest part of their professional life.

The macroeconomic scenario underlying the updated stability programme envisages that real GDP growth will decelerate from 5.5% in 2006 to 4.3% on average over the rest of the programme period. Assessed against currently available information, this scenario appears to be based on plausible growth assumptions. The programme's projections for inflation also appear realistic. Output gaps, both those presented in the programme and those recalculated by the Commission services using the common methodology and the information from the programme, remain negative throughout the period covered. These negative and broadly stable output gaps go hand in hand with high projected rates of economic growth and job creation as well as a decline in the unemployment rate.

[1]The analysis takes into account (i) the Commission services' autumn 2006 forecast, (ii) the code of conduct ("Specifications on the implementation of the Stability and Growth Pact and guidelines on the format and content of stability and convergence programmes", endorsed by the ECOFIN Council of 11 October 2005) and (iii) the commonly agreed methodology for the estimation of potential output and cyclically-adjusted balances.

Consequently, economic conditions during the period covered should rather be labelled as 'neither good nor bad'.

For 2006, the general government deficit is estimated at 1.0% of GDP in the Commission services' autumn 2006 forecast, against a target of 1.8% of GDP set in the previous update of the stability programme. This is partly explained by the downward revision of the 2005 deficit outcome, from 2.3% of GDP in the previous programme to 1.0% according to the most recent data. The 2006 deficit outturn may also be better than estimated in the new programme (1.5% of GDP) as tax revenues are likely to be underestimated.

The main goal of the programme's medium-term budgetary strategy is to regain a balanced position within the programme horizon. This is to be achieved through a progressive improvement of the general government balance from an estimated deficit of 1.5% of GDP to a small surplus in 2009 (0.1% of GDP). The reduction in the primary balance would be parallel to the decrease in the headline deficit. The adjustment relies on a reduction in the expenditure ratio amounting to 3.8 percentage points of GDP, which would more than offset a 2.1 point of GDP decrease in the revenue ratio. This strategy is similar to that described in the 2005 programme, which, against the background of a broadly similar macroeconomic outlook, projected the deficit to reach its peak in 2005 rather than 2006 and a broadly balanced position to be achieved in 2008 instead of 2009. Government gross debt, which is estimated to have reached 7.5% of GDP in 2006, is projected to rise slightly to 8.5% of GDP by the end of the programme period.

The structural balance (i.e. the cyclically-adjusted balance net of one-off and other temporary measures) calculated according to the commonly agreed methodology is planned to improve from a deficit of around 1¼% of GDP in 2006 to a surplus of about 1% at the end of the programme period. As in the previous update of the stability programme, the medium-term objective (MTO) for the budgetary position is a structural deficit of 0.8% of GDP, which is in line with the Pact. The programme aims to achieve it by 2007, one year earlier than in the previous update.

The budgetary outcomes could be better than projected in the programme. In particular, tax projections seem rather cautious, especially for 2007. Indeed, budgetary outcomes have very often been better than projected in Luxembourg in recent years, generally because of significantly higher-than-expected revenues.

In view of this risk assessment, the budgetary stance in the programme seems sufficient to ensure that the MTO is achieved by 2007, as envisaged in the programme. In addition, it seems to provide a sufficient safety margin against breaching the 3% of GDP deficit threshold with normal macroeconomic fluctuations from 2007 onwards. The pace of the adjustment towards the MTO implied by the programme is fully in line with the Stability and Growth Pact, which specifies that, for euro-area and ERM II Member States, the annual improvement in the structural balance should be 0.5% of GDP as a benchmark and that the adjustment should be higher in good economic times and could be lower in bad economic times. After the achievement of the MTO, the fiscal policy stance implied by the programme is also fully in line with the Pact.

As mentioned above, the long-term budgetary impact of ageing in Luxembourg is very high - among the highest in the EU - influenced notably by a very considerable increase in pension expenditure (7½ percentage points of GDP), and in total age-related public spending (8¼ points), from 2004 to 2050 (compared to EU average increases of 2¼ and

3½ percentage points of GDP, respectively). Although gross government debt is very low and the social security system has accumulated considerable assets, which contributes significantly to public finance sustainability, the current level of these assets will not be sufficient to offset the sizeable increase in age-related expenditure. Therefore, while keeping a strong budgetary position will help to alleviate part of the cost of ageing, as recognised by the authorities, some changes to the pension scheme are necessary so as to contain the future increase in public expenditure and reduce the risks to the long-term sustainability of public finances. Overall, Luxembourg appears to be at medium risk with regard to the sustainability of its public finances.

The implementation report of the national reform programme (NRP) of Luxembourg, provided in the context of the renewed Lisbon strategy for growth and jobs, was submitted on 27 October 2006. The NRP identifies as key challenges: a high quality education and learning system, an economy integrated in the European and international context, an attractive economic environment, a stable macro-economic framework and the respect of the principles of durable development. The Commission's assessment of this programme (adopted as part of its December 2006 Annual Progress Report[2]) showed that Luxembourg is making very good progress on the implementation of its NRP, but that there is still room for improvement regarding the weaknesses identified in 2005. The macroeconomic measures adopted hold out the prospect of fiscal consolidation and lower inflation. A promising set of measures are now being implemented at the micro-economic level. Greater efforts are required, however, to implement a system to monitor and assess annual progress, and a number of measures need to be introduced, for instance to assist business start-ups and SMEs. Despite encouraging reforms on the employment front, no new initiative has been announced to raise the level of employment among older workers, and major reforms to improve the education system have yet to materialise. Against the background of progress made, Luxembourg was encouraged to focus on the areas of: increasing the employment rate among older workers and reforming current early-retirement systems; reducing drop-out rates and removing artificial barriers between different types of education; close monitoring of the impact on youth unemployment of the measures recently adopted for young people; and greater support for competitive markets, the transposition of EU directives and SMEs.

The stability programme and the NRP are to some extent integrated. In particular, the government's intention to keep public investment at a high level seems to reflect the identification as priority actions by the NRP of the increase in R&D, the encouragement of the sustainable use of resources and the improvement of the rail connections with neighbouring countries.

The overall conclusion is that, in a context of strong growth prospects, the programme is making rapid progress towards the MTO, which should be achieved from 2007 onwards, and envisages a further narrowing of the deficit thereafter. However, most of the expenditure-curbing measures recently decided are only temporary (i.e. until 2009) and no structural reform aiming at improving the long-term sustainability of public finances (especially in the area of pensions) has yet been undertaken.

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[2] Communication from the Commission to the Spring European Council, "Implementing the renewed Lisbon strategy for growth and jobs - A year of delivery", 12.12.2006, COM(2006)816.

Comparison of key macroeconomic and budgetary projections

		2005	2006	2007	2008	2009
Real GDP (% change)	**SP Nov 2006**	**4.0**	**5.5**	**4.0**	**5.0**	**4.0**
	COM Nov 2006	4.0	5.5	4.5	4.2	n.a.
	SP Nov 2005	*4.0*	*4.4*	*4.9*	*4.9*	*n.a.*
HICP inflation (%)	**SP Nov 2006**	**3.8**	**2.9**	**1.4**	**2.0**	**2.0**
	COM Nov 2006	3.8	3.2	2.2	1.8	n.a.
	SP Nov 2005	*3.7*	*2.6*	*2.0*	*1.8*	*n.a.*
Output gap (% of potential GDP)	**SP Nov 2006** [1]	**-1.6**	**-0.3**	**-0.8**	**-0.5**	**-1.6**
	COM Nov 2006 [5]	-2.2	-0.9	-0.7	-0.9	n.a.
	SP Nov 2005 [1]	*-1.7*	*-1.3*	*-0.7*	*-0.6*	*n.a.*
General government balance (% of GDP)	**SP Nov 2006**	**-1.0**	**-1.5**	**-0.9**	**-0.4**	**0.1**
	COM Nov 2006	-1.0	-1.0	-0.5	-0.3	n.a.
	SP Nov 2005	*-2.3*	*-1.8*	*-1.0*	*-0.2*	*n.a.*
Primary balance (% of GDP)	**SP Nov 2006**	**-0.8**	**-1.3**	**-0.8**	**-0.2**	**0.3**
	COM Nov 2006	-0.8	-0.8	-0.3	-0.1	n.a.
	SP Nov 2005	*-2.1*	*-1.7*	*-0.7*	*0.1*	*n.a.*
Cyclically-adjusted balance (% of GDP)	**SP Nov 2006** [1]	**-0.2**	**-1.3**	**-0.5**	**-0.1**	**0.9**
	COM Nov 2006	0.0	-1.1	-0.2	0.1	n.a.
	SP Nov 2005 [1]	*-1.5*	*-1.2*	*-0.6*	*0.1*	*n.a.*
Structural balance [2] (% of GDP)	**SP Nov 2006** [3]	**-0.2**	**-1.3**	**-0.5**	**-0.1**	**0.9**
	COM Nov 2006 [4]	0.0	-1.1	-0.2	0.1	n.a.
	SP Nov 2005	*-1.5*	*-1.2*	*-0.6*	*0.1*	*n.a.*
Government gross debt (% of GDP)	**SP Nov 2006**	**6.1**	**7.5**	**8.2**	**8.5**	**8.5**
	COM Nov 2006	6.0	7.4	7.3	7.1	n.a.
	SP Nov 2005	*6.4*	*9.6*	*9.9*	*10.2*	*n.a.*

Notes:
[1] Commission services calculations on the basis of the information in the programme.
[2] Cyclically-adjusted balance (as in the previous rows) excluding one-off and other temporary measures.
[3] There are no one-off and other temporary measures in the programme.
[4] There are no one-off and other temporary measures in the Commission services' autumn 2006 forecast.
[5] Based on estimated potential growth of 4.1%, 4.1%, 4.4% and 4.7% respectively in the period 2005-2008.
Source:
Stability programme (SP); Commission services' autumn 2006 economic forecasts (COM); Commission services' calculations

1. INTRODUCTION

The 2006 update of the stability programme of Luxembourg (henceforth "the programme" or "the update"), covering the period 2006-2009, was submitted to the Commission on November 24, 2006 [3]. It was approved by the government the same day and transmitted to the Parliament. It was drafted in parallel with the 2007 budget, which was submitted to Parliament on October 11 and was adopted on 22 December.

The update adheres to the code of conduct as far as its table of contents is concerned and broadly follows the model structure in Annex 1 of the code, except that Part 7 "Institutional features of public finance" is missing. There are some gaps in the data provided but they have no practical consequence for the assessment of the programme.

- There is one gap in the provision of compulsory data: Table 1d (sectoral balances) is missing. While the rest of the table is optional, its line 1 ("net lending/borrowing vis-à-vis the rest of the world") and 4 ("statistical discrepancy") are compulsory. Data on sectoral balances are not yet available in Luxembourg except for the general government and data on the balance of payments only cover the current account.

- There are also some gaps in the provision of optional data [4]:

Annex 3 provides a detailed overview of all aspects of compliance with the code of conduct.

2. ECONOMIC TRENDS AND POLICY CHALLENGES

This section is in five parts. The first provides a brief overview of the macroeconomic performance in terms of growth and other major macroeconomic variables. The second presents the results of a growth accounting exercise and tries to identify the main reasons for low or high average annual economic growth vis-à-vis the euro area. The third looks at the volatility of growth and other key macroeconomic variables and the stabilising or destabilising role of macro-policies. The fourth part focuses on trends in public finances. Based on the picture outlined in the first four parts, the fifth identifies major economic challenges with implications for public finances.

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[3] The English translation of the programme was transmitted to the Commission services on December 5, 2006.

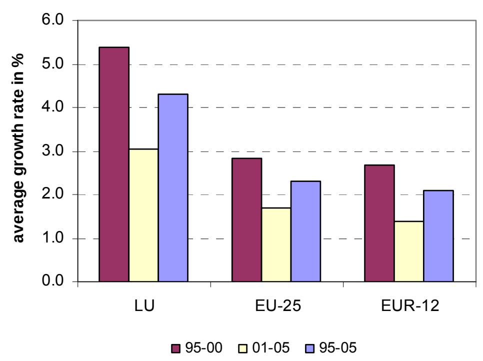
[4] Missing compulsory data: table 1d (sectoral balances). Missing optional data: the year "X + 3" (i.e. 2009) in Table 3 "general government expenditure by function"; the years "X + 1" to "X + 3" (i.e. 2007-2009) for lines 6 "liquid financial assets" and 7 "net financial debt" in Table 4 "general government debt developments in Table 5 "Cyclical developments", the details on "contributions to potential GDP growth" (line 4); some series in Table 7 "long term sustainability of public finance" e.g. distinction between "social security pension" and "old-age and early pensions", consolidated public pension funds assets or participation rate for males and females.

2.1. Economic performance

In the last decade, growth continued to be strong in Luxembourg, as it had been since the mid-1980s. Over the period 1995-2005, real GDP grew by an average 4.7% a year, more than twice the euro zone average (2.1%) and the second highest growth rate in the area after Ireland (with low points of 1½-2% in 1995/6 and 2003, and a peak in 1999/2000 with 8.4% in both years). Employment growth followed output: it averaged 3.4% from 1996 to 2005, with more than 5% in the years 1999 to 2001, and a subsequent slowdown to 1.8% in 2003 followed by a recovery to about 3% in recent years. The unemployment rate rose from 2.6% on average between 1996 and 2000 to 3.6% on average between 2001 and 2005 (reaching of 4.2% in the latter year).

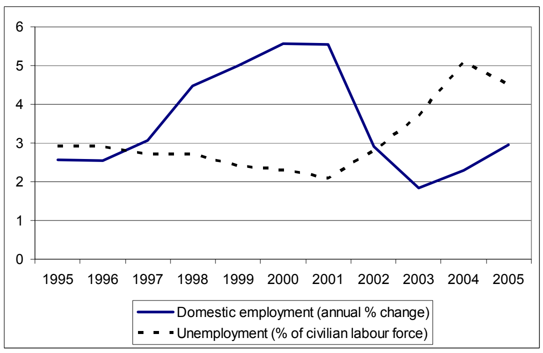
This rise in unemployment is rather paradoxical, considering that annual employment growth still reached 2.4% on average between 2001 and 2005. However, job creation increasingly benefited non-residents whereas resident employment only rose by 1.2% on average during the period. Indeed, an important feature of employment growth in Luxembourg in the last 15 to 20 years has been the increasing share of non-resident workers, who now amount to more than one third of total employment and represented about two thirds of its rise in recent years. This differential between the growth in resident and non-resident employment certainly reflects mismatches between the skills of unemployed residents and those required by the jobs created. However, it might also be the result of a significantly higher reservation wage related to the generosity of the social security system (unemployment benefits are nearly twice as high in Luxembourg as in neighbouring countries). Due to this bias of job creation towards non-residents, it seems that employment now has to rise by about 3% to 3½% a year for unemployment in Luxembourg to stabilise.

Figure 1: Average GDP growth: Luxembourg, EU25 and euro area



Source: Commission services

Figure 2: Luxembourg: employment and unemployment

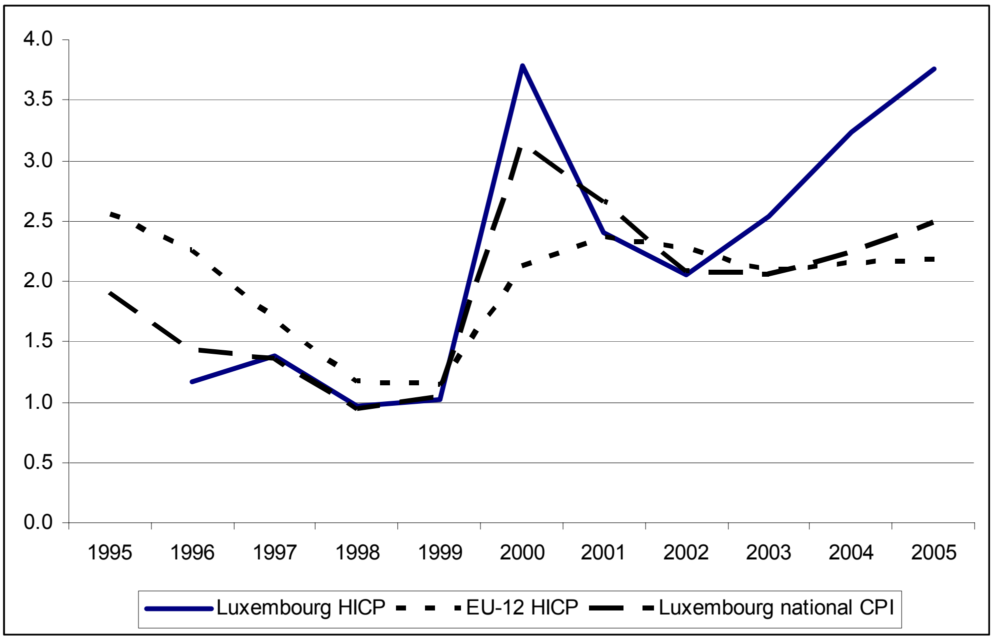


Source: Commission services

Inflation was rather subdued (and even slightly declining) in Luxembourg between 1995 and 1999, with HICP inflation not exceeding 2% until it jumped to 3.8% in 2000, reflecting hikes in oil prices. Since 2003, the rise in the HICP in Luxembourg has been increasingly faster than in the euro area as a whole and especially in neighbouring countries. This rising differential is chiefly due to the high weight in the Luxembourg HICP of oil products, alcohol and tobacco, the prices of which, though remaining significantly lower than abroad, have considerably increased in recent years. Because of the large purchases of these products by non-residents, their weight amounts to some

22% in the Luxembourg HICP compared to 7.5% in the national CPI, which excludes consumption by non-residents. This explains why the rise in the national index was much more moderate, reaching 2.5% in 2005, which is still higher than e.g. in France and Germany or in the EU-12 average but much less than the rise in the HICP (see Figure 3). In order to avoid excessive fluctuations that could result from developments in oil prices or from changes in the taxation of tobacco and alcohol, wages and social benefits are indexed on the national CPI.

Figure 3: Inflation in Luxembourg and in the euro area



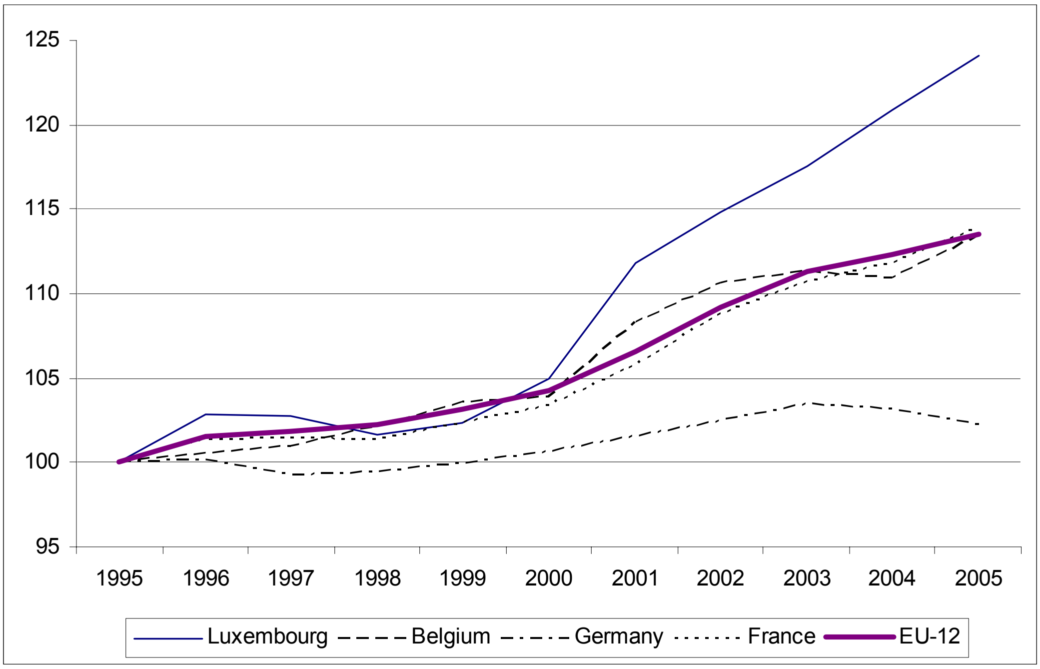
Source: Commission services

Since its acceleration in the early 1980s, growth in Luxembourg has been essentially driven by services. This was still the case from 1995 to 2005, when the value added of the sector increased by around 63% in volume over the period (compared to e.g. 20% in Germany and some 25% in France). The main performers were financial services and services to enterprises, as well as transport and communication, whose value added rose over these 10 years by about 56%, 88% and 120% in real terms, respectively. However, the fact that Luxembourg has radically evolved towards a service-oriented economy does not mean that it has become an industrial desert: manufacturing industry performed well too, its value added increasing by 35% in real terms over the period 1995-2005, which is the third highest rate in the euro area (where it rose by 22% on average) and significantly more than in e.g. Belgium, Germany, France or the Netherlands.

These good performances are also illustrated by the growth in exports: from 1995 to 2005, exports of services rose by 130% in real terms in Luxembourg, the third highest rate in the euro area (after Ireland and Greece) and exports of goods by 78% compared to 71% on average in the euro area. The contribution of net exports of services to GDP growth was 1.5% a year on average over the period (+9.4% for exports, -7.9% for imports). However, due to the dynamism of domestic demand and the ensuing strong rise in imports, the contribution of net exports of goods was negative (-0.6% a year, resulting from +2.3% for exports and - 2.9% for imports). Over the whole period 1995-2005, the goods balance recorded on average an 11.3% of GDP deficit, while the trade in services generated a surplus of 31.2% of GDP on average. As far as domestic demand is concerned, its contribution to GDP growth amounted to 3.8% a year on average (3.6% for final domestic demand and +0.2% for change in stocks).

The country's performance in terms of exports can thus primarily be explained by a business-friendly legal, fiscal and regulatory environment that led to the development of a large and rapidly growing export-oriented services sector. Clearly, 30 or 40 years ago there was no specific reason for Luxembourg to become a large international financial centre, to be the home of one of the leading cargo airlines worldwide or to house the headquarters of a large network of satellite operators located across all continents.

Figure 4: Nominal unit labour costs (1995 = 100)



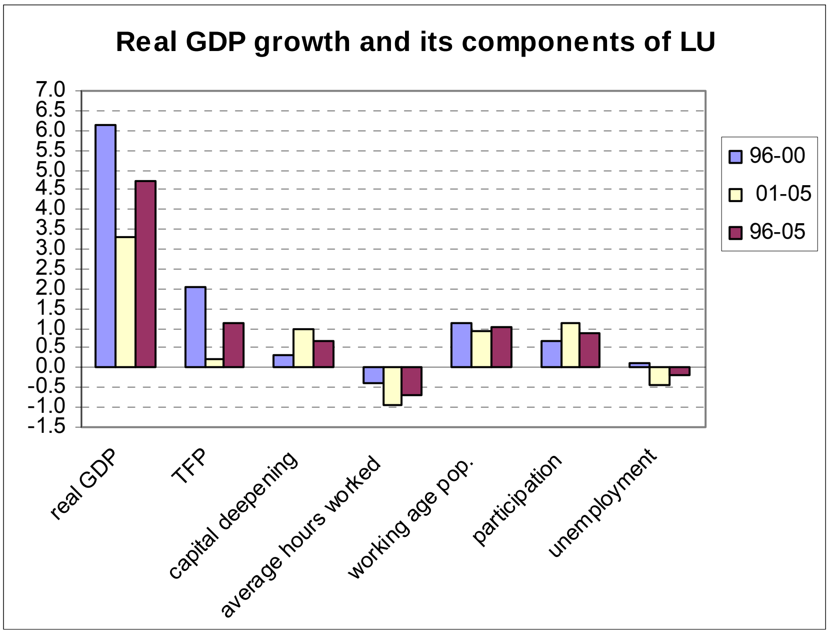
<u>Source</u>: Commission services

However, the good export performance of Luxembourg can hardly be explained by a cost competitiveness effort, at least in the last 5 years: as shown in Figure 4, up to 2000, developments in nominal unit labour costs (ULC) in Luxembourg were broadly in line with those in neighbouring countries and in the euro zone as a whole. However, since then, ULCs rose by 20.5% in 5 years, compared to 10.0% in Belgium, 12.3% in France, 0% in Germany and 9.8% on average in the EUR-12. Not only was the rise in nominal wages faster in Luxembourg than in neighbouring countries, especially Germany, and in the euro area as a whole, but the increase in the apparent productivity of labour was also extremely slow. Clearly, this stagnation in productivity was just the reverse side of the very dynamic employment growth, which, of course, is *per se* a very positive development. However the faster rise in ULCs that it implies could, if continued, jeopardize the competitiveness of the economy in the long term, even if it did not dent its export performance up to now.

2.2. Anatomy of medium-term growth

Within the framework of a traditional growth accounting exercise, this section dissects the sources of high or low average growth as well as possible differences in average economic growth vis-à-vis the euro area. The results of the exercise are displayed in Figures 5 and 6.

Figure 5: Real GDP growth and its components



Note:

Assuming a Cobb-Douglas-production function $Y = A(L \cdot H)^{\alpha} K^{1-\alpha}$ where Y denotes the level of *GDP*, *L* employment, *H* the average hours worked per person employed, K the capital stock and α the labour share in income, real GDP can be written as $Y = \frac{Y}{H \cdot L} H \cdot L = A \cdot \left(\frac{K}{H \cdot L}\right)^{1-\alpha} H \cdot WP \cdot PART \cdot (1-ur)$ where *WP* stands for working age population, *PART* denotes the participation ratio as a share of *WP* and *ur* the rate of unemployment. In terms of growth rates *g* this is:

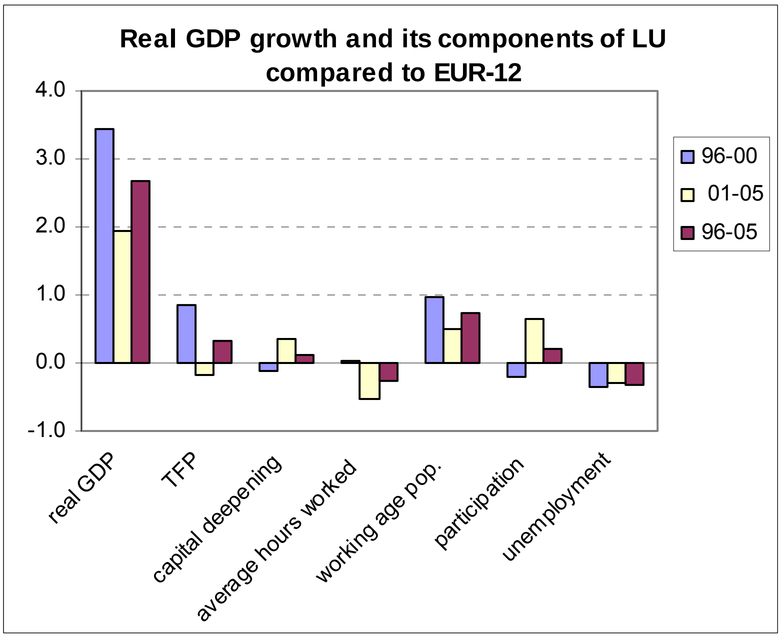
$$g_Y = g_A + (1-\alpha)(g_K - g_L - g_H) + g_H + g_{WP} + g_{PART} - g_{ur} \cdot \frac{ur}{1-ur}$$

The expression $(g_K - g_L - g_H)$ is referred to as capital deepening, i.e. the increase in the capital labour ratio.

Source: Commission services

From this analysis it can be concluded that the contribution of capital deepening has been relatively limited, generally positive but only marginally different from the euro area average and the contribution of labour duration has been relatively limited too, generally negative and more so than in the euro area as a whole. The contribution of developments in unemployment has been marginal and significantly smaller than at the euro area level because unemployment was already very low at the beginning of the period and its trend since then was clearly oriented upwards (at least since 2002). On the contrary, the contribution to GDP growth of the rise in working age population has been significantly positive (about 1 percentage point over the whole period with few differences among sub-periods) and about 1 percentage point higher than in the euro area as a whole: from 1996 to 2005 Luxembourg had the third fastest rise in working age population (+10.9% over 10 years) in the euro area after Ireland and Spain. The contribution of labour participation has been more or less of the same magnitude as that of population growth but the difference with the euro area average has been smaller, though significantly positive: the participation rate, which was one of the lowest in the EU in 1995, has risen by 5.4% over the period compared with 4.9% in the euro area and 4.2% in the EU-15.

Figure 6: Real GDP growth and its components: difference vis-à-vis the euro area



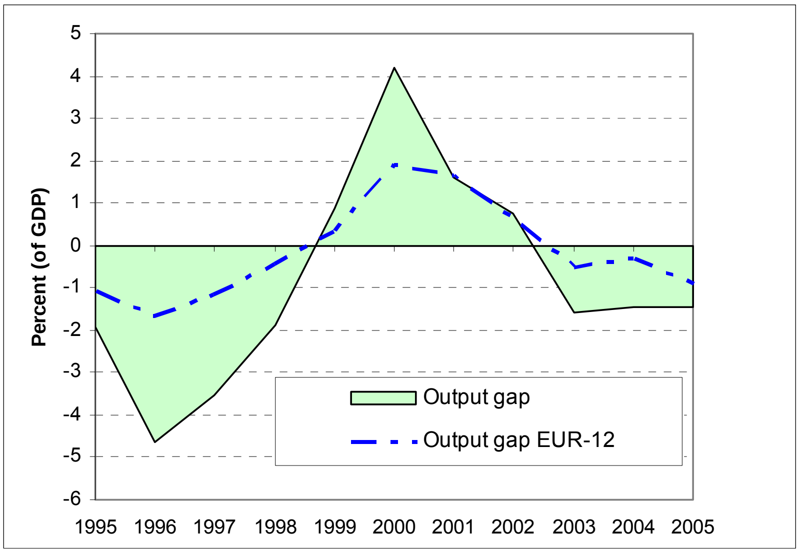
Note: See note of Figure 5.

Source: Commission services

2.3. Macro-policies against the backdrop of the economic cycle

Growth in Luxembourg in the last 10 years was highly correlated with that of the euro area as a whole but it was also significantly more volatile: the standard deviation of the country's real GDP growth rate was the second highest in the euro area after Ireland (actually, these two countries also had the strongest average GDP growth in the area over the same period). This is confirmed by Figure 7, which shows that cyclical developments in Luxembourg broadly followed the euro area pattern but that the output gap was on average much larger (both ways), reaching more than 4% both in the trough of 1996 and in the peak of 2000 (more than twice the EU-12 average in both cases).

Figure 7: Output gap in Luxembourg and the euro area



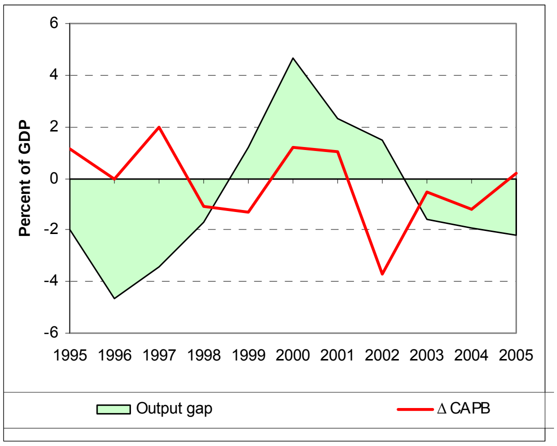
Source: *Commission services*

As shown by Figure 8, the fiscal policy stance (as measured by the change in the cyclically-adjusted general government balance) was broadly pro-cyclical in the late nineties. There was first a pro-cyclical tightening from 1995 to 1997, when the cyclically-adjusted surplus rose in two out of the three years (1995 and 1997) and remained constant in 1996, while the output gap was widely negative (and even increasing until 1996). This was followed by a pro-cyclical loosening in 1998 and 1999, when the cyclically-adjusted surplus fell by 2 percentage points of GDP in 2 years, while the negative output gap, which was narrowing since 1997, decreased markedly in 1998 and turned positive in 1999.

Since 2000, fiscal policy has been largely anti-cyclical. This started with an anti-cyclical tightening in 2000 and 2001, when the cyclically-adjusted surplus rose by more than 2 percentage points of GDP in 2 years, while the output gap reached its peak of the period in 2000 and, though narrowing markedly, remained significantly positive in 2001. This tightening was followed by an anti-cyclical loosening from 2002: the cyclically-adjusted surplus dropped from its 2001 peak (by 3.6 percentage points of GDP in the sole year 2002) and turned into a deficit in 2004, while the positive output gap, which was rapidly closing since 2001, turned negative in 2003 and remained broadly constant since then at around -1½% of GDP.

As shown by Figure 9, the picture of the monetary stance was mixed too. It was anti-cyclical until 1998: the real interest rate declined and the real effective exchange rate depreciated while the output gap was widely negative (though narrowing from 1996). In 1998-1999, the real interest rate rose while the output gap was closing but the exchange rate continued to depreciate. After 2000, with the positive output gap rapidly closing, the interest rate continued to decline until 2004 while the real effective exchange rate began to appreciate.

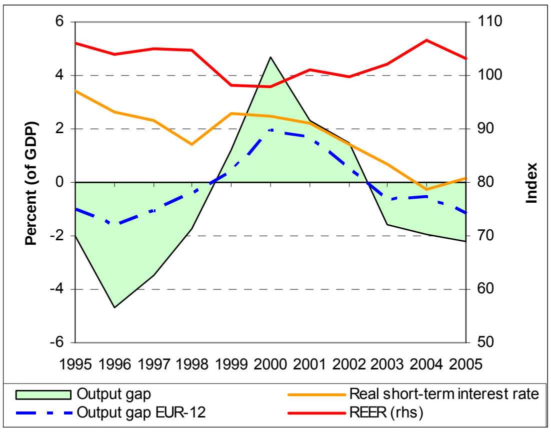
Figure 8: Output gap and fiscal stance



Note: ΔCAPB is the change in the cyclically-adjusted primary balance

Source: Commission services

Figure 9: Output gap and monetary stance



Source: Commission services

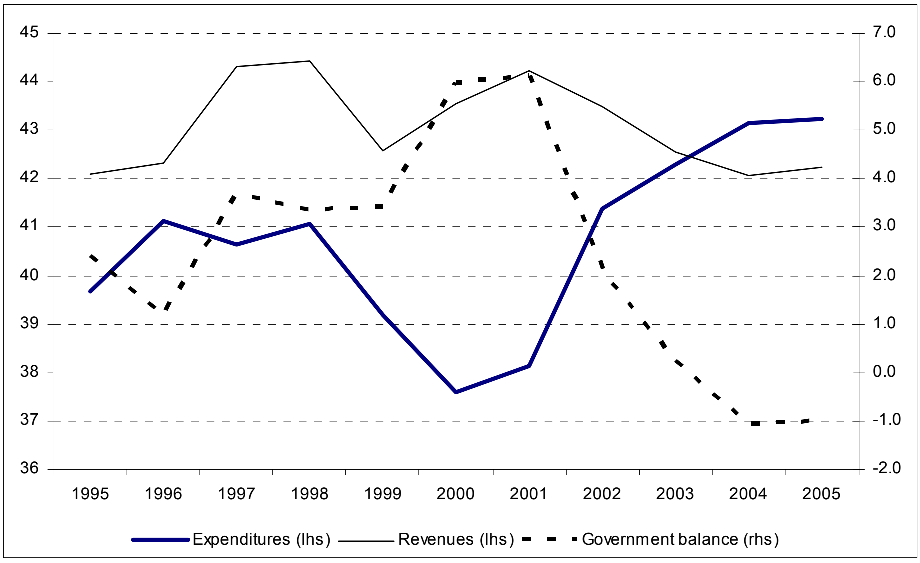
2.4. Public finances

Luxembourg public finances have traditionally been very sound: the government recorded recurrent surpluses all along the 1990s and the public debt amounts to slightly more than 5% of GDP. The very strong output and employment growth at the end of the 1990s generated buoyant revenues that allowed both a rapid rise in public spending, which increased by nearly one quarter over the three years 1998-2000, and a surge in the general government surplus, which culminated at some 6% of GDP in 2000 and 2001. Budgetary policy was guided by the triple rule [5]: i) that the general government had to be in surplus, ii) that central government's finances had to be balanced and iii) that the increase in the State's [6] current expenditure had to remain slower than that in its total spending. This set of rules was *de facto* abandoned in recent years (except the third one since capital expenditure kept rising more than current spending. See, however, footnote 4).

[5] This rule was not a formal norm but a political commitment expressed in the government's inaugural declaration of August 12, 1999 and repeated in all successive budgets until 2003 (budget for 2004).

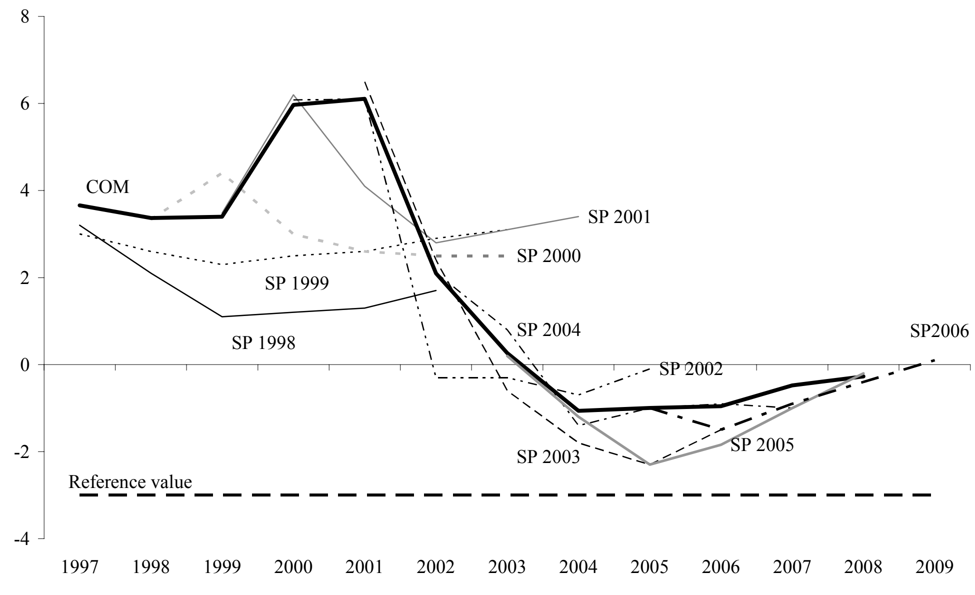
[6] The State constitutes the main part of the central government, the rest being the special funds, which perform the largest part of the central government's investment expenditure. The budget registers the transfers from the State to these funds and not the funds actual expenditure. As the funds are allowed to carry over the unspent amounts to the next years, investment spending by the State is not equivalent to the investment expenditure of the central government as recorded in ESA95, even if in the long run the latter reflects the former since the funds can not spend systematically more than the amounts they are granted by the State. This also implies that this third rule was not really binding in the short term.

Figure 10: General government revenues, expenditure and balance (% of GDP)



Source: Commission services

Figure 11: General government balance projections in successive stability programmes (% of GDP)



Source: Commission services and national stability programmes

However, the situation began to change with the slowdown in growth at the beginning of the current decade: the rise in government revenues strongly decelerated in 2001 from the record rates recorded in 1999 (9.5%) and 2000 (13.2%) to around 4% to 5% a year over the period 2001-2004. This slowdown in revenues did not immediately result in a deterioration in the government balance because spending also decelerated in 2001, so that the surplus stabilised around 6% of GDP. In 2002, however, government expenditure surged by no less than 15.8% (or 3.3 percentage points of GDP), while revenues "only" increased by 4.9% and declined by 0.8 percentage point of GDP. As a result, the surplus fell by 4 percentage points of GDP that year, for more than 80% due to the rise in expenditure.

In 2003 and 2004, spending slowed down somewhat but still rose by about 8% a year, while revenues increased by 4% to 4¼%, about the same rate as in 2002. As a result, the general government balance further deteriorated from the 2.1% of GDP surplus recorded in 2002 to a 1.1% of GDP deficit in 2004. All in all, the government balance thus deteriorated by 7.2 percentage points of GDP from 2001 to 2004, of which 5 points, more than two-thirds of the total deterioration, were due to the rise in expenditure. However, in spite of this deterioration, public debt remains very low: it stood at 6.2% of GDP in 2005, the second lowest figure in the EU-25. Moreover, the reserves accumulated by the Social Security system from its recurrent surpluses amount to about 25% of GDP.

2.5. Medium and long-term challenges for public finances

The macroeconomic performance of Luxembourg in the last 25 years has been impressive both in terms of output and employment growth. However, despite the strong job creation, the labour market situation is less favourable than appears at first sight. Unemployment, though still rather low, has been on the rise since 2002, with residents facing intense competition from non-residents. Moreover, the employment rate of older residents, although it has increased in recent years, remains one of the lowest in the EU. Although the burden on public finances constituted by these unemployed and additional retirees has so far been easily sustained thanks to the buoyancy in revenues, it should nevertheless not be understated.

Despite the recent deterioration, public finances have remained basically sound and compare favourably with most other Member States: public debt is very low and the government, essentially the Social Security, holds sizeable reserves. However, the country faces problems that have implications for public finances, especially in the long-term:

- Luxembourg's comparatively sound public finances (with the proviso related to the recent deterioration) have essentially, if not exclusively, been the result of the buoyancy in revenues and not of a moderation in spending, which has increased very rapidly in recent years. This strong rise in expenditure is not a concern as long as growth continues to be strong and the buoyancy in revenues continues. However, should the economy slow down for a more extended period of time than in 2001-2003, large budgetary slippages could occur unless expenditure patterns are significantly and swiftly modified.

- Moreover, the long-term sustainability of Luxembourg's public finances is subject to non negligible risks. The current situation of the country's pension system is favourable thanks to the strong employment growth since the mid-1980s, which resulted in a large increase in the number of contributors. However, this situation is only temporary because this strong employment growth will inevitably translate in the coming years into a corresponding rise in the number of retirees. The ratio between contributors and retirees will thus necessarily deteriorate in the future, even if employment continues to grow at the current pace. Moreover, many non-resident workers who retired in recent years were only entitled to relatively low pensions from the Luxembourg social security because of incomplete careers in the country. Increasingly non-resident retirees will have worked in Luxembourg for the largest part of their professional life, which will lead to an increase in the average pension paid. Projections by the Commission services show that the long-term budgetary impact of ageing in Luxembourg will be among the highest in the EU (see Section 5 for details), due in particular to a considerable projected increase in pension expenditure. These projections also show that the current budgetary position is not sufficiently high to offset the impact of this considerable increase in age-related expenditure up to 2050. These factors explain why Luxembourg is now considered to be at medium risk as regards the sustainability of its public finance.

Table 1: Key economic indicators

	Luxembourg						Euro area					
	Averages			2003	2004	2005	Averages			2003	2004	2005
	'96 - '05	'96 - '00	'01 - '05				'96 - '05	'96 - '00	'01 - '05			
Economic activity												
Real GDP (% change)	4.6	6.2	3.1	1.3	3.6	4.0	2.1	2.7	1.4	0.8	2.0	1.4
Contributions to real GDP growth:												
Domestic demand	3.8	4.8	2.9	3.0	1.9	3.9	2.0	2.7	1.3	1.4	1.8	1.6
Net exports	0.8	1.4	0.2	-1.6	1.8	0.1	0.1	0.1	0.1	-0.7	0.2	-0.2
Prices, costs and labour market												
HICP inflation (% change)	2.2	1.7	2.8	2.5	3.2	3.8	1.9	1.7	2.2	2.1	2.1	2.2
Labour productivity (% change)	1.0	1.9	0.0	-0.5	1.3	1.0	1.2	1.5	0.8	0.8	1.6	0.9
Real unit labour costs (% change)	0.0	-0.6	0.6	-2.4	1.1	-2.0	-0.5	-0.6	-0.5	-0.1	-1.0	-0.8
Employment (% change)	1.6	1.9	1.4	1.0	0.9	0.9	1.2	1.5	0.9	0.7	0.7	0.8
Unemployment rate (% of labour force)	3.1	2.6	3.6	3.7	5.1	4.5	9.1	9.8	8.5	8.7	8.9	8.6
Competitiveness and external position												
Real effective exchange rate (% change) (1)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Export performance (% change) (2)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
External balance (% of GDP)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Public finances												
General government balance (% of GDP)	2.4	3.5	1.3	0.3	-1.1	-1.0	-2.3	-2.1	-2.5	-3.1	-2.8	-2.4
General government debt (% of GDP)	6.8	7.2	6.4	6.3	6.6	6.0	70.9	72.5	69.3	69.3	69.8	70.8
Structural budget balance (% of GDP) (3)	n.a.	n.a.	n.a.	1.0	-0.2	0.0	n.a.	n.a.	n.a.	-3.2	-2.9	-2.0
Financial indicators (4)												
Long term real interest rate (%) (5)	2.6	3.8	1.4	-0.9	2.4	-1.3	3.1	4.1	2.1	2.0	2.2	1.5
Household debt (% of GDP) (6)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Corporate sector debt (% of GDP) (7)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Notes:
More detailed tables summarising the economic performance of the country are included in Annex 4.
(1) Unit labour costs relative to rest of a group of industrialised countries (USD): EU24 (=EU25 excl. LU), BG, RO, TR, CH, NR, US, CA, JP, AU, MX and NZ.
(2) Market performance of exports of goods and services on export weighted imports of goods and services of 35 industrial markets.
(3) Cyclically-adjusted budget balance net of one-off and other temporary measures.
(4) Data available up to 2004.
(5) Using GDP deflator.
(6) Households' and non-profit institutions serving households' debt, defined as loans and securities other than shares.
(7) Non-financial corporate sector debt, defined as loans and securities other than shares.
Source:
Commission services

3. MACROECONOMIC OUTLOOK

This section is in six parts, five of which refer to various dimensions of the macroeconomic scenario, notably: the external assumptions, overall economic growth, the labour market, costs and prices, and potential output growth. The final part summarises the assessment and includes (i) an overall judgment on the plausibility of the macroeconomic scenario and (ii) an indication as to whether economic conditions over the programme period can be characterised as economic 'good' or 'bad' times.

3.1. External assumptions

The external assumptions of the programme's macroeconomic scenario are close to those of the Commission services' autumn 2006 forecasts, especially for EU growth, interest rates, exchange rates and oil price [7]. Differences are larger for the effective exchange rate (-0.03% in 2006, -0.09% in 2007 and -0.03% in 2008 as against +0.8%, +1.1% and +0.3% respectively according to the forecasts) or growth in foreign markets, where the programme's assumptions are markedly less optimistic than the Commission services' forecast (7.2% in 2006, 5.4% in 2007 and 6.2% in 2008 compared to 9.6%, 8.6% and 7.8% respectively in the forecast) without particular explanation.

3.2. Economic activity

The programme projects real GDP growth to decelerate from 5.5% in 2006 to 4.0% in 2007, to re-accelerate to 5.0% in 2008 and to slow down again to 4.0% in 2009. The deceleration in 2007 is due to a forecast slowdown in the euro area and especially in Germany, the re-acceleration in 2008 to a stronger German growth and a more dynamic domestic demand. The deceleration in 2009 is caused by a less supportive international environment and a slower investment growth due to expected higher interest rates. For the years 2006-2008, these projections are quite close to the Commission services autumn 2006 forecasts, according to which GDP growth should decelerate from 5.5% in 2005 to 4.5% in 2007 and 4.2% in 2008, the main difference being that the Commission services do not project a rebound in growth in 2008. For the year 2009, for which no forecasts by the Commission services are yet available, the programme's growth projection (4.0%) is relatively close to the average Commission services estimates of potential growth over the period 2006-2008 (4.4 %). For the whole period 2006-2009, the programme's projections are also broadly in line with the growth performance of Luxembourg in the last 20 years (see Section 2 above).

As far as the composition of real GDP growth is concerned, the programme projects a higher contribution from domestic demand and a lower contribution from external trade than the Commission services forecast: the growth rate in exports from the programme's

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[7] - EU growth: 2.7% in 2006, 2.1% in 2007 and 2.4% in 2008 for the EU-15 as against 2.6%, 2.2% and 2.3% respectively in the forecasts ;
- interest rates: 3.7% in 2006, 4.0% in 2007 and 4.1% in 2008 for long-term rates compared to 3.8%, 4.0% and 4.2% respectively according to the forecasts ;
- exchange rates: 1.26 USD for 1 euro from 2007 onwards as against 1.27 in the forecasts ;
- oil price: 67.4 USD per barrel from 2007 onwards versus 66.3 in 2007 and 68.0 in 2008 according to the forecast).

scenario is on average [8] 0.9% above that of the Commission services forecasts (despite a markedly slower growth in foreign markets, see above 3.1) but the growth rate in imports is 1.4% higher, which implies that the contribution from net exports to GDP growth is on average 0.7% lower in the programme's scenario than in the forecasts.

The higher contribution from domestic demand in the programme's projections is exclusively due to stronger growth in investment (which is not further explained in the programme) and government consumption: although employment growth and wage increases are broadly similar, private consumption, on the contrary, is projected to be significantly less buoyant than in the Commission services forecasts, especially in 2007 and 2008 (+1.7% and +2.2% respectively compared to +3.0% in both years in the Commission services forecasts), which should lead, *ceteris paribus,* to a slower rise in indirect taxes. On the other hand, with similar increases in employment and in compensation per head, the rise in the total wage bill projected in the programme is very close to that of the Commission services forecasts (the difference is 0.3% in 2006 and only 0.1% in 2007 as well as 2008), which should in principle result in broadly similar developments in revenues from social security contributions and the income tax.

Table 3: Comparison of macroeconomic developments and forecasts

	2006		2007		2008		2009
	COM	**SP**	**COM**	**SP**	**COM**	**SP**	**SP**
Real GDP (% change)	5.5	5.5	4.5	4.0	4.2	5.0	4.0
Private consumption (% change)	3.5	2.6	3.0	1.7	3.0	2.2	2.3
Gross fixed capital formation (% change)	5.6	12.8	6.4	11.8	5.6	11.9	8.0
Exports of goods and services (% change)	14.4	14.8	9.7	10.7	8.9	10.3	9.7
Imports of goods and services (% change)	13.8	14.9	10.2	11.9	9.3	10.6	10.4
Contributions:							
- Final domestic demand	3.3	4.4	3.2	4.2	2.9	4.6	3.8
- Change in inventories	-1.3	-1.3	0.0	-0.6	0.0	-0.3	-0.1
- Net exports	3.4	2.5	1.3	0.5	1.2	0.7	0.3
Output gap[1]	-0.9	-0.3	-0.7	-0.8	-0.9	-0.6	-1.7
Employment (% change)	3.8	3.9	3.7	3.6	3.6	3.7	3.7
Unemployment rate (%)	4.6	4.8	4.4	4.7	4.1	4.5	4.4
Labour productivity growth (%)	1.7	1.6	0.7	0.5	0.6	1.4	0.5
HICP inflation (%)	3.2	2.9	2.2	1.4	1.8	2.0	2.0
GDP deflator (% change)	4.1	4.0	3.5	3.6	3.1	3.1	3.3
Comp. of employees (per head, % change)	3.7	3.9	3.5	3.7	3.5	3.2	3.1
Real unit labour costs (% change)	-2.1	-1.6	-0.8	-0.3	-0.2	-1.1	-0.5
External balance (% of GDP)	11.4	n.a	12.2	n.a.	12.8	n.a.	n.a.

Note:
[1] In percent of potential GDP, with potential GDP growth as reported in Table 5 below.

Source:
Commission services' autumn 2006 economic forecasts (COM); stability programme (SP)

The macroeconomic scenario presented by the programme implies that growth will remain below potential during the whole period covered since actual and potential GDP are both projected to grow by 4.6% on average from 2006 to 2009. The output gap (recalculated by the Commission services on the basis of the data provided in the

[8] Over the period 2006-2008 since there are no Commission services forecasts for 2009.

programme and using the commonly agreed method [9]), which reached a maximum of -1.6% of GDP in 2005, remains negative without closing throughout the period. It increases from -0.3% of potential GDP in 2006 to -0.8% in 2007, when actual growth is projected to slow down from 5.5% to 4.0%, and decreases again to -0.5% of potential GDP in 2008, when actual growth re-accelerates to 5.0%. In 2009, the output gap widens again significantly to -1.6% of GDP. For 2007, this output gap is very close to that based on the Commission services autumn forecast (-0.7% of potential GDP), while for 2008, it is significantly smaller (-0.5% versus -0.9% in the forecast) as, contrarily to the programme's projections, the Commission services do not forecast a rebound in growth that year but a mild slowdown.

As Table 4 shows, in recent years negative output gap estimates have become smaller in successive Commission services' forecasts and stability programmes, essentially because actual growth projections have generally been revised upwards.

Table 4: Output gap estimates in successive Commission services' forecasts and stability programme updates (% of potential GDP)

	2006		2007		2008	
	COM	**SP [1]**	**COM**	**SP [1]**	**COM**	**SP [1]**
November 2006	-	-0.3	-	-0.8	-	-0.5
Autumn 2006	-0.9	-	-0.7	-	-0.9	-
Spring 2006	-1.2	-	-1.0	-	n.a.	-
November 2005	-	-1.3	-	-0.8	-	-0.6
Autumn 2005	-1.3	-	-1.2	-	n.a.	-
Spring 2005	-2.0	-	n.a.	-	n.a.	-
November 2004	-	-3.8	-	-5.0	-	-

Note:
[1] Commission services' calculations according to the commonly agreed method based on the figures of the programme
Source: Commission services' forecasts and national stability programme updates

3.3. Potential growth and its determinants

Table 5 presents the estimate of potential output that is consistent with the programme's macroeconomic scenario, i.e. the Commission services calculations according to the commonly agreed methodology, based on the information provided in the programme. (These estimates of potential growth are close to those based on the Commission services' autumn 2006 forecast and broadly in line with the recent growth experience of the country (real GDP growth averaged 3.9% over the period 1996-2005 in Luxembourg). The contribution of capital to GDP growth is much higher in the programme than in the Commission services' forecasts probably due to the very strong growth in investment in the programme's scenario.

Table 5: Sources of potential output growth

[9] Unless otherwise mentioned, from now, when talking about output gaps from the programme, this assessment will always refer to the output gaps recalculated by the Commission services on the basis of the data provided in the programme using the commonly agreed method and not to the original output gaps presented in the programme.

	2006		2007		2008		2009
	COM	**SP[2]**	**COM**	**SP[2]**	**COM**	**SP[2]**	**SP[2]**
Potential GDP growth (%)[1]	4.1	4.1	4.3	4.4	4.4	4.7	5.1
Contributions:							
- Labour	1.3	1.5	1.3	1.6	1.3	1.6	1.8
- Capital accumulation	1.7	2.0	1.8	2.2	1.8	2.4	2.5
- TFP	1.0	0.6	1.1	0.6	1.2	0.7	0.8

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 stability programme (SP).

Source:
Commission services' autumn 2006 economic forecasts (COM); Commission services' calculations

3.4. Labour market developments

The programme projects domestic employment to keep growing rapidly over the period covered, while fluctuating slightly in response to variations in output growth: it would decelerate from 3.9% in 2006 to 3.6% in 2007 whereas GDP growth is projected to slow down and reaccelerate slightly to 3.7% in 2008 and 2009, in line with the projected re-acceleration in GDP. Consequently, the programme projects the rise in labour productivity to fluctuate too, between about 1½% in the years when GDP growth is forecast to accelerate (i.e. in 2006 and 2008) and ½% when it is supposed to slow down (i.e. in 2007 and 2009). This pattern is broadly conform to the experience of recent years, when developments in employment reflected fluctuations in output in a dampened way and with a (variable) lag. In a similar way, the Commission services forecast the rise in labour productivity to decelerate from +1.7% in 2006 to +0.6% in 2008, in parallel with the slowdown in GDP. Historically, cyclical fluctuations in the apparent productivity of labour were sometimes much wider than in the programme's projections and in the Commission services' forecast, especially at the beginning of the current decade (the annual change in GDP per person employed varied between -2.9% in 2001 and +1.3% in 2004).

The programme foresees the unemployment rate to progressively decrease from a maximum of 4.8% in 2006 to 4.4% in 2009, which is very close to the Commission services autumn 2006 forecasts.

3.5. Costs and price developments

The programme projects inflation to slow down considerably in 2007: after rising by 2.9% in 2006, the HICP [10] would increase by 1.4% in 2007 and 2.0% both in 2008 and 2009. For 2007, these projections are markedly more optimistic than those of the Commission services forecasts (+3.2% in 2006, +2.2% in 2007, +1.8% in 2008) [11].

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[10] The deceleration in the national CPI, which, as already stated, excludes consumption by non-residents on the Grand-Duchy's territory and especially their large purchases of car fuel, alcohol and tobacco, would be more limited: +2.7% in 2006, +2.0% in 2007, +2.2% in 2008, +2.1% in 2009.

[11] The central Bank of Luxembourg forecasts the HICP to rise by 2.2% in 2007 with a lower oil price than in the programme (64.6 USD compared to 67.4 ; see Banque centrale du Luxembourg, Bulletin 2006/2, November 2006, pp. 26-27 (http://www.bcl.lu/fr/publications/bulletins_bcl/Bulletin_2006_2/index.html). For the national CPI, the BCL has the same forecast as the programme (+2.0% in 2007). No forecast for 2008.

The programme's macroeconomic scenario projects a slightly stronger deceleration in the wage increase than the Commission services forecasts, with the rise in compensation per head slowing down from 3.9% in 2006 to 3.1% in 2009, while the Commission services forecast it to decelerate from 3.7% in 2006 to 3.5% in 2007 and 2008. On average, the yearly increase in wages would amount to 3.2% over the period 2006-2009 according to the programme compared with 3.5% over the period 2006-2008 in the forecasts. The reason for this difference might be that the programme has a more optimistic assessment of the effect on wages of the change in the indexation mechanism decided in April 2006 (see below Section 4). As far as labour productivity is concerned, the programme's assumptions and the forecasts are very close, except for 2008, essentially because the programme projects a rebound in GDP growth that year, which results in a significantly stronger rise in productivity.

The time profiles of the programme's projections of unit labour costs and inflation are very different: ULCs strongly increase in 2007 (nearly 1% more than in 2006) due to the deceleration in productivity, strongly slow down in 2008 for the symmetric reason and increase again in 2009 for the same reason as in 2007, while CPI inflation strongly decreases in 2007, increases in 2008 and stabilises in 2009. This discrepancy can probably be explained by the fact that inflation is supposed to be more influenced by changes in oil prices than by developments in labour costs (especially the rise in the HICP because of the large weight of oil products in that index). This is also the case in the Commission services autumn forecast but time profiles are different from those in the programme: while nominal unit labour costs are projected to accelerate over the period because the deceleration in productivity more than compensates for the slowdown in wages, inflation is forecast to decrease continuously due to developments in oil prices.

The export projections of the programme could at first sight appear surprisingly high in view of this rather strong projected increase in labour costs. However, as said before, they are relatively close to the Commission services autumn forecasts, which are even more optimistic in terms of contribution of net exports to GDP growth. Moreover, as already stated (see above Section 2.1), Luxembourg's exports of services but also of goods have been buoyant in recent years, despite a significantly stronger increase in labour costs than in neighbouring countries and in the EU as a whole, indicating that (at least up to now) some other factors more than compensated for the unfavourable development in cost competitiveness.

3.6. Assessment

The assessment of the macroeconomic outlook covers two questions: first, whether the macroeconomic scenario is plausible, and, second, whether the economy should be considered to be in economic 'good' or 'bad' times.

3.6.1. Plausibility of the macroeconomic scenario

The programme's macroeconomic scenario is plausible and does not show any optimistic or pessimistic bias. For the period 2007-2008 [12] it is close to the Commission services' autumn 2006 forecast and thereafter it is broadly in line with their estimate of potential GDP growth. The only differences of practical importance are a slower real growth in

[12] Taking into account the high volatility of GDP growth in Luxembourg (see above Section 2.3), differences of less than 1% in projected growth rates may legitimately be regarded as relatively limited.

private consumption and lower consumer price inflation in the programme's assumptions, which contribute to a more cautious projection of indirect tax revenues.

3.6.2. Economic good vs. bad times

According to the Commission services' autumn 2006 forecast, the negative output gap should significantly narrow in 2006 (-0.9%), chiefly as a result of the strong acceleration in GDP growth. It would then fluctuate slightly between -¾% and -1% of GDP in 2007 and 2008 without showing any visible upward or downward trend. These estimates are slightly more optimistic than those based on previous forecasts from the Commission services, where the negative output gap remained in the neighbourhood of -1% or -1¼% of GDP in 2006 and 2007 (see Table 4). This more favourable picture is essentially due to the fact that growth in 2006 has been significantly revised upwards. The output gap estimates based on the autumn 2006 forecasts are generally higher than in the programme, especially in 2006 (0.6% of GDP)

These negative and broadly stable output gaps could a priori be interpreted as an indication of 'bad times'. However, the growth in GDP projected over the programme period is relatively robust compared to past trends and it is strong enough to allow a significant rise in expenditure (both in nominal and real terms) together with a decrease in the nominal deficit by half a percentage point of GDP per year. Moreover, the Luxembourg labour market is characterised by large inflows of cross-border workers, implying highly elastic labour supply, which makes the interpretation of output gaps ambiguous. Consequently, potential growth, output gaps and the cyclical adjustment of government balances based on them should be used with special caution when assessing the cyclical position of the Luxembourg economy and it does not appear warranted to conclude that the economy is experiencing ‘bad times’[13].

4. GENERAL GOVERNMENT BALANCE

This section consists of four parts. The first part discusses budgetary implementation in the year 2006 and the second presents the budgetary strategy in the new update, including the programme’s medium-term objective (MTO) for the budgetary position. The third analyses the risks attached to the budgetary targets in the programme. The final part contains the assessment of the fiscal stance and of the country’s position in relation to the budgetary objectives of the Stability and Growth Pact.

4.1. Budgetary implementation in 2006

Since the previous programme was submitted to the Commission, sizeable changes have occurred in the picture of the latest budgetary developments: according to recently released data, the general government deficit amounted to 1.0% of GDP in 2005, compared to a 2.3% deficit estimate provided by the 2005 programme. This much better outcome is due to the fact that, while the previous programme projected expenditure to rise by 1.4 percentage point of GDP and revenues only by 0.2, the increase in expenditure was actually much more limited: it only amounted to 0.1 percentage point of

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[13] On this issue, see for instance P. Guarda, Potential output and output gap in Luxembourg. Some alternative methods, Banque Centrale du Luxembourg, Working Paper n° 4, June 2002 (http://www.bcl.lu/fr/publications/cahiers_etudes/4/working_paper_4.pdf).

GDP, the same rise as revenues. Consequently, instead of deteriorating by 1.1 percentage point of GDP as projected last year, the deficit marginally improved from 1.1% of GDP in 2004 [14] to 1.0% in 2005.

The target for 2006 set in the 2005 programme was a deficit amounting to 1.8% of GDP, which implied a 0.5 percentage point of GDP improvement with respect to the estimate for 2005 given in that programme (-2.3% of GDP). This improvement was supposed to result from a 0.7 percentage point of GDP decrease in government expenditure, only partially compensated by a 0.2 point of GDP decline in revenues. The current programme indicates that the 2006 deficit would have amounted to 1.5% of GDP, 0.5% lower than projected in the 2005 programme. However, due to the revision of the 2005 deficit, this better outcome for 2006 would now imply a 0.5 percentage point of GDP deterioration compared to 2005 instead of the 0.5 point of GDP improvement projected in the previous programme [15]. This deterioration is estimated to have occurred in spite of a faster GDP growth (5.5% against 4.0% in 2005). It would have resulted from a 1.7 percentage point of GDP decline in revenues, only partially compensated by a 1.2 point of GDP decrease in expenditure

The decline in spending in 2006 is thus now estimated to have been 0.5 percentage point of GDP larger than projected in 2005. The measures decided by the Tripartite Committee on 28 April 2006 had already an effect in 2006 because wages and benefits were not indexed in August 2006 as should have been the case under the "normal" indexation system but only on 1st December 2006. However, this effect was relatively limited : the impact of these measures will mostly be felt from 2007 onwards,

The revision of the decrease in revenues is even larger than that in spending: 1.5 percentage point of GDP (a 1.7 point decline instead of 0.2). In particular, according to the programme's projections, receipts from taxes and social security contributions would have fallen by 1.9 percentage point of GDP in 2006. Should such a fall in the tax burden have really occurred, it would be the largest recorded in Luxembourg since 1990 [16], although no important tax cuts were operated in 2006. The programme explains this decrease by several factors, namely the fact that the elasticity of indirect taxes to GDP is generally smaller than 1, the sluggishness of VAT in the first semester of 2006 and the effects of some policy changes aiming at dealing with environmental problems. Consequently, indirect taxes would have decreased by 0.9 percentage point of GDP in 2006. As far as direct taxes are concerned, the programme indicates that their level in 2005 was inflated by an exceptional payment amounting to 0.5% of GDP, which is the main reason for their projected decline by 0.7 percentage point of GDP in 2006. Finally, according to the programme, social security contributions would have decreased by 0.3 percentage point of GDP in 2006.

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[14] A slightly revised figure with respect to the -1.2% estimate provided by the 2005 programme

[15] It is difficult to compare the expenditure and revenues ratios provided by the programme with those given in the previous ones (as Table 6 shows, there are differences amounting to 3 or 4 percentage points of GDP) because, due to a thorough revision of national accounts finalised in the first months of 2006 (see STATEC, Statnews n° 18/2006 (30 March 2006), GDP levels for the last 10 years are now about 7.5% higher on average.

[16] At least since 1990: there are no general government accounts in ESA95 before. The largest recorded fall in the tax burden happened in 1991 and amounted to 1.5 percentage point of GDP.

By contrast, according to the Commission services' forecast, the deficit would have broadly stabilised in 2006 with respect to the 2005 level, at about -1% of GDP, with both expenditure and revenues declining by 0.6 or 0.7 percentage point of GDP. Along the same lines, according to the Central Bank of Luxembourg (hereafter BCL), which published its projections recently [17], the deficit is projected to have risen from 1.0% of GDP in 2005 to 1.3% in 2006, the revenues ratio declining by 0.4 and the expenditure ratio by 0.1 percentage point of GDP.

Table 6: Evolution of budgetary targets in successive programmes

		2005	2006	2007	2008	2009
General government balance (% of GDP)	**SP November 2006**	**-1.0**	**-1.5**	**-0.9**	**-0.4**	**+0.1**
	SP November 2005	-2.3	-1.8	-1.0	-0.2	n.a.
	SP November 2004	*-1.0*	*-0.9*	*-1.0*	*n.a.*	*n.a.*
	COM Nov 2006	-1.0	-1.0	-0.5	-0.3	n.a.
General government expenditure (% of GDP)	**SP November 2006**	**43.2**	**42.0**	**40.1**	**39.4**	**38.2**
	SP November 2005	47.0	46.3	45.1	44.5	n.a.
	SP November 2004	*45.6*	*45.5*	*45.7*	*n.a.*	*n.a.*
	COM Nov 2006	43.2	42.5	41.9	41.4	n.a.
General government revenues (% of GDP)	**SP November 2006**	**42.2**	**40.5**	**39.2**	**39.0**	**38.4**
	SP November 2005	44.7	44.5	44.1	44.3	n.a.
	SP November 2004	*44.6*	*44.6*	*44.7*	*n.a.*	*n.a.*
	COM Nov 2006	42.2	41.6	41.5	41.1	n.a.
Real GDP (% change)	**SP November 2006**	**4.0**	**5.5**	**4.0**	**5.0**	**4.0**
	SP November 2005	4.0	4.4	4.9	4.9	n.a.
	SP November 2004	*3.8*	*3.3*	*4.3*	*n.a.*	*n.a.*
	COM Nov 2006	4.0	5.5	4.5	4.2	n.a.

Source:
Stability programmes (SP) and Commission services' autumn 2006 economic forecasts (COM)

4.2. 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.

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

The main goal of the current budgetary strategy of the Luxembourg authorities, as expressed by the programme, is to "*regain a balanced budgetary position as soon as possible and at the latest in 2009.*" The consolidation strategy is defined in nominal terms: the programme plans the headline deficit, after rising from 1.0% of GDP in 2005 to 1.5% in 2006, to decline progressively to 0.9% of GDP in 2007, 0.4% in 2008 and then to turn into a surplus of 0.1% in 2009. The adjustment path for the primary balance would be similar, from a 1.3% of GDP deficit in 2006 to a 0.3% of GDP surplus in 2009. The deficit of the central government is planned to decrease by 0.8 percentage point of GDP, which represents half of the total adjustment, the surplus of the social security is

[17] Banque centrale du Luxembourg, Bulletin 2006/2, November 2006, p. 71. (http://www.bcl.lu/fr/publications/bulletins_bcl/Bulletin_2006_2/index.html)

projected to rise by 0.6 percentage point of GDP and the slight deficit of the local authorities to turn into a slight surplus in 2009.

Table 7: adjustment path of the nominal deficit in the 2005 and 2006 stability programmes

(% of GDP)	2004	2005	2006	2007	2008	2009	2005-2008	2006-2009
2005 Programme	-1.2	-2.3	-1.8	-1.0	-0.2	n.a.	**+ 2.1**	**-**
2006 Programme	-1.1	-1.0	-1.5	-0.9	-0.4	+ 0.1	**-**	**+ 1.6**
Source: *Stability programme updates and Commission services' calculations*								

The macroeconomic background of the current programme is slightly different from that presented in the previous one but these differences should not be overstated: real GDP growth is now estimated to have reached 5.5% in 2006, 1.1% higher than the 4.4% projected in the 2005 programme and it is now forecast to decelerate to 4.0% in 2007, while the previous programme projected it to accelerate to 4.9%. However, on average GDP growth would reach 4.8% over the period 2006-2008, which is very close to the 4.7% projected in the 2005 programme.

The main difference between the adjustment strategy described in the previous programme and the current one is that the starting point of the consolidation is significantly better: the deficit is now projected to peak at 1.5% of GDP in 2006 compared to 2.3% of GDP in 2005 in the previous programme. Consequently, the planned adjustment is significantly more limited: in order to come back to a surplus or a close-to-balance position in three years, the total improvement now amounts to 1.6 percentage points of GDP instead of 2.1 in the previous programme.

For the rest, the adjustment paths described by the 2005 and 2006 programmes are rather similar, with a one-year lag: the peak of the deficit is now supposed to be reached in 2006 (as compared to 2005 in the previous programme) and the government's financial position is planned to be brought back close to balance at the end of the three-year period covered by the programme (now 2009, compared to 2008 in the previous programme). However, the 2005 programme was slightly back-loaded and more ambitious in the outer years; the annual improvement in the deficit was projected to rise from 0.5 percentage point of GDP in 2006 to 0.8 in 2007 and 2008. By contrast, in the current programme, the time profile of the adjustment is gradual: the decline in the deficit is planned to be constant over the period (0.5 percentage point of GDP every year).

The Commission services autumn forecasts project a more favourable adjustment path for the nominal deficit: starting from a stabilisation in 2006 (-1.0% of GDP, unchanged from 2005, while the programme, as said before, projects the deficit to rise to 1.5% of GDP in 2006), the deficit would decrease to 0.5% in 2007 and 0.3% in 2008. According to the BCL, the deficit would rise to 1.3% of GDP in 2006 (midway between the programme's and the Commission services' projections) before decreasing to 1.0% in 2007 and 0.6% in 2008. It is thus slightly more optimistic than the programme for 2006 and slightly less thereafter.

4.2.2. *The composition of the budgetary adjustment*

The consolidation envisaged by the programme is to be achieved through a substantial reduction in the expenditure ratio (3.8 percentage points of GDP between 2006 and 2009, which would more than compensate for a parallel but more limited decline in the revenue ratio (2.1 points of GDP over the same period) (see table 8). Interest payments are negligible (0.2% of GDP in 2005), thanks to the very low level of the government debt, and, consequently, are not supposed to play any role in the consolidation.

Table 8: Composition of the budgetary adjustment

(% of GDP)	2005	2006	2007	2008	2009	Change: 2009-2006
Revenues	**42.2**	**40.5**	**39.2**	**39.0**	**38.4**	**-2.1**
Of which:						
- Taxes & social contributions	38.8	36.9	35.8	35.6	35.0	-1.9
Of which:						
indirect taxes	*13.2*	*12.3*	*11.6*	*11.5*	*11.3*	-1.0
direct taxes	*14.0*	*13.3*	*12.8*	*12.9*	*12.8*	-0.5
social contributions	11.6	11.3	11.4	11.2	11.0	-0.3
- Other (residual)	3.5	3.7	3.4	3.4	3.3	-0.4
Expenditure	**43.2**	**42.0**	**40.1**	**39.4**	**38.2**	**-3.8**
Of which:						
- Primary expenditure	43.0	41.9	40.0	39.2	38.0	**-3.9**
of which:						
1. Consumption	16.9	16.2	15.8	15.2	14.7	-1.5
1a - Collective consumption	*6.7*	*6.2*	*6.0*	*5.9*	*5.8*	-0.4
1b - Social transfers in kind	*10.2*	*10.0*	*9.8*	*9.3*	*8.9*	-1.1
2. Transfers other than in kind	*14.8*	*14.1*	*13.6*	*13.2*	*12.8*	-1.3
p.m. : Total social transfers (= 1b + 2)	*25.0*	*24.1*	*23.4*	*22.6*	*21.8*	*-2.3*
3. Subsidies	1.7	1.7	1.6	1.6	1.6	-0.1
4. Gross fixed capital formation	4.6	4.4	4.3	4.2	4.0	-0.4
5. Other (residual)	5.0	5.4	4.7	4.9	4.9	-0.5
- Interest expenditure	0.2	0.1	0.1	0.2	0.2	+0.1
General government balance	**-1.0**	**-1.5**	**-0.9**	**-0.4**	**0.1**	**+1.6**
Primary balance	**-0.8**	**-1.3**	**-0.8**	**-0.2**	**0.3**	**+1.6**
One-off and other temporary measures	0.0	0.0	0.0	0.0	0.0	0.0
General government balance excluding one-off & other temporary measures	**-1.0**	**-1.5**	**-0.9**	**-0.4**	**0.1**	**+1.6**

Source:
Stability programme update; Commission services' calculations

The 2005 programme had announced that the measures needed to consolidate public finance would be taken in the course of 2006 after a thorough consultation between the Government and the social partners. This consultation led to a decision of the "*Comité de coordination tripartite*" (made up of the social partners and of the Government) on 28 April 2006, which resulted in a series of consolidation measures. The most important of these measures are detailed in the following box.

Box 1: Main budgetary measures decided in 2006 and budget for 2007

- Expenditure-related measures (decided by the "Tripartite"):
  - suspension until 2009 of the normal indexation to consumer prices [18] of all wages [19] and social benefits (except child benefits and education allowances, allowances for parental leave and "*forfaits d'éducation*", which will not be indexed until 2009). The normal system (indexation whenever inflation exceeds a certain threshold) is temporarily replaced by an adaptation at predetermined dates (1st December 2006, 1st January 2008 and 1st January 2009, postponed to 1st March 2008 and 1st March 2009, respectively, if oil price remains above 63 USD per barrel on average).
  - Postponement of the 2% adjustment of social allowances and old-age pensions normally scheduled for 1 January 2007 (the purpose of this adjustment, which generally happens every 2 years, is to keep these benefits in line with developments in real wages and other incomes). These allowances and pensions will be increased by 1% on 1 July 2007, and by 0.9% on 1 July 2008.
  - Reduction of the relative share of "*current operating expenditures*" in total public expenditures, especially by limiting the hiring of new staff in the public sector.
  - "*Optimization*" of government investment spending, which will nevertheless remain "*well above the average of the Member States*" in percentage of GDP.
- Revenues-related adjustment measures decided by the "Tripartite"
  - Increase on 1 January 2007 of the long-term care insurance ("dependency insurance") contribution paid by households from 1% to 1.4% of the part of their incomes which is subject to social contributions. Simultaneously, the State's contribution to this insurance should be frozen in nominal terms until 2009.
  - Increase from 1 January 2008 onwards of the "solidarity tax" (which is a surtax applied to the amount of the personal or corporate income tax payable) rate from 2.5% to 3.5% for households and from 4% to 5% for corporations.
  - Increase from 12% to 15% of the "parking" VAT rate for certain services (e.g. lawyers, travel agencies) from 1 January 2007 onwards.
- Other revenues-related measures (not decided by the "Tripartite")
  - Decrease in the withholding tax rate on outbound dividends from 20% to 15%. The programme estimates the resulting decline in revenues at 0.4% of GDP.
  - Increase in the tax on motor vehicles; the programme estimates the additional revenues from this measure at 0.12% of GDP.

▪ The 2007 budget was submitted to Parliament on 11 October 2006 and adopted on 22 December.

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[18] The national CPI has been chosen because of the artificially large weight of oil products, alcohol and tobacco in the HICP (see Section 2). Under the "normal" indexation system, wages are increased by 2.5% every time the national CPI has risen by the same percentage. In recent years, it generally meant about once a year (April 2001, June 2002, August 2003, October 2004 and October 2005).

[19] All wages, not only those paid by the general government: the measure also aims at restoring cost-competitiveness and curbing inflation.

- It targets a general government deficit amounting to 0.9% of GDP in 2007, down from an estimated -1.5% in 2006.
- According to the programme, the expenditure-related measures decided in April 2006 (see above) and listed in the 2007 budget will together reduce the expenditure-to-GDP ratio by 1.2% in 2007.

The main measures in the budget are the following:

Table 9: Main measures in the budget for 2007

Revenue measures*	Expenditure measures**
• Increase of the dependency insurance contribution (+0.2% of GDP source: budget) • Increase of the VAT "parking" rate: not quantified • Reduction of the withholding tax rate (-0.4% of GDP) • Increase in the tax on motor vehicles (+0.1% of GDP) N.B. : the increase in the "solidarity tax" will take place in 2008	• Reduction of "current operating expenditure" (-0.1% of GDP) • Hiring freeze by central government (less than -0.1% of GDP) • Freeze of government's wages in real terms (-0.1% of GDP) • Suspension of indexation (-0.2% of GDP) • Other measures in the field of social security (-0.2% of GDP) • Suspension of indexation of family allowances (-0.1% of GDP): • Reduction in central government investment (-0.5% of GDP) • Reduction in spending by Employment Fund (less than -0.05% of GDP) Expenditure increases mentioned in the programme and quantified in budget: • Increase in public research expenditure , in line with the NRP: +0.3% of GDP

* Estimated impact on general government revenues.
** Estimated impact on general government expenditure.

Sources: Commission services, 2006 Stability Programme, 2007 budget, STATEC

The measures decided by the Tripartite Committee on 28 April 2006 were passed into law in the course of 2006 but, as already stated, their effects will mostly be felt from 2007 onwards. In contrast with the tax increases, which are in principle permanent, the expenditure-curbing measures are only supposed to last until 2009. This, of course, raises the question of the durable character of the slowing down in expenditure that these measures are supposed to bring about.

About 60% of the decline in the expenditure ratio (2.3 percentage points of GDP out of 3.8) would come from social transfers, with transfers in cash declining slightly more (1.3 percentage point of GDP) than transfers in kind (1.1 point). Both collective consumption and public investment are planned to decrease by about 0.4 percentage point of GDP, which means that they would each account for about 10% of the total reduction in spending. After rising by 0.4 percentage point of GDP in 2006, the residual category "other expenditure" [20] would decline by 0.5 point of GDP over the period covered but this decrease would occur exclusively in 2007, when it is projected to fall by 0.7 point of GDP: in 2008, it would, on the contrary, slightly rise again, especially because of an increase in expenditure related to greenhouse gas emissions.

It should be noted that the "current operating expenditure", which the programme intends to reduce (partly by freezing the hiring of central government's staff), is not particularly high in Luxembourg. Collective consumption is comparatively low: it amounted to 6.6% of GDP on average over the years 2001-2005, the second lowest figure in the EU after Ireland. Similarly, the government's total wage bill amounted to 8.1% of GDP on average over the same period, the third lowest figure in the EU, where it averaged 10.8% of GDP. .According to the programme, public investment is planned to decline from 4.4% of GDP in 2006 to 4.0% in 2009. In contrast with collective consumption or the government's wage bill, public investment is traditionally very high in Luxembourg: it averaged 4.5% of GDP over the period 2000-2005, the highest rate in the EU and nearly twice its average (2.4%).

The 3.8 points of GDP decline in the global expenditure ratio in three years has to be seen against an average nominal GDP growth of 8.3% a year projected by the programme over the period 2006-2009. Hence, government spending would still be allowed to rise by 4.8% a year on average in value, which means about 1½% to 2¾% in volume depending on the deflator chosen [21]. However, in view of the very rapid growth in expenditure in recent years, this would nevertheless represent a real break with the past.

After declining by 1.7 percentage point of GDP in 2006 according to the programme's projections, revenues would decrease by another 2.1 percentage points over the period 2006-2009: the tax burden is projected to decline by 1.8 percentage point of GDP, of which 1 point for indirect taxes, 0.5 for direct taxes and 0.3 for social security contributions, while other revenues would decrease by 0.4 point of GDP.

Even if the programme does not give a detailed quantification of the effect of all the consolidation measures decided in 2006, it provides, together with the 2007 budget, adequate information to estimate their impact on government balance. These measures were taken into account by the Commission services when performing their autumn 2006 forecasts and are in their view sufficient for achieving the envisaged budgetary adjustment

It should also be noted that, despite the extreme openness of Luxembourg's economy (exports of goods and services amounted to 159.3% of GDP and imports to 138.0% in 2005), the consolidation measures decided in April 2006 might have some limited negative impact on growth: according to simulations performed by the STATEC [22], this

[20] This residual category corresponds to all expenditure other than the items collective consumption, transfers in cash and in kind, subsidies, interest payments and gross fixed capital formation. The reason for its 0.4 percentage point of GDP rise in 2006 is an exceptional acquisition of land.

[21] The deflators of government consumption, of private consumption (which may be used as a proxy of the price index of social transfers) and of GDP are projected by the programme to rise respectively by 2.5%, 2.1% and 3.3% a year on average over the period.

[22] Service central de la statistique et des études économiques, which depends on the Ministry of Economic Affairs. See STATEC, Note de conjoncture 2006 / 1, pp. 24-27.

effect on GDP growth would reach 0.2% in 2007 and 0.5% in 2008, while the general government balance would improve by 0.5 percentage point of GDP in 2007 and 0.9 point in 2008 (including spill-over effects). Keynesian effects of the adjustment measures would thus dominate "Ricardian" ones presumably because, despite its deterioration in recent years, the condition of public finance in Luxembourg is not bad enough for the perspective of a consolidation to engineer a significant surge in consumers' confidence.

4.2.3. The medium-term objective (MTO) and the structural adjustment

The programme indicates that the medium-term objective (hereafter MTO) targeted is a deficit amounting to 0.8% of GDP in structural terms, i.e. cyclically-adjusted and net of one-off and other temporary measures. According to the programme, this objective "*should be achievable from 2007 onwards*":. The MTO is unchanged from the 2005 programme, which however aimed to achieve it one year later, by 2008, the final year of the period it covered.

Box 2: The medium-term objective (MTO) for the budgetary position

According to the Stability and Growth Pact, stability and convergence programmes must present a medium-term objective (MTO) for the budgetary position. The MTO is country-specific to take into account the diversity of economic and budgetary positions and developments as well as of fiscal risk to the sustainability of public finances.

The MTO should fulfil a triple aim. First, it should provide a safety margin with respect to the 3% of GDP deficit limit. Second, it should ensure rapid progress towards sustainability. Third, taking into account the first two goals, it should allow room for budgetary manoeuvre, considering in particular the needs for public investment. The code of conduct 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 3% of GDP deficit reference value. Member States are free to set an MTO that is more demanding than strictly required by these provisions.

The MTO is defined in structural terms, i.e. it is adjusted for the cycle and one-off and other temporary measures are excluded. For countries belonging to the euro area or participating in the exchange-rate mechanism (ERM II), the MTO should be in a range between a deficit of 1% of GDP and balance or surplus.

As far as the appropriateness of the MTO is concerned, the analysis leads to the same conclusions as in the assessment of last year's programme: the MTO is set at an appropriate level because it satisfies the three following criteria:

- it respects the minimum benchmark, i.e. the estimated budgetary position in cyclically-adjusted terms that provides a sufficient safety margin for automatic stabilisers to operate freely during normal economic downturns without breaching the 3% of GDP deficit reference value. In the case of Luxembourg, this benchmark is estimated at a deficit of about 1% of GDP;

- 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 - i.e. between a 1% of GDP deficit and balance or surplus;

- and it adequately reflects the country's debt ratio and average potential output growth in the long term.

Table 10: Output gaps, cyclically-adjusted and structural balances

(% of GDP)	2005		2006		2007		2008		2009	Change: 2009-2006
	COM	SP[1]	COM	SP[1]	COM	SP[1]	COM[2]	SP[1]	SP[1]	SP[1]
Gen. gov't balance	-1.0	-1.0	-1.0	-1.5	-0.5	-0.9	-0.3	-0.4	+0.1	+1.6
One-offs[3]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
Output gap[4]	-2.2	-1.6	-0.9	-0.3	-0.7	-0.8	-0.9	-0.5	-1.6	-
CAB[5]	0.0	-0.2	-1.1	-1.3	-0.2	-0.5	+0.1	-0.1	+0.9	+2.2
Change in CAB	*+0.2*	*+0.1*	*-1.1*	*-1.1*	*+0.9*	*+0.8*	*+0.3*	*+0.4*	*+1.0*	-
CAPB[5]	0.2	0.0	-0.9	-1.2	0.0	-0.4	+0.3	+0.1	+1.1	+2.3
Structural balance[6]	0.0	-0.2	-1.1	-1.3	-0.2	-0.5	+0.1	-0.1	+0.9	+2.2
change in struct. bal.	*+0.2*	*+0.1*	*-1.1*	*-1.1*	*+0.9*	*+0.8*	*+0.3*	*+0.4*	*+1.0*	-
Struct. prim. Balance[6]	0.2	0.0	-0.9	-1.2	0.0	-0.4	+0.3	+0.1	+1.1	+2.3

Notes:
[1]Output gaps and cyclical adjustment according to the stability programme (SP) as recalculated by Commission services on the basis of the information in the programme according to the commonly agreed methodology.
[2]At unchanged policy.
[3]One-off and other temporary measures.
[4]In percent of potential GDP. See Table 5 above.
[5]CA(P)B = cyclically-adjusted (primary) balance..
[6]Structural (primary) balance = CA(P)B excluding one-off and other temporary measures.

Source:
Commission services' autumn 2006 economic forecasts (COM); Commission services' calculations

As already stated, the programme projects the nominal deficit to have increased by 0.5 percentage point of GDP in 2006 against the background of a strong acceleration in GDP growth and a rapidly diminishing output gap. As a result, the structural deficit (as recalculated by the Commission services according to the commonly agreed methodology and using the data provided by the programme) would deteriorate too, but by a much larger extent (1.1 percentage point of GDP).

After this initial deterioration, the programme foresees a continuous improvement in the structural balance, from a deficit amounting to 1.3% of GDP in 2006 to a 1% of GDP surplus in 2009. This improvement (2.1 percentage points of GDP) is more pronounced than that in the nominal balance (1.5 point of GDP) because of the persisting negative output gaps over the whole period. It is also stronger at the beginning of the period in 2007 and at the end in 2009 (¾ and 1 percentage points of GDP respectively) than in 2008 (about ½ point of GDP): the constant reduction in the nominal deficit translates into a larger structural adjustment in the years when the programme projects GDP growth to decelerate and the output gap widens (i.e. in 2007 and 2009).

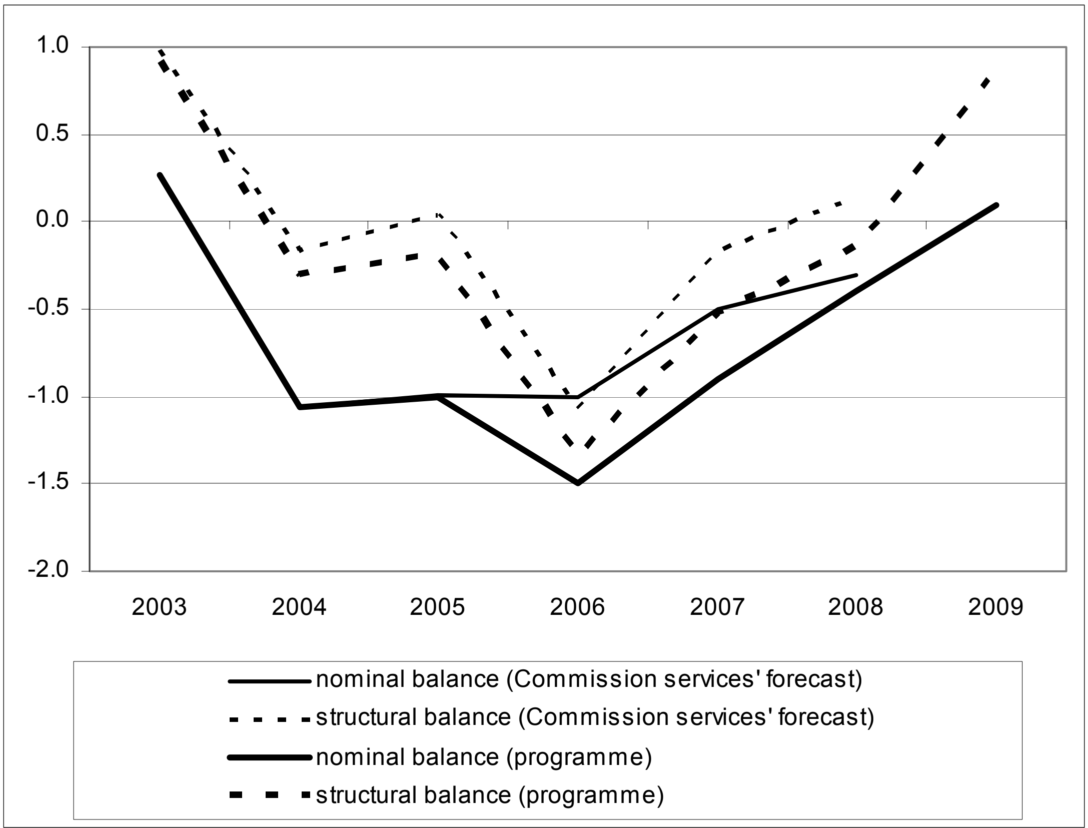
For the years 2007 and 2008, the adjustment path of the structural deficit derived from the programme (recalculated by the Commission services) is relatively similar to that based on the Commission services autumn forecasts. The main difference between the two is that, in the scenario based on the autumn forecasts, the structural deficit is lower from the beginning and turns sooner into a surplus (in 2008 instead of 2009 in the adjustment path based on the programme). This difference is essentially due to two factors:

– as said before, in the Commission services forecasts, the nominal deficit is considerably lower in 2006 (1.0% of GDP instead of 1.5% in the programme);

– the negative output gap based on the Commission services forecasts is significantly wider in 2008 than the output gap derived from the programme (nearly 1% of potential GDP instead of about ½%), which implies that a broadly similar nominal deficit (0.3% in the forecasts, 0.4% in the programme) translates into a more favourable structural balance (a 0.1% of GDP surplus according to the forecasts instead of a 0.1% deficit in the programme).

According to Commission calculations on the basis of the programme, the total improvement in the structural balance will amount to more than 0.7 percentage point of GDP per year on average over the period 2006-2009 (0.8 percentage point of GDP in 2007, 0.4 in 2008 and 1.0 in 2009). The planned stance of fiscal policy may thus be characterised as rather restrictive in 2007, when GDP growth is forecast to slow down, mildly restrictive in 2008, when growth is projected to reaccelerate and restrictive in 2009 when growth slows down again. However, as already indicated, despite the persisting negative output gaps, economic conditions during the period considered should be characterised as 'neutral' rather than 'bad'.

Figure 12 : Planned adjustment path in nominal and structural balances: programme versus Commission services forecast (in % of GDP)



Note: structural balances from the programme as recalculated by the Commission services on the basis of the data provided in the programme using the commonly agreed method.

Source: Commission services autumn 2006 economic forecast; Commission services calculations

4.3. Risk assessment

This section discusses the plausibility of the programme's budgetary projections by analysing various risk factors:

- Macroeconomic scenario and composition of growth: the macroeconomic scenario presented by the programme does not show any systematic bias: as already stated, it is slightly less optimistic in terms of GDP growth than the Commission services' autumn forecasts for the year 2007, slightly more optimistic for 2008 and slightly less optimistic than the Commission services' estimate of potential growth for 2009. However, differences are never very large, taking into account the high volatility of output growth in Luxembourg. Consequently, this scenario does not seem to imply any significant upside or downside risks. The contribution of domestic demand to GDP growth is, as already stated, significantly higher in the macroeconomic scenario of the programme than in the Commission services forecasts but that of private consumption is significantly lower. This, together with the lower forecast inflation in the programme's scenario, contributes to explaining the more prudent projections of indirect tax revenues in the programme.

Table 11: Comparison of budgetary developments and projections

(% of GDP)	2005	2006		2007		2008		2009
		COM	SP	COM	SP	COM [1]	SP	SP
Revenues	**42.2**	**41.6**	**40.5**	**41.5**	**39.2**	**41.1**	**39.0**	**38.4**
of which:								
- Taxes & social contributions	38.8	38.6	36.9	38.6	35.8	38.4	35.6	35.0
- Other (residual)	3.5	3.1	3.7	2.9	3.4	2.8	3.4	3.3
Expenditure	**43.2**	**42.5**	**42.0**	**41.9**	**40.1**	**41.4**	**39.4**	**38.2**
of which:								
- Primary expenditure	43.0	42.4	41.9	41.8	40.0	41.2	39.2	38.0
of which:								
1. Consumption	16.9	16.6	16.2	16.4	15.8	16.2	15.2	14.7
of which : 1a. collective consumption	6.7	6.5	6.2	6.4	6.0	6.3	5.9	5.8
of which : 1b. social transfers in kind	10.2	10.1	10.0	10.0	9.8	10.0	9.3	8.9
2. Transfers other than in kind	14.8	14.5	14.1	14.3	13.6	14.1	13.2	12.8
p.m. : Total social transfers (=1b + 2)	*25.0*	*24.6*	*24.1*	*24.3*	*23.4*	*24.0*	*22.6*	*21.8*
3. Gross fixed capital formation	4.6	4.7	4.4	4.6	4.3	4.5	4.2	4.0
4. Other (residual)	6.7	6.6	7.1	6.5	6.3	6.4	6.5	6.5
- Interest expenditure	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2
General government balance	**-1.0**	**-1.0**	**-1.5**	**-0.5**	**-0.9**	**-0.3**	**-0.4**	**+0.1**
Primary balance	**-0.8**	**-0.8**	**-1.3**	**-0.3**	**-0.8**	**-0.1**	**-0.2**	**+0.3**
One-offs[2]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GGB[3] excl. one-offs	**-1.0**	**-1.0**	**-1.5**	**-0.5**	**-0.9**	**-0.3**	**-0.4**	**+0.1**

Notes:
[1]On a no-policy change basis.
[2]One-off and other temporary measures.
[3]General government balance.

Source:
Commission services' autumn 2006 economic forecasts (COM); stability programme update (SP); Commission services' calculations

- Information about the measures: the current programme gives sufficient information about the measures supporting the envisaged consolidation over the entire programme period, many of which have, furthermore, already been passed into law. However, it does not quantify the detailed budgetary effect of the different measures but only the global impact of the expenditure-curbing measures decided in April 2006 (1.2 percentage point of GDP in 2007). The 2007 budget provides more detailed information.

- Reliance on one-offs: the adjustment envisaged by the programme does not rely on one-offs or other temporary measures.

- Assumptions about the tax intensity of economic activity: the programme projects receipts from taxes and social contributions, after declining by 1.9 percentage point of GDP in 2006, to decrease by an additional 1.2 percentage point of GDP in 2007. Indirect taxes would decline by 0.7 and direct taxes by 0.5 percentage point of GDP. The programme explains these declines by several factors: the recent slowdown in excise duties, the near-stagnation of VAT revenues due to the termination of its activities in Luxembourg by an electronic commerce company in 2006 , the extremely high level of direct taxes in 2006 due to exceptional factors, such as the payment of an exceptional dividend by Arcelor, which boosted revenues from the withholding tax on outbound dividends, and finally the reduction in the rate of this withholding tax from 20% to 15% that will enter into force in 2007. However, as table 12 clearly shows, the projections for 2007 rest on a tax-to-GDP elasticity which is significantly lower than that used by the Commission services for their autumn 2006 forecast (as well as the ex-ante elasticity estimated by the OECD). The same (at least as far as the comparison with the OECD ex-ante elasticity is concerned) holds for the programme's revenues projections for 2008 and 2009. The programme's tax projections may thus be regarded as cautious.

Table 12: Assessment of tax projections

	2007			2008			2009
	SP	**COM**	**OECD[3]**	**SP**	**COM[1]**	**OECD[3]**	**SP**
Change in tax-to-GDP ratio	-1.2	0.0	0.4	-0.2	-0.2	0.0	-0.5
Difference (SP – COM)	-1.2		/	0.0		/	/
of which[2]:							
- discretionary and elasticity component	-1.3		/	0.5		/	/
- composition component	-0.2		/	-0.4		/	/
Difference (COM - OECD)	/	-0.4		/	-0.7		/
of which[2]:							
- discretionary and elasticity component	/	-0.3		/	-0.8		/
- composition component	/	0.6		/	0.8		/
p.m.: Elasticity to GDP	0.6	1.0	1.1	0.9	0.9	1.1	0.8

Notes:

[1] On a no-policy change basis

[2] The decomposition is explained in Annex 5

[3] Based on OECD ex-ante elasticity relative to GDP

Source:

Commission services' autumn 2006 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)

- Degree of expenditure restraint: as already stated, the decline in the expenditure ratio planned by the programme (3.8 percentage points of GDP from 2006 to 2009) might seem impressive but, taking into account the strong growth in GDP projected over the period (8.3% a year on average in value), it would still allow government spending to rise by 4.8% a year on average in nominal terms. The expenditure restraint required to achieve the programme's objectives does thus not seem very demanding, although it would constitute a significant break with the recent past.

- Concerning Luxembourg's overall track record when it comes to respecting its budgetary targets [23], budgetary outcomes were very often better than targeted in the last 15 years, as Figure 11 clearly shows (the sole exception was the period 2000-2002, when the general government balance deteriorated more than expected due essentially to the stronger-than-forecast slowdown in GDP growth and the very fast increase in spending). These better outcomes were nearly always due to higher-than-projected revenues because the rise in expenditure was rather strong (7.5% a year on average for total expenditure over the period 1990-2005 and 7.7% for current expenditure). Historical evidence is thus not really conclusive in this respect and to some extent reinforces the impression that the programme's tax projections are very prudent.

Overall assessment of the balance of risks: to sum up, the programme's consolidation scenario may be regarded as rather cautious, especially in view of the prudence of its revenues projections. It is thus likely that budgetary outcomes will be better than projected by the programme, especially in 2007, with possible carry-over effects into the rest of the programme period.

4.4. Assessment of the fiscal stance and budgetary strategy

Table 13 offers a summary assessment of the country's position relative to the budgetary requirements of the Stability and Growth Pact. In order to highlight the role of the preceding analysis of the risks that are attached to the budgetary targets presented in the programme, this assessment is done in two stages: first, a preliminary assessment on the basis of the targets taken at face value is made (middle column) and, second, the final assessment that also takes into account risks (final column).

Table 13: Overview of compliance with the Stability and Growth Pact

	Based on programme[4] (with targets taken at face value)	**Assessment** (taking into account risks to targets)
a. Safety margin against breaching 3% of GDP deficit limit [1]	from 2007 onwards	yes throughout the whole programme period
b. Achievement of the MTO	from 2007 onwards	from 2007 onwards
c. Adjustment towards MTO in line with the Pact [2]	fully in line	fully in line

[23] As already stated in Section 2.4, there existed from 1999 to 2003 a rule that the rate of increase in the State's current expenditure had to remain lower than that in its total spending. However, this rule was not legally binding and, moreover, it only implied in fact that current spending by the State might not increase as fast as its capital expenditure, which is not a very exigent requirement.

d. Fiscal stance in line with the Pact after achieving the MTO [3]	fully in line	fully in line

Notes:

[1] The risk of breaching the 3% of GDP deficit threshold with normal cyclical fluctuations, i.e. the existence of a safety margin, is assessed by comparing the cyclically-adjusted balance with the above mentioned minimum benchmark (estimated as a deficit of around 1% of GDP for Luxembourg). These benchmarks represent estimates and as such need to be interpreted with caution.

[2] The Stability and Growth Pact requires Member States to make progress towards their MTO (for countries in the euro area or in ERM II, this has been quantified as an annual improvement in the structural balance of at least 0.5% of GDP as a benchmark). In addition, the structural adjustment should be higher in good times, whereas it may be more limited in bad times.

[3]According to the Stability and Growth Pact, countries which have already achieved their MTO should avoid pro-cyclical fiscal policies in "good times".

[4]Targets in structural terms as recalculated by Commission services on the basis of the information in the programme.

Source:
Commission services

In view of the above risk assessment, the MTO can be expected to be reached already in 2007. The budgetary stance in the programme seems to provide a sufficient safety margin for automatic stabilisers to operate freely during normal economic downturns without breaching the 3% of GDP deficit reference value throughout the period, because – taking into account the positive risks - the structural deficit would be at or below the estimated minimum benchmark (which, in the case of Luxembourg, is a deficit of about 1% of GDP in cyclically-adjusted terms) from 2007 onwards.

Also in view of this risk assessment, the structural adjustment towards the MTO is fully in line with the Pact as it will amount to 0.8 percentage point of GDP in 2007 according to the programme (and could even be somewhat larger), i.e. well above the 0.5% of GDP benchmark set in the Pact for euro area and ERM II countries.

Once the MTO has been reached (in the case of Luxembourg in 2007) pro-cyclical policies in good times are supposed to be avoided. Although the negative output gap remains relatively large without closing during the period covered, economic conditions, as said before, may be regarded as broadly neutral rather than 'bad times', which would be broadly confirmed by the assessment of tax elasticities. The fiscal adjustment strategy, which foresees a further narrowing of the deficit in nominal and structural terms, should thus not be considered as pro-cyclical and, hence, is fully in line with the Pact.

5. Government debt and long-term sustainability

Government debt is the result of the financing needs of government over the years. It corresponds primarily to an accumulation of deficits, though the build up of financial assets and other adjustments may also play a role.[24] The reform of the Stability and Growth Pact has raised attention to the crucial importance of government debt and of sustainability in fiscal surveillance.

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[24] On the factors other than the deficit which explain the evolution of the government debt, see "The dynamics of government debt: decomposing the stock-flow adjustment", chapter II.2.2 of *Public Finances in EMU 2005*, European Economy, N°3/2005.

This section is in two parts: a first part describes recent developments and the medium-term prospects for government gross debt; it describes the stability programmes targets, compares them with the Commission services' forecasts and assesses the associated risks. A second part looks into the government debt from a longer-term perspective with the aim of assessing the long-term sustainability of public finances.

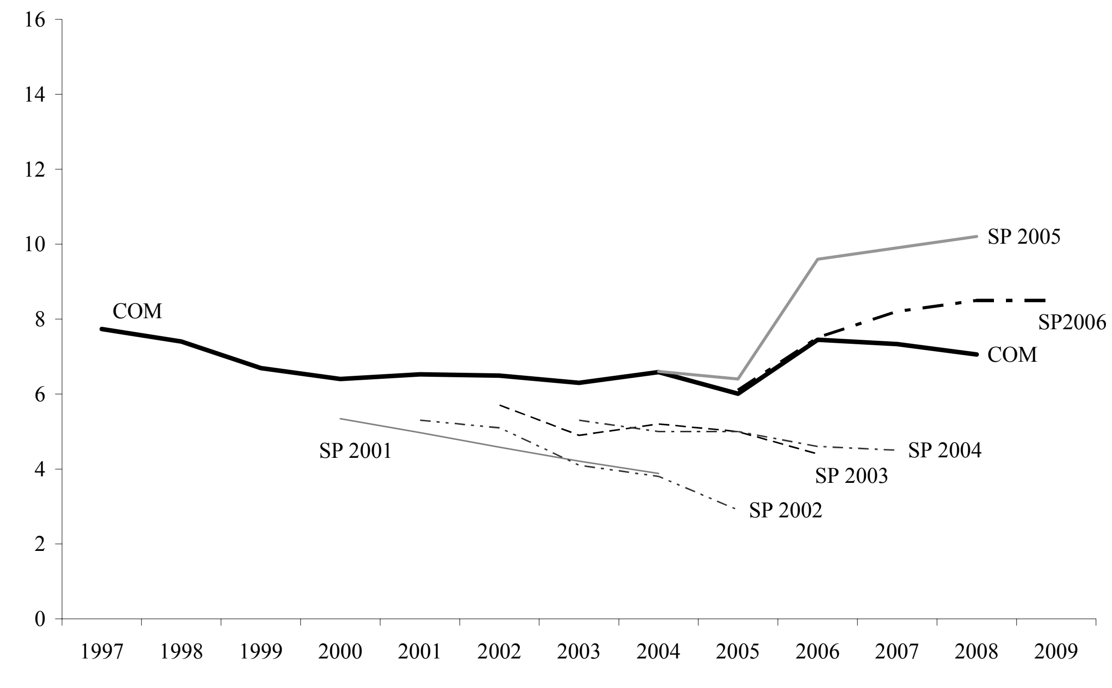
5.1. Recent debt developments and medium-term prospects

5.1.1. Debt projections in the programme

As already stated, Luxembourg's general government debt (which is chiefly the debt of the central government) is extremely low: it is estimated to have reached 7.5% of GDP at the end of 2006. The programme explains recent and future debt developments by a series of factors:

The central government used the surpluses recorded from 1997-2001 to accumulate assets (held by the State and by off-budget funds), amounting to 6.3% of GDP in 2005, instead of reducing its debt, which was very low. These reserves subsequently allowed to finance the deficits of the years 2002-2004 without having recourse to borrowing (actually, no new debt was issued by the central government between 1998 and 2005). This is for a large part the reason why the large fluctuations in the general government balance over the last 10 years (from a surplus of about 6% of GDP in 2000-2001 to a deficit of around 1% in 2004-2005) were not reflected in similar movements in its debt, which decreased from 7.8% of GDP in 1996 to 6.4% in 2000 and then remained broadly constant between 6% and 6½% until 2005.

Figure 13: General government debt projections in successive stability programmes (% of GDP)



<u>Source</u>*: Stability programme updates (SP) and Commission services' autumn 2006 economic forecasts (COM)*

- In 2006, new debt was issued for €400 million (about 1.3% of GDP) in favour of the rail and road funds (which are part of the central government).

- In 2007, the Government is allowed to borrow €332 million for similar infrastructure projects (1.0% of GDP) and €300 million to cover the budget deficit (0.9% of GDP). However, the programme assumes that only the loans for infrastructure projects will be launched in 2007 and that other loans for a total of €200 million per year will be issued in 2008 and 2009 in favour of the rail and road funds.

- The programme also indicates that the inclusion into the government debt of debts to private partners in the context of public-private partnership [25] (especially financial guarantees granted to property developers in view of the construction of public infrastructures) will raise the debt ratio by about 1.2 to 1.4 point over the years 2006-2009. As a result, the programme projects the general government debt to rise further from 7.5% of GDP in 2006 to 8.5% in 2008 and 2009.

Furthermore, the programme recalls that the social security recurrent surpluses have allowed the building up of assets in order to pay for future social transfers (mainly pensions). At the end of 2006, these assets amounted to more than €7 billion (about 26% of GDP). Taking the reserves of the central government and of the social security into account, the general government net financial position is thus widely positive.

Table 14: Debt dynamics

(% of GDP)	average 2000-04	2005	2006		2007		2008		2009
			COM	SP	COM	SP	COM	SP	SP
Gross debt ratio[1]	**6.6**	**6.0**	**7.4**	**7.5**	**7.3**	**8.2**	**7.1**	**8.5**	**8.5**
Change in the ratio	0.0	-0.6	1.4	1.5	-0.1	0.7	-0.3	0.3	0.0
Contributions[2]:									
Primary balance	-2.9	0.8	1.3	1.4	0.3	0.8	0.1	0.2	-0.3
"Snow-ball" effect	-0.1	-0.3	-0.4	-0.4	-0.4	-0.4	-0.3	-0.4	-0.4
Of which:									
Interest expenditure	0.3	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2
Growth effect (real GDP)	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.3
Inflation (GDP deflator)	-0.1	-0.3	-0.2	-0.2	-0.3	-0.3	-0.2	-0.2	-0.3
Stock-flow adjustment	3.0	-1.0	0.5	0.5	0.0	0.3	0.0	0.5	0.7
Of which:									
Cash/accruals diff.	-0.4	0.2	-	-	-	-	-	-	-
Acc. financial assets	3.4	-1.2	-	-	-	-	-	-	-
Privatisation	0.0	0.0	-	-	-	-	-	-	-
Val. effect & residual	0.0	0.0	-	-	-	-	-	-	-

Notes:

[1]End of period.
[2]The change in the gross debt ratio can be decomposed as follows:

[25] In accordance with a Eurostat decision of February 2004 (press release of 11 February).

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

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 (in the table, the latter is decomposed into the growth effect, capturing real GDP growth, and the inflation effect, measured by the GDP deflator). The term in parentheses represents the "snow-ball" effect. The stock-flow adjustment includes differences in cash and accrual accounting, accumulation of financial assets and valuation and other residual effects.
Source:

Stability programme update (SP); Commission services' autumn 2006 economic forecasts (COM); Commission services' calculations

5.1.2. Assessment

In spite of the deficits recorded by the Luxembourg government since 2003 and planned until 2008, the debt remains very low. At the end of the programme horizon, it is projected to amount to 8.5% of GDP. The programme's projections are based on more recent information than the Commission services' autumn forecasts, which expected slightly smaller debts. Forecasting developments in the Luxembourg's government debt is complicated by the fact that, they do not closely reflect the level of the general government balance but are often mostly determined by the accumulation or diminution of financial assets by the central government (including the off-budget funds) and social security. Taking this specific issue into account, the programme's projections appear within a plausible range.

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

The issue of long-term sustainability is a multi-faceted one. It involves avoiding imposing an excessive burden on future generations and ensuring the country's capacity to appropriately adjust budgetary policy in the medium and long run.[26]

Debt sustainability is derived from the government's *intertemporal budget constraint*. It imposes that current total liabilities of the government, i.e. the current public debt and the discounted value of future expenditure including the budgetary impact of ageing populations, should be covered by the discounted value of future government revenue. If current policies ensure that the intertemporal budget constraint is fulfilled, current policies are sustainable.

The approach adopted by the Commission services and the Ageing Working Group of the Economic Policy Committee (EPC) is to project the debt, and to calculate the associated sustainability indicators (see box 3), on the basis of two different scenarios. The first scenario assumes that the structural primary balance will remain unchanged from 2006 through 2009, the final year of the stability programme; it is called the "2006 scenario". Debt projections in this scenario start in 2007. The second scenario assumes that the macroeconomic and budgetary plans until 2009 provided in the stability

[26] For a detailed analysis of long-term sustainability issues, see "The Long Term Sustainability of Public Finances – A report by the Commission services", European Economy n°4/2006, published in October 2006 (hereinafter sustainability report).

programme will be fully respected. This is the “programme scenario”. Debt and primary balance projections in this scenario start in 2010. In addition to this quantitative analysis, other relevant factors are taken into account which allows to better qualify the assessment with regard to where the main risks are likely to stem from and to reach an overall assessment.

5.2.1. Sustainability indicators and long-term debt projections

Table 15 shows the evolution of government spending on pensions, healthcare, long-term care for the elderly, education and unemployment benefits according to the EPC’s projections[27]. Non age-related primary expenditure and revenue is assumed to remain constant as a share of GDP.

[27] These assumptions cover labour productivity growth, real GDP growth, participation rates, unemployment rate, demographic developments, government spending in pensions, healthcare, long-term care for the elderly, education and unemployment benefits. See Economic Policy Committee and European Commission (DG ECFIN) (2006), “The impact of ageing on public expenditure: projections for the EU25 Member States on pensions, health-care, long-term care, education and unemployment transfers (2004-2050)”, European Economy, Special Report No 1 (hereinafter ageing report).

Table 15: Long-term age-related expenditure: main projections

(% of GDP)	2004	2010	2020	2030	2040	2050	Changes
Total age-related spending	19.5	19.4	21.6	25.0	27.4	27.8	+8.2
Pensions	10.0	9.8	11.9	15.0	17.0	17.4	+7.4
Healthcare	5.1	5.3	5.6	5.9	6.2	6.3	+1.2
Long-term care	0.9	1.0	1.0	1.1	1.3	1.5	+0.6
Education	3.3	3.1	2.8	2.7	2.6	2.4	-0.9
Unemployment benefits	0.3	0.3	0.3	0.3	0.2	0.2	-0.1

Source: Economic Policy Committee and Commission services.

The projected increase in age-related spending in Luxembourg is among the highest increases in the EU (8.2 percentage points of GDP between 2004 and 2050 compared to 3.4 points on average for the EU). This is particularly due to pension expenditure being projected to rise by 7.4 percentage points of GDP considerably more than on average in the EU (where it should increase by 2.2 percentage points). The increase in health-care expenditure is projected to be 1.2 percentage points of GDP, lower than on average in the EU. For long-term care, the projected increase of 0.6 percentage points up to 2050, is slightly below the average in the EU.

Based on the long-term budgetary projections, sustainability indicators can be calculated.

Table 16: Sustainability indicators and the required primary balance

	2006 scenario			Programme scenario		
	S1	**S2**	**RPB**	**S1**	**S2**	**RPB**
Value	4.3	9.3	8.0	2.0	7.1	8.0
of which:						
Initial budgetary position	1.1	1.1	-	-1.1	-1.1	-
Debt requirement in 2050	-1.7	-	-	-1.8	-	-
Future changes in budgetary position	4.9	8.2	-	4.9	8.2	-

Source:
Commission services.

Table 16 shows the sustainability indicators for the two scenarios. In the “2006 scenario”, the sustainability gap (S1) that assures reaching the debt ratio of 60% of GDP by 2050 would be 4.3% of GDP. The sustainability gap (S2) which satisfies the intertemporal budget constraint would be 9.3% of GDP. These sustainability gaps in the present assessment are very close to those in the Commission's Sustainability Report.

The initial budgetary position is not sufficiently high to offset the impact of the considerable increase in age-related expenditure up to 2050. The programme plans a structural budgetary consolidation of 2.2 p.p. of GDP between 2006 and 2009. If achieved, such a consolidation would appreciably reduce risks to long-term sustainability of public finances (“programme scenario”). The difference between the initial budgetary position in the 2006 scenario and the programme scenario illustrates how the full respect of the stability programme targets would contribute to tackling the budgetary challenges raised by the demographic developments. However, a significant sustainability gap would remain. Indeed, according to both sustainability gaps, the long-term budgetary impact of ageing is among the highest in the EU.

Box 3 – Sustainability indicators*

- The **sustainability gap S1** shows the permanent budgetary adjustment (often presented as an increase in the tax burden**) required to reach a debt ratio in 2050 of 60% of GDP.
- The **sustainability gap S2**, shows the permanent budgetary adjustment that guarantees the respect of the intertemporal budget constraint of the government. In order to estimate S2, the revenue and expenditure ratios (age-related and non age-related) after 2050 are assumed to remain constant at the 2050 level.
- The sustainability indicators can be decomposed into the: (i) i**nitial budgetary position (IBP)**; (ii) l**ong-term change in the budgetary position (LTC)**.
- In addition, the **required primary balance (RPB)** can be derived from the S2 indicator. It measures the average primary balance over the first five years after the programme horizon (i.e. 2010-2014) that results from a permanent budgetary adjustment carried out to comply fully with the S2 indicator.

Summarizing the sustainability indicators

	Impact of		
	Initial budgetary position		**Long-term changes in the primary balance**
S1*=**	Gap to the debt-stabilizing primary balance	+	Additional adjustment required to finance the increase in public expenditure *up to 2050*
S2=	Gap to the debt-stabilizing primary balance	+	Additional adjustment required to finance the increase in public expenditure *over an infinite horizon*

* For a complete description of the sustainability indicators, see Annex I of the "The Long Term Sustainability of Public Finances – A report by the Commission services", European Economy n°4/2006, published in October 2006.

** Although the sustainability gap indicators (S1, S2) are usually defined as differences between revenue ratios, this does not mean that countries are asked to increase taxes to reach sustainability. There are several ways to ensure sustainability and governments typically choose a combination of budget consolidation over the medium term (either through expenditure reduction and/or tax hikes) and the implementation of structural reforms aiming at curbing long-term public spending (e.g. pension reforms).

*** Moreover, in the case of S1, the decomposition also separates the impact of the debt position (60% of GDP in 2050); the debt requirement in 2050 (DR). In particular, if the current debt/GDP ratio is below 60% of GDP debt is allowed to rise and this component reduces the sustainability gap as measured by the S1 indicator, and vice versa.

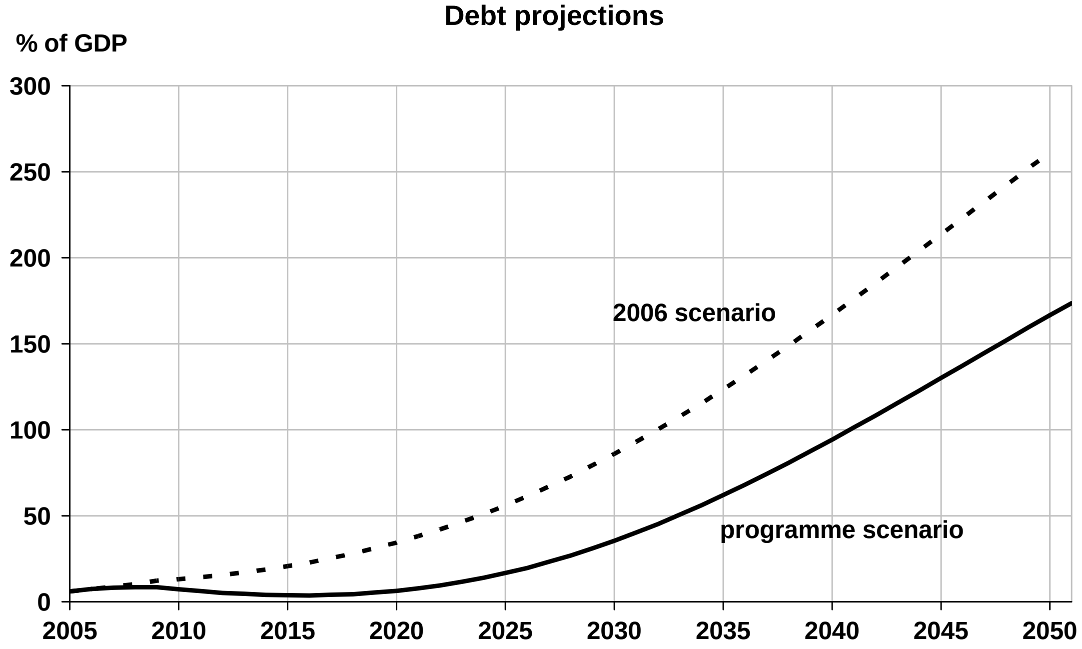
The required primary balance (RPB) is about 8% of GDP, much higher than the structural primary balance of about -1.1% of GDP in 2006 and would still be significantly higher than the structural primary balance in 2009, despite the structural adjustment over the programme period.

Moreover, the S1 sustainability gap would increase by around ½% of GDP if the planned adjustment was to be postponed by 5 years, highlighting that savings can be made over time if action is taken sooner rather than later.

Another way to look at the prospects for long-term public finance sustainability is to project the debt/GDP ratio over the long-term using the same assumptions as for the calculations of S1 and S2. The long-term projections for government debt under the two scenarios are shown in Figure 14.

The gross debt ratio is currently very low at 7.5% of GDP in 2006. According to the "2006 scenario", the debt ratio would increase quite significantly over the projection period, reaching 60% of GDP in the mid-2020s. In the "programme scenario", the debt would stay at a low level for the next two decades but would substantially increase afterwards, though at a lower pace than in the 2006 scenario thanks to the consolidation of public finances over the programme period.[28].

Figure 14: Long-term projections for the government debt ratio



Source: Commission's services

5.2.2. *Additional factors*

To reach an overall assessment of the sustainability of public finances, other relevant issues are taken into account which in addition allows to better qualify the assessment with regard to where the main risks are likely to stem from.

First, the current level of debt is very low and Luxembourg has already accumulated substantial assets in the social security schemes (of around 26% of GDP in 2006) which will cover a part of the sizeable increase in age-related expenditure.

Second, the update projects a rise in the revenue/GDP ratio, which amounts to 0.4% of GDP between 2005 and 2050.[29] On the assumption that this increase materialises, it would imply marginally lower sustainability risks.

[28] It should be recalled, however, that being a mechanical, partial-equilibrium analysis, the long-term debt projections are bound to show highly accentuated profiles. As a consequence, the projected evolution of debt levels should not be seen as a forecast similar to the Commission services' short-term forecasts, but as an indication of the risks faced by Member States.

[29] The 2006 update points to the increase in social contributions as share of GDP but does not provide the related figure, which is taken here from the 2005 update. According to the 2005 programme, the increase in the social contributions is due to the ageing of the workforce over the period.

5.2.3. Assessment

The long-term budgetary impact of ageing in Luxembourg is among the highest in the EU, influenced notably by a very considerable increase in pension expenditure, which is projected to rise by 7.4 percentage points of GDP from 2004 to 2050. Total age-related public spending is expected to increase by 8.2 points of GDP over the same period (compared to EU average increases of 2.2 and 3.4 percentage points of GDP, respectively).

The current level of gross debt is very low and considerable assets have been accumulated by the government, notably by social security. However, while these assets contribute significantly to public finance sustainability, they will not be sufficient to offset the sizeable increase in age-related expenditure. Therefore, keeping a strong budgetary position will help to alleviate part of the cost of ageing. Moreover, as recognised by the authorities, changes to the pension system will prove necessary at some point so as to contain future increase in public expenditure and reduce the risks to the long-term sustainability of public finances.

Overall, Luxembourg appears to be at medium risk with regard to the sustainability of its public finances.

6. STRUCTURAL REFORM, THE QUALITY OF PUBLIC FINANCES AND INSTITUTIONAL FEATURES

As explained in section 4, the expenditure-curbing measures decided last April are temporary by nature: the suspension of the normal indexation mechanism should last until 2009 and the postponement of the 2% increase in social benefits initially scheduled for 1 January 2007 will not necessarily be repeated. These measures are thus more aiming at restoring budgetary balance within the coming years than at addressing public finance problems in the long run. The current programme does not announce specific measures that would be expected to significantly affect the quality of public finances (like a significant tax, pensions or health care reform, a new public investment programme, a significant privatisation plan or one-off operations). However, it recalls that, when deciding in April 2006 the consolidation measures mentioned above, the Tripartite Coordinating Committee also decided the creation of a discussion group made up of the social partners and the Government, "*which will have as its mission the drawing up of recommendations to ensure the long-term viability of the pension system and the studying of various measures that can be envisaged in order to guarantee this long-term viability and to adapt the pension system to developments linked to changes in the unfolding of professional careers, demographic ageing and its impact on working life spans.* " However, these proposals have not yet been made.

The previous programme recalled some reforms that had been introduced in 2005 to improve 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. No other procedural reform is announced by the current programme.

In the same vein, the previous programme indicated that all public investment projects would be submitted to a more detailed analysis aimed at reducing their cost and the operating costs of the new infrastructures will be taken into account from the initial planning phase. This intention is confirmed by the announcement made by the current programme of the decision taken in April 2006 to optimise government investment spending (see above 4.2.2). However, although improving the efficiency of public investment is certainly desirable, it does not by itself result in a reduction in its level or in its rate of increase unless a more thorough examination leads to abandoning or scaling down of a significant number of projects.

7. CONSISTENCY WITH THE NATIONAL REFORM PROGRAMME AND WITH THE BROAD ECONOMIC POLICY GUIDELINES

The consolidation measures presented by the programme and described above are in line with the Implementation Report (National Reform Programme), submitted on 27 October 2006 in the context of the renewed Lisbon strategy for growth and jobs. This Implementation Report identifies as macro-economic key challenges "*guaranteeing economic stability for sustainable growth*" and "*safeguarding economic and budgetary sustainability*" In that context, the Implementation Report describes the consolidation measures that are also presented by the 2006 stability programme.

Box 5: The Commission assessment of the implementation report of the National Reform Programme

The implementation report of the National Reform Programme (hereafter NRP) of Luxembourg, provided in the context of the renewed Lisbon strategy for growth and jobs, was submitted on 27 October 2006. The Commission's assessment of this report, which was adopted on 12 December 2006 as part of its Annual Progress Report, can be summarised as follows.

Luxembourg has in general made very good progress in the implementation of its NRP. As far as macro-economic policies are concerned, the measures taken in 2006 and described by the implementation report should contribute to the achievement of the objectives identified in the NRP, especially macro-economic stability, by helping to improve the condition of public finance, to curb inflation and to restore competitiveness. As far as the objective of long-term sustainability of public finance is concerned, it will be necessary to take measures aiming at ensuring the viability of the pension system because the ratio between contributors and retirees, which is very favourable at the moment, will necessarily deteriorate in the long run.

As far as micro-economic policies are concerned, the measures presented in the implementation report seem generally to adequately address the problems identified. This is especially the case in terms of improving economic environment as well as transport and communications infrastructures, supporting small and medium businesses and increasing the public financing of R&D. However, some additional measures would be necessary in order to support small and medium enterprises and to promote competition and some of the measures already taken would need clarification. Moreover, their implementation will require further scrutiny. The report also presents a comprehensive set of measures aiming at promoting durable development.

As far as employment policies are concerned, progress has been made in terms of raising the employment rate of women, improving the educational and training system, as well as favouring the professional insertion of younger people, whose unemployment rate is surprisingly high compared to that of the rest of the population and in view of the strong job creation. However, the report does not address the important issue of the employment rate of older workers, which is one of the lowest of the EU, and it seems that few measures have been adopted to date in order to address this issue.

The programme does not contain a qualitative assessment of the overall impact of the National Reform Programme within the medium-term fiscal strategy nor provides systematic information on the direct budgetary costs (or savings) associated with the main reforms envisaged in the National Reform Programme.

Although the stability programme does not explicitly refer to the public finance implications of the actions envisaged in the National Reform Programme and the Implementation Report, the programme seems to take into account the public finance implications of the actions outlined in the national reform programme : for instance, the government's intention, confirmed by the programme, to keep public investment at a high level or the planned rise in the category "other government expenditure" seem to reflect the identification as priority actions by the NRP of the increase in R&D, the encouragement of the sustainable use of resources or the improvement of the rail connections with neighbouring countries.

The table below provides an overview of whether the strategy and policy measures in the programme are consistent with the broad economic policy guidelines in the area of public finances, which are included in the integrated guidelines for the period 2005-2008. The assessment of guideline 1 corresponds to the evaluation in Section 4.4 above, whereas that of the pace of debt reduction in guideline 2 is covered in Section 5 above. Information on the different elements covered by the remaining guidelines in the table can be found in Sections 5 and 6.

Overall, the budgetary strategy in the stability programme is partly consistent with the broad economic policy guidelines.

Integrated guidelines	**Yes**	**Steps in the right direction**	**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].				
– Member States in excessive deficit should take effective action in order to ensure a prompt correction of excessive deficits [3].				**X**
– Member States posting current account deficits that risk being unsustainable should work towards (…), where appropriate, contributing to their correction via fiscal policies.				**X**
2. To safeguard economic and fiscal sustainability In view of the projected costs of ageing populations,				
– Member States should undertake a satisfactory pace of government debt reduction to strengthen public finances.				**X**
– Member States should reform and re-enforce pension, social insurance and health care systems to ensure that they are financially			**X**	

Integrated guidelines	Yes	Steps in the right direction	No	Not applicable
viable, socially adequate and accessible (…)				
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 1: Glossary

Automatic stabilisers Various features of the tax and spending regime which tend to have a dampening effect on economic fluctuations without requiring a discretionary intervention of fiscal authorities. As a result, the budget balance in % of GDP tends to improve in years of high growth and deteriorate during economic slowdowns. See also *cyclically-adjusted balance*, *structural balance* and *minimum benchmark*.

Broad economic policy guidelines (BEPGs) Guidelines for the economic and budgetary policies of the Member States. Together with the Employment Guidelines, they form the Integrated Guidelines, prepared by the Commission and adopted by the Council of Ministers responsible for Economic and Financial Affairs (ECOFIN). See also *Lisbon strategy*.

Budget balance The balance between total public expenditure and revenue (according to *ESA95*); with a positive balance indicating a surplus and a negative balance indicating a deficit. Also known as *government net borrowing*. For the monitoring of Member State budgetary positions, the EU uses *general government* aggregates. See also *cyclically-adjusted balance*, *primary balance, structural balance* and *reference values*.

Budget constraint A basic condition applying to the public finances, according to which total public expenditure in any one year must be financed by taxation, borrowing or changes in the monetary base; the latter is prohibited in the EU. See also *stock-flow adjustment* and *long-term sustainability*.

Budgetary sensitivity The variation in the *budget balance* brought about by a change in the *output gap*. In the EU, it is estimated to be 0.5 on average, i.e. for any percentage point of GDP below or above potential, the budget-balance-to-GDP ratio deteriorates or improves by half a percentage point. The size of the budgetary sensitivity essentially reflects (i) the revenue and expenditure elasticities of the budget and (ii) the size of discretionary government expenditure. See also *cyclically-adjusted balance, structural balance* and *tax elasticity*.

Code of conduct Policy document adopted by the Economic and Financial Committee (an advisory committee gathering high-level officials from national governments, national central banks, the European Central Bank and the European Commission which prepares the meetings of the Council of Ministers responsible for Economic and Financial Affairs (ECOFIN)) and endorsed by the ECOFIN Council in October 2005, containing specifications on the implementation of the *Stability and Growth Pact* and guidelines on the format and content of *stability programmes* and *convergence programmes*.

Contingent liabilities A possible government obligation to pay the existence of which will be confirmed by the occurrence of one or more uncertain events in the future not wholly under the control of government. For instance, government guarantees on debt issued by private or public companies are contingent liabilities, since the government obligation to pay depends on the non-ability of the original debtor to honour its obligations. See also *implicit liabilities*.

Convergence programme Medium-term budgetary and monetary strategy presented by each Member State that has not yet adopted the euro; updated annually, according to the provisions of the *Stability and Growth Pact*. See also *stability programme, code of conduct* and *medium-term objective*.

Cyclically-adjusted balance The *budget balance* adjusted for its cyclical component (which captures the part of public revenue and expenditure that is linked to the *output gap*), i.e. the budget balance that would prevail if GDP were at its potential level. See also *structural balance, budgetary sensitivity* and *output gap*.

Cyclically-adjusted primary balance The *cyclically-adjusted balance* net of interest expenditure on *general government* debt. See also *interest burden*.

Debt dynamics The evolution of *government debt* as a ratio to GDP; it depends on the *primary deficit*, the debt-increasing impact of interest payments, the dampening effect of GDP growth on the ratio and the *stock-flow adjustment*.

EDP notification See *notification of deficit and debt (or EDP notification).*

ERM II Exchange rate mechanism linking some currencies of non-euro Member States to the euro, which is the centre of the mechanism. For the currency of each Member State participating in the mechanism, a central rate against the euro and a standard fluctuation band of ±15% are defined.

ESA95 European accounting standards for the compilation and reporting of macroeconomic (including budgetary) data by the EU Member States.

Excessive deficit procedure (EDP) A procedure, laid down in the EC Treaty, according to which the Commission and the Council monitor the development of national *budget balances* and *public debt* in relation to the *reference values*, in order to assess the existence (or risk) of an excessive deficit in each Member State and to ensure its correction. Its application has been further clarified in the *Stability and Growth Pact*.

Fiscal stance A measure of the thrust of discretionary fiscal policy such as, in this document, the change in the *structural balance* relative to the preceding year. When the change is positive (negative) the fiscal stance is said to be restrictive (expansionary).

Funded pension scheme Pension system in which current pension expenditures are financed by running down assets accumulated over the years on the basis of contributions by the scheme beneficiaries. According to *ESA95*, defined-contribution funded pension schemes are not considered as part of the *general government* sector. See also *pay-as-you-go pension scheme*.

General government The focus of EU budgetary surveillance under the *Stability and Growth Pact* and the *excessive deficit procedure* is on general government aggregates, with the general government sector covering national, regional and local government, as well as social security. In principle, public enterprises are excluded.

Government debt See *public debt*.

Government net borrowing See *budget balance*.

Implicit liabilities Future government expenditure which have not yet been funded, even when future expenditure is not backed by law or contractual obligations, but is simply grounded in strong expectations of the public. To be meaningful for economic analysis, implicit liabilities should be assessed net of future revenue assuming that the government will keep collecting taxes (and other non-tax revenue) at rates comparable to current levels. See also *contingent liabilities*.

Interest burden *General government* interest expenditure on *government debt* as a share of GDP.

Lisbon strategy Partnership between the EU and Member States for growth and more and better jobs. Originally approved in 2000, the Lisbon Strategy was revamped in 2005. Based on the Integrated Guidelines (merger of the *broad economic policy guidelines* and the employment guidelines, dealing with macro-economic, micro-economic and employment issues) for the period 2005-2008, Member States drew up 3-year national reform programmes at the end of 2005. They reported on the implementation of the national reform programmes for the first time in autumn 2006. The Commission analyses and summarises these reports in an EU Annual Progress Report each year, in time for the Spring European Council.

Long-term sustainability A combination of budget deficits and debt that ensures that the latter does not grow without bound. While conceptually intuitive, an agreed operational definition of sustainability has proven difficult to achieve.

Maturity structure of public debt The profile of debt in terms of when it is due to be paid back. Interest rate changes affect the *budget balance* directly to the extent that the *general government* sector has debt with a relatively short maturity structure. Long maturities reduce the sensitivity of the *budget balance* to changes in the prevailing interest rate. See also *public debt*.

Medium-term objective (MTO) According to the *Stability and Growth Pact*, *stability programmes* and *convergence programmes* must present a *medium-term objective* for the budgetary position. It is country-specific 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, and is defined in structural terms (see *structural balance*).

Minimum benchmark Estimated budgetary position (in *cyclically-adjusted* terms) that provides a "safety margin" that is enough for the *automatic stabilisers* to operate freely during normal economic slowdowns without breaching the 3% of GDP deficit *reference value*. The minimum benchmarks are estimated by the European Commission. They do not cater for other risks such as unexpected budgetary developments and interest rate shocks.

National reform programme (NRP) See *Lisbon strategy*.

Notification of deficit and debts (EDP notification) Twice a year (by 1 April and 1 October), EU Member States have to notify their *general government* deficit and debt figures (and a number of associated data) to the Commission, the quality of which is then checked by Eurostat, the Commission department in charge of statistics. See also *budget balance* and *public debt*.

One-off and temporary measures Government transactions having a transitory budgetary effect that does not lead to a sustained change in the intertemporal budgetary position. See also *structural balance*.

Output gap The difference between actual GDP and *potential GDP* in any given year, usually expressed as a percent of *potential GDP*. Potential GDP is an unobserved variable and needs to be estimated from actual data. See also *production function method*.

Pay-as-you-go pension scheme (PAYG) Pension system in which current pension expenditures are financed by the contributions of current employees. Also known as *unfunded pension scheme*. See also *funded pension scheme*.

Potential GDP The level of real GDP in a given year that is consistent with a stable rate of inflation. If actual output rises above its potential level, then constraints on capacity begin to bind and inflationary pressures build; if output falls below potential, then resources are lying idle and inflationary pressures abate. See also *production function method* and *output gap*.

Primary balance The *budget balance* net of interest expenditure on *general government* debt. See also *interest burden*.

Pro-cyclical fiscal policy A *fiscal stance* which amplifies the economic cycle by lowering the *structural balance* when the *output gap* is positive or improving, or by increasing when the *output gap* is negative or widening, as opposed to a counter-cyclical fiscal policy stance. A neutral fiscal policy keeps the *structural balance* unchanged over the economic cycle by letting the *automatic stabilisers* work.

Production function method A method to estimate *potential GDP* typically based on a Cobb-Douglas production function. Potential GDP is estimated as the level of GDP consistent with a full utilisation of capital, an unemployment rate that does not accelerate inflation and factor productivity at its trend level. See also *output gap, cyclically-adjusted balance, budgetary sensitivity*.

Public debt (or government debt) Consolidated gross debt for the *general government* sector. It includes the total nominal value of all debt owed by government units, except that part of the debt which is owed to government units in the same Member State. It is a gross debt measure meaning that government financial assets on other sectors are not netted out. See also *debt dynamics* and *reference values*.

Public investment The component of total public expenditure which consists in the acquisition of durable assets and through which governments increase and improve the stock of capital employed in the production of the goods and services they provide. Also known as government gross fixed capital formation (GFCF).

Public-private partnerships (PPP) Agreements between government and corporations according to which the latter build and operate public-use infrastructure (roads, tunnels, bridges, but also hospitals, prisons, concert halls, etc.) which were traditionally directly controlled by government. In exploiting the infrastructure, the corporation receives prices paid by final users, rentals or fees from the government or both. Infrastructure built under PPPs is considered as either government investment or corporate investment depending on a number of specific criteria.

Quality of public finances A multi-dimensional concept which refers to the contribution that public finances make to the efficient allocation of resources in the economy and to achieving the government's strategic objectives (sustainable growth, macroeconomic stability, competitiveness, social cohesion etc.). It concerns notably the overall level of expenditure and taxation, their composition, the budgeting and control mechanisms and the institutional arrangements for deciding on public finance issues.

Reference values for public deficit and debt Respectively, a 3 percent *general government* deficit-to-GDP ratio and a 60 percent *general government* debt-to-GDP ratio. See also *excessive deficit procedure, government debt* and *budget balance*.

Sensitivity analysis An econometric or statistical simulation designed to test the robustness of an estimated economic relationship or projection to changes in the underlying assumptions.

'Snow-ball' effect The self-reinforcing effect of *public debt* accumulation or decumulation arising from a positive or negative differential between the implicit interest rate on public debt and the GDP growth rate. See also *debt dynamics*.

Stability and Growth Pact (SGP) Approved in 1997 and reformed in 2005, the SGP clarifies the provisions on budgetary surveillance in the EC Treaty. The "preventive" arm of the SGP obliges Member States to submit annual *stability and convergence programmes*, while the "corrective" arm of the SGP clarifies and speeds up the *excessive deficit procedure*.

Stability programme Medium-term budgetary strategy presented by each Member State that has already adopted the euro; updated annually, according to the provisions of the *Stability and Growth Pact*. See also *convergence programme, code of conduct* and *medium-term objective*.

Stock-flow adjustment (SFA) The stock-flow adjustment (also known as the debt-deficit adjustment) ensures consistency between *government net borrowing*, which is a flow variable, and the variation in *government debt*, which is a stock variable. It includes differences between cash and accrual accounting, accumulation of financial assets, changes in the value of debt denominated in foreign currency and remaining statistical adjustments. See also *debt dynamics.*

Structural balance The *budget balance* in *cyclically-adjusted* terms and excluding *one-off and temporary measures*. See also *fiscal stance*.

Structural primary balance The *structural balance* net of interest expenditure on *general government* debt. See also *interest burden*.

Tax elasticity A parameter measuring the relative change in tax revenues with respect to a relative change in GDP. The tax elasticity is an input to the *budgetary sensitivity*.

Annex 2: Summary tables from the programme update

7.1.1. Table 1a: Macroeconomic forecast

	ESA Code	2005	2005	2006	2007	2008	2009
		€ million	%	%	%	%	%
Real GDP	B1*g	25,574	4.0	5.5	4.0	5.0	4.0
Nominal GDP	B1*g	29,396	8.9	9.8	7.7	8.3	7.5
		Components of real GDP					
Private consumption expenditure	P.3	10,680	3.4	2.6	1.7	2.2	2.3
Government consumption expenditure	P.3	4,151	4.8	3.3	4.7	5.0	5.3
Gross fixed capital formation	P.51	5,450	2.2	12.8	11.8	11.9	8.0
Changes in inventories	P.52 + P.53	377	1.5	0.1	-0.5	-0.8	-0.9
Exports of goods and services	P.6	43,314	8.0	14.8	10.7	10.3	9.7
Imports of goods and services	P.7	38,645	9.3	14.9	11.9	10.6	10.4
		Contributions to real GDP growth					
Final domestic demand		…	2.7	4.4	4.2	4.6	3.8
Changes in inventories	P.52 + P.53	…	1.2	-1.3	-0.6	-0.3	-0.1
External balance of goods and services	B.11	…	0.1	2.5	0.5	0.7	0.3

7.1.2. Table 1b: Price developments

	2005	2006	2007	2008	2009
	%	%	%	%	%
GDP deflator	4.7	4.0	3.6	3.1	3.3
Private consumption deflator (NICP, "national")	3.6	2.7	2.0	2.2	2.1
Inflation rate (HICP, "harmonised")	3.8	2.9	1.4	2.0	2.0
Public consumption deflator	4.5	2.9	2.5	2.5	2.4
Investment deflator	1.5	2.6	2.1	2.3	2.2
Export price deflator (goods and services)	8.2	8.1	4.6	4.0	4.1
Import price deflator (goods and services)	8.0	7.1	5.3	4.9	4.7

7.1.3. Table 1c: Labour market developments

	ESA Code	2005	2005	2006	2007	2008	2009
		Level	%	%	%	%	%
Domestic employment (persons)		307,320	3.0	3.9	3.6	3.7	3.7
Employment (hours worked)		…	2.5	3.7	3.4	3.5	3.5
Unemployment rate		…	4.5	4.8	4.7	4.5	4.4
Labour productivity (persons)		…	1.0	1.6	0.5	1.4	0.5
Labour productivity (hours worked)		…	1.4	1.8	0.7	1.6	0.7
Compensation of employees	D.1	…	3.7	3.9	3.7	3.2	3.1

7.1.4. Table 2: General government budgetary developments

	ESA Code	2005	2005	2006	2007	2008	2009
		€ million	**% GDP**	**% GDP**	**% GDP**	**% GDP**	**% GDP**
		Net lending by sub-sector					
General government	**S.13**	**-292**	**-1.0**	**-1.5**	**-0.9**	**-0.4**	**0.1**
Central government	S.1311	-678	-2.3	-3.1	-2.9	-2.8	-2.3
Local government	S.1313	-60	-0.2	-0.1	-0.1	0.1	0.1
Social security	S.1314	445	1.5	1.7	2.1	2.3	2.3
Total revenue	**TR**	**12,416**	**42.2**	**40.5**	**39.2**	**39.0**	**38.4**
Total expenditure	**TE**	**12,708**	**43.2**	**42.0**	**40.1**	**39.4**	**38.2**
Net lending/borrowing of general government	EDP B.9	-292	-1.0	-1.5	-0.9	-0.4	0.1
Interest expenditure (including FISIM)	EDP D.41 incl. FISIM	56	0.2	0.1	0.1	0.2	0.2
Primary balance		-237	-0.8	-1.3	-0.8	-0.2	0.3
		Components of revenue					
Taxes		7,983	27.2	25.6	24.4	24.4	24.0
Taxes on production and imports	*D.2*	*3,880*	*13.2*	*12.3*	*11.6*	*11.5*	*11.3*
Current taxes on income and wealth	*D.5*	*4,104*	*14.0*	*13.3*	*12.8*	*12.9*	*12.8*
Social contributions	D.6	3,421	11.6	11.3	11.4	11.2	11.0
Property income	D.4	346	1.2	1.4	1.3	1.3	1.3
Other revenue		665	2.3	2.3	2.1	2.1	2.0
Total revenue	**TR**	**12,416**	**42.2**	**40.5**	**39.2**	**39.0**	**38.4**
Tax burden	D.2 + D.5 + D.61 + D.91 - D.995	…	38.8	36.9	35.8	35.6	35.1
		Components of expenditure					
Public consumption	P.32	1,973	6.7	6.2	6.0	5.9	5.8
Social transfers	D.62 + D.63	7,357	25.0	24.1	23.4	22.6	21.8
Social transfers in kind	*D.63*	*3,010*	*10.2*	*10.0*	*9.8*	*9.3*	*8.9*
Social transfers in cash	*D.62*	*4,347*	*14.8*	*14.1*	*13.6*	*13.2*	*12.8*
Interest expenditure (including FISIM)	EDP D.41 incl. FISIM	56	0.2	0.1	0.1	0.2	0.2
Subsidies	D.3	490	1.7	1.7	1.6	1.6	1.6
Gross fixed capital formation	P.51	1,363	4.6	4.4	4.3	4.2	4.0
Other expenditure		1,469	5.0	5.4	4.7	4.9	4.9
Total expenditure	**TE**	**12,708**	**43.2**	**42.0**	**40.1**	**39.4**	**38.2**
Compensation of employees	D.1	2,373	8.1	7.8	7.7	7.5	7.4

7.1.5. Table 3: General government expenditure by function

in % of GDP	**COFOG Code**	**2004**	**2005**	**2009**
General public services	**1**	4.9	5.6	…
Defence	**2**	0.3	0.3	…
Public order and safety	**3**	1.1	1.0	…
Economic affairs	**4**	4.7	4.3	…
Environmental protection	**5**	1.1	1.1	…
Housing and community amenities	**6**	0.8	0.9	…
Health	**7**	5.2	5.4	…
Recreation, culture and religion	**8**	2.0	1.9	…
Education	**9**	5.1	5.0	…
Social protection	**10**	18.0	17.7	…
Total expenditure	**TE**	43.1	43.2	…

7.1.6. Table 4: Public debt

in % of GDP	**2005**	**2006**	**2007**	**200 8**	**200 9**
Gross debt	**6.1**	**7.5**	**8.2**	**8.5**	**8.5**
Central government	3.8	5.2	6.0	6.4	6.5
Local government	2.3	2.4	2.3	2.2	2.1
Social security	0.0	0.0	0.0	0.0	0.0
Change in gross debt ratio	-0.5	0.9	1.6	1.9	1.9
Primary surplus	-0.8	-1.3	-0.8	-0.2	0.3
Interest expenditure	0.2	0.1	0.1	0.2	0.2
Stock-flow adjustment	1.0	3.5	2.2	1.3	0.5
P.M.: implicit interest rate on public debt	*3.1*	*2.6*	*1.8*	*2.4*	*2.4*
Liquid financial assets	35.6	37.2	…	…	…
Net debt	-29.5	-29.7	…	…	…

7.1.7. *Table 5: Cyclical developments of public finances*

in % of GDP	**2005**	**2006**	**2007**	**2008**	**2009**
Real economic growth	4.0	5.5	4.0	5.0	4.0
Net lending/borrowing of general government	-1.0	-1.5	-0.9	-0.4	0.1
Interest expenditure	0.2	0.1	0.1	0.2	0.2
Potential GDP growth rate	4.1	4.2	4.5	4.8	5.2
Output gap	-1.6	-0.4	-0.8	-0.6	-1.7
Cyclical budgetary components	-0.8	-0.2	-0.4	-0.3	-0.8
Cyclically-adjusted budgetary balance	**-0.2**	**-1.3**	**-0.5**	**-0.1**	**0.9**
Cyclically-adjusted primary balance	0.0	-1.2	-0.4	0.1	1.1

7.1.8. Table 6: Divergences from previous programme update

	2005	2006	2007	2008
Real economic growth (%)				
7th update	4.0	4.4	4.9	4.9
8th update	4.0	5.5	4.0	5.0
Difference	**0.0**	**1.1**	**-0.9**	**0.1**
Net lending/borrowing of general government (in % of GDP)				
7th update	-2.3	-1.8	-1.0	-0.2
8th update	-1.0	-1.5	-0.9	-0.4
Difference	**1.3**	**0.3**	**0.1**	**-0.2**
General government gross debt (in % of GDP)				
7th update	6.4	9.6	9.9	10.2
8th update	6.1	7.5	8.2	8.5
Difference	**-0.3**	**-2.1**	**-1.7**	**-1.7**

7.1.9. *Table 7: Long-term sustainability of public finances*

in % of GDP	2004	2010	2015	2020	2030	2040	2050
Expenditure related to ageing	**19.5**	**19.4**	**20.5**	**21.6**	**25.0**	**27.4**	**27.8**
Pension expenditure	10.0	9.8	10.9	11.9	15.0	17.0	17.4
Health	5.1	5.3	5.4	5.6	5.9	6.2	6.3
Long-term care insurance	0.9	1.0	1.0	1.0	1.1	1.3	1.5
Education	3.3	3.1	2.9	2.8	2.7	2.6	2.4
Unemployment benefits	0.3	0.3	0.3	0.3	0.3	0.2	0.2
Reserves of pension funds	23.6	31.7	37.4	39.2	17.9	…	…
General government gross debt (if medium-term budgetary objective is respected)	6.6	9.8	15.2	26.6	73.6	150.0	240.0
Assumptions:							
Population (in million)	0.5	0.5	0.5	0.5	0.6	0.6	0.6
Working age population (15-64) in % of total	67.1	67.5	67.4	66.6	62.8	60.7	61.3
Old-age dependency ratio (65+/15-64)	21.0	21.6	22.8	24.7	31.6	36.7	36.1
Participation rate (15-64)	65.5	67.2	67.8	67.9	67.9	68.6	68.3
Participation rate of older workers (55-64)	31.7	35.7	39.5	41.1	39.7	41.6	42.2
Unemployment rate	3.8	4.2	4.2	4.2	4.2	4.2	4.2
Potential GDP	4.0	3.9	2.9	2.8	3.0	3.0	3.0

7.1.10. Table 8: Basic assumptions

	2005	2006	2007	2008	2009
Short-term interest rate (annual average)	2.2	3.1	3.7	3.6	3.7
Long-term interest rate (annual average)	3.4	3.7	4.0	4.1	4.3
Exchange rate €/USD (annual average)	1.24	1.25	1.26	1.26	1.26
Nominal effective exchange rate (changes in %)	-0.07	-0.03	-0.09	-0.03	-0.02
World GDP growth (excluding EU-15)	…	…	…	…	…
EU-15 economic growth	1.3	2.7	2.1	2.4	2.4
Economic growth of relevant foreign markets	4.5	7.2	5.4	6.2	4.6
World import volume growth (excluding EU-25)	…	…	…	…	…
Oil prices (Brent, USD/barrel)	54.5	65.5	67.4	67.4	67.4

Annex 3: 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.

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		Broadly follows: section 7 (institutional features of public finance) is missing
3. Model tables (so-called data requirements)			
The quantitative information is presented following the standardised set of tables (Annex 2 of the code of conduct).	X		
The programme provides all compulsory information in these tables.		X	One gap (sectoral balances) because not available (except government)
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		Broadly in line with common external assumptions; some divergences
Significant divergences between the national and the Commission services' economic forecasts are explained [2].			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	No sectoral balances available (except government) ; very large external surplus
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			Not applicable

Guidelines in the new code of conduct	Yes	No	Comments
Council.			
When applicable, the programme explains the reasons for possible deviations from previous targets and, in case of substantial deviations, whether measures are taken to rectify the situation, and provide information on them.	X		
The budgetary targets are backed by an indication of the broad measures necessary to achieve them and an assessment of their quantitative effects on the general government balance is analysed.	X		
Information is provided on one-off and other temporary measures.			Not applicable
The state of implementation of the measures (enacted versus planned) presented in the programme is specified.	X		
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.			Not applicable
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		Two alternative scenarios: 1. adverse external demand shock 2. oil price 10% lower than in central scenario
In case of "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	No explicit information but consistency can nevertheless be assessed
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		Information limited to negative net debt because of large assets and reserves
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	AWG projections not included but most necessary information provided
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:			

Guidelines in the new code of conduct	Yes	No	Comments
[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 4: Assessment of tax projections

Table 12 compares the tax projections of the programme with those of the Commission services' autumn 2006 forecast and those obtained by using standard ex-ante elasticities, as estimated by the OECD. The table summarises 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 table below)[30].

Conceptually, the analysis draws on the definition of a semi-elasticity, which measures the change in a ratio vis-à-vis the relative change in the denominator. The semi-elasticity of the tax-to-GDP ratio of the *i-th* tax $\frac{T_i}{Y}$ can be written as:

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

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

To the extent that ε_{T_i,B_i} is derived from observed or projected data, it will typically reflect (i) the effect of discretionary measures (including one-offs) and (ii) the tax elasticity[31]. 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:

[30] Private and corporate income taxes are generally not provided, neither in the programme nor in the Commission services' autumn 2006 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.

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

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

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

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

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 $\varepsilon = \sum_i w_i\varepsilon_{T_tB_i}\varepsilon_{B_iY}$ with w_i the share of the *i-th* tax in the overall tax burden.

The table below reports 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 Table 12.

Assessment of tax projections by major tax category

	2007			2008			2009
	SP	**COM**	**OECD[1]**	**SP**	**COM[2]**	**OECD[1]**	**SP**
Taxes on production and imports:							
Change in tax-to-GDP ratio	-0.8	-0.1	0.0	-0.1	-0.3	0.0	-0.2
Difference SP/CP – COM	-0.7			0.2			/
of which[3]:							
- discretionary & elasticity component	-0.7			0.4			/
- composition component	-0.2			-0.1			/
Difference COM – OECD[1]	/	-0.1		/	-0.3		/
of which[3]:							
- discretionary & elasticity component	/	0.5		/	0.0		/
- composition component	/	-0.4		/	-0.3		/
p.m.: Elasticity							
- of taxes to tax base[4]	0.4	1.5	1.0	1.7	1.0	1.0	1.3
- of tax base[4] to GDP	0.5	0.6	1.0	0.5	0.7	1.0	0.6
Social contributions:							
Change in tax-to-GDP ratio	0.1	0.0	-0.2	-0.2	0.0	-0.2	-0.2
Difference SP/CP – COM	0.1		/	-0.3		/	/
of which[3]:							
- discretionary & elasticity component	0.1		/	-0.1		/	/
- composition component	0.0		/	-0.1		/	/
Difference COM – OECD[1]	/	0.2		/	0.3		/
of which[3]:							
- discretionary & elasticity component	/	-0.1		/	-0.1		/
- composition component	/	0.4		/	0.4		/
p.m.: Elasticity							
- of taxes to tax base[5]	1.2	1.1	1.3	0.9	1.0	1.3	0.8
- of tax base[5] to GDP	1.0	0.9	0.6	0.8	1.0	0.6	0.9
Personal income tax[6]:							
Change in tax-to-GDP ratio	-0.4	0.1	0.4	0.1	0.0	0.5	-0.1
Difference SP/CP – COM	-0.5		/	0.1		/	/
of which[3]:							
- discretionary & elasticity component	-0.6		/	0.2		/	/
- composition component	0.0		/	-0.1		/	/
Difference COM – OECD[1]	/	-0.3		/	-0.4		/
of which[3]:							
- discretionary & elasticity component	/	-0.7		/	-0.7		/
- composition component	/	0.8		/	0.8		/
p.m.: Elasticity							
- of taxes to tax base[5]	0.5	1.2	2.5	1.3	1.0	2.5	1.0
- of tax base[5] to GDP	1.0	0.9	0.6	0.8	1.0	0.6	0.9
Corporate income tax[6]:							
Change in tax-to-GDP ratio	-0.1	0.0	0.2	0.0	0.0	0.2	0.0
Difference SP/CP – COM	-0.1		/	0.0		/	/
of which[3]:							
- discretionary & elasticity component	-0.2		/	0.0		/	/
- composition component	0.0		/	0.0		/	/
Difference COM – OECD[1]	/	0.2		/	0.3		/
-of which[3]:							
- discretionary & elasticity component	/	-0.1		/	-0.1		/
- composition component	/	0.4		/	0.4		/
p.m.: Elasticity							
- of taxes to tax base[7]	0.5	1.0	1.3	1.0	1.0	1.3	0.8
- of tax base[7] to GDP	1.0	1.1	0.6	1.1	1.0	0.6	1.1

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

Source:
Commission services' autumn 2006 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)