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Ministry of Finance

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STABILITY AND GROWTH
PROGRAMME
2002-2006**

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INTRODUCTION

In accordance with Council Regulation EC 1466/97, the Grand-Duchy of Luxembourg presented in early 1999 its first Stability and Growth Programme to the Council and to the Commission. The present document is the fifth update of this Programme. It covers the time period 2002-2006.

As was the case with previous updates, the present update of the Stability and Growth Programme has been prepared in parallel with the draft budget law, which was laid before Parliament on 10 September 2003 and which is expected to be adopted by Parliament around mid-December 2003. The current update also takes into account the key data of the multi-annual investment spending plan and the budget amendments adopted by the government in November 2003.

The updated Luxembourg Stability and Growth Programme has been approved by the Cabinet and has also been communicated to Parliament.

The Stability and Growth Programme is available on the website of the Ministry of Finance <http://www.etat.lu/FI/>.

I. ECONOMIC OUTLOOK

In October 2003, the Central bureau for statistics and economic analysis (STATEC) presented a new macro-economic forecast covering the years 2003-2006. This forecast updates and extends the earlier spring 2003 forecast.

I.1. Exogenous framework

In accordance with the forecasts issued by the principal international organisations, STATEC expects real GDP in the European Union (EU-15) to grow by 0.5% in 2003, 1.9% in 2004 and 2.4% in 2005 and 2006.

Economic growth in the relevant foreign markets is expected to reach 2.2% in 2003. It is then forecast to expand to 5.2% in 2004 and to 6.2% in 2005 and 2006.

With respect to the financial services sector, STATEC expects a quasi-stagnation of activity in 2003. In 2004, the level of activity will slowly start to pick up again and the sector will return to cruising speed in 2005 and 2006. However, the financial sector growth rates are not expected to return to the very high levels observed in the late 1990s.

For 2004, the draft central government budget and the forecasts of the General Inspection for Social Security (IGSS) have been taken into account in order to forecast the behaviour of the public sector. For 2005 and 2006, it is assumed that the government will pursue its policy of strict public spending controls, in accordance with the revenue and spending forecasts for general government as set out in Table 2 below.

I.2. The Luxembourg economy in 2003

Following two successive years of spectacular economic growth in 1999 and 2000 (+7.8% and +9.1% respectively), the Luxembourg economy has entered a phase of more apathetic economic growth in 2001-2003. As the world economy remains in a fragile state, it is expected that real GDP will grow by 1.2% in 2003.

Private and public consumption remain fairly strong but they nonetheless start to slowly adjust to general economic circumstances that have clearly deteriorated. Indeed, in 2003 private consumption will increase by 1.6% although it was still growing at a rate of 2.3% in 2002. Public consumption, which grew by 4.2% in 2002, is expected to grow by 3.8% in 2003.

The growth rate of exports and imports, which was negative in 2002, becomes positive again in 2003. The strong performance of some exporting (for instance industry) and importing (for instance retail sales and services provided to households and enterprises) sectors also accounts for the relatively good performance of the labour market.

Gross capital formation, which was negative in 2002 (-1.4%), returns to a positive growth rate in 2003 (+0.5%).

At a sectoral level, during the first seven months of the year industrial output has increased by 1.8% (2.6% excluding the iron and steel industry) relative to the same period of the previous year. The results of recent business surveys indicate that prudent optimism regarding the change in industrial production during the second semester 2003 is spreading.

The construction sector remains in difficulties. In fact, relative to the first semester 2002, this sector has recorded a decrease in output of 2.2% on an annual basis. However, despite this negative trend over the past few months, the overall level of activity in the sector remains very high. Also, while non-residential investment is falling, residential investment – in part stimulated by fairly low interest rates – continues to expand rapidly.

TABLE 1: Growth and associated factors

	2002	2003	2004	2005	2006
GDP growth at constant market prices	1.3	1.2	2.0	3.0	3.8
GDP level at current market prices (in billion €)	22.4	23.0	24.1	25.6	27.0
GDP deflator	0.6	1.7	2.7	2.8	1.9
HICP change	2.1	2.5	1.5	1.3	1.2
Consumer price index (national variant)	2.3	2.0	1.8	1.6	1.3
Employment growth					
Total employment	3.1	1.7	1.1	1.8	2.2
National employment	1.6	0.6	0.1	0.3	0.5
<i>Sources of growth: percentage change at constant prices</i>					
Private consumption expenditure	2.3	1.6	1.9	2.5	2.5
Government consumption expenditure	4.2	3.8	2.1	2.9	3.0
Gross fixed capital formation	-1.4	0.5	1.9	3.3	6.2
Export of goods and services	-0.3	1.6	3.7	5.4	6.9
Imports of goods and services	-1.6	2.0	3.9	5.6	7.1
<i>Contribution to GDP growth</i>					
Final domestic demand	1.7	1.4	1.2	1.6	1.6
External balance of goods and services	1.7	-0.2	0.4	0.6	0.8

Private consumption remains fairly buoyant and this has a positive impact on the wholesale and retail trade sector. During the first semester 2003, turnover increased by 6.9% on an annual basis for wholesale trade, by 3.2% for retail trade and by 7.2%

for sale and repair of motor vehicles. Altogether, the turnover of the sector has increased by 6.5% on an annual basis.

In this context, it has to be underlined that the consumer confidence index published by the Luxembourg Central Bank has increased markedly between July and September 2003. The subjective evaluation of the current and future economic conditions of the financial situation of households and of the prospects for future inflation have all improved.

Generally speaking, tradable services exhibit a positive trend during the first semester 2003. However, at the level of the sub-branches there is a wide spread in the respective performances. Indeed, turnover of telecommunications and business services has increased by 2.1% and 13.7% respectively on a year earlier. Turnover of transportation and other tradable services has decreased by 0.7% and 2.6% respectively. It is also worthwhile to highlight the strong performance of the air cargo sector, which grows at a rate well above the Europe-wide average for these activities, thus exhibiting a strong resistance to adverse economic conditions.

The financial sector, which was the engine of economic growth prior to 2001, remains stagnant during the first semester 2003, mainly as a consequence of the economic turmoil at the international level. Despite a positive trend on the stock markets since April 2003, the first tangible signs of a recovery have only materialized during the third term. From January to September 2003, operating profit decreased by 2.4% on a year earlier with, however, a recovery during the third term. The sector continues the process of rigorously cutting down on non-essential expenditures and this cost-rationalisation has not remained without consequences for the labour market.

The labour market is adjusting gradually to the lower economic growth, but total employment continues to rise. In fact, it increased from 285.700 jobs in 2002 to 290.500 jobs in 2003, which is a relative change of +1.7%.

The trend in unemployment is more worrying. It reached a low of only 2.4% by mid-2002 but by late September 2003, it had risen to 3.9%.

Consumer price inflation amounts to 2%. In August 2003, all wages and salaries were increased by 2.5%, aggregate consumer price inflation having reached the automatic indexation threshold.

I.3. Medium term economic prospects (2004-2006)

The medium term macroeconomic forecast is prudently optimistic. In 2004, real GDP is expected to grow at a rate of 2%. Due to a more favourable international environment, imports and exports of goods and services will increase by 3.9% and 3.7% respectively. Private consumption and gross fixed capital formation will increase by 1.9%. However, due to the more restrictive fiscal policy set out by the government in the draft budget for 2004, public spending will increase less rapidly than in the past. In fact, it is expected that government consumption expenditure will increase by only 2.1%. This is lower than the observed growth rates of 4.2% in 2002 and 3.8% in 2003.

In 2005 and 2006, the Luxembourg economy is expected to gather speed with a real growth rate of GDP equal to 3.0% and 3.8% respectively. Economic growth in these

years will be fuelled by robust private and public consumption growth, but also by a re-vitalised international economy.

In 2004, the labour market will suffer the full impact of the negative macroeconomic shock. As a result, total employment is forecast to increase by only 1.1% and national employment (i.e. the employment of residents) will stagnate (+0.1%). Furthermore, unemployment will continue to rise and the unemployment rate will cross the 4% threshold. In 2005 and 2006, total employment will increase by approximately 2%. This growth rate is significantly lower than the growth rates observed prior to 2001 and it reflects the concern of enterprises to rigorously control expenditure growth following the exuberance of the late 1990s.

Consumer price inflation will be fairly moderate and exhibits a clear downward trend. In fact, inflation is expected to fall gradually from 1.8% in 2004 to 1.3% in 2006. As a result, there will be no automatic indexation of wages and salaries in 2004 and the relevant threshold for the next automatic indexation should be reached in early 2005.

II. FISCAL POLICY GUIDELINES

II.1. The 2004 draft budget

The following table shows the key figures of the 2004 draft budget. For comparative purposes, data for the budget years 2002 (general account) and 2003 (approved budget) are also included in this table:

	General account (final result) 2002	Approved budget 2003	Draft budget 2004	Change 03/04	
				in €	in %
Total budget					
<u>Revenue</u>					
in €	6,200,421.0	6,349,712.3	6,390,089.5	+40,377.2	+0.64%
in % of GDP	27.69%	27.56%	26.46%	...	-1.10%
<u>Expenditures</u>					
in €	6,200,177.2	6,349,318.4	6,477,943.4	+128,625.0	+2.03%
in % of GDP	27.68%	27.56%	26.83%	...	-0.73%
<u>Balance</u>					
in €	+243.8	+393.9	-87,853.9	-88,247.8	...
in % of GDP	+0.00%	+0.00%	-0.36%	...	-0.36%

Note: Amounts shown in this table are in thousands of €.

For a complete assessment of the overall trends in central government revenue and expenditures it is necessary to take into account – in addition to the revenue and expenditure information given in the budget – the revenues and expenditures of the government special investment funds. Currently, there are 28 such funds. A special fund is created by law and the law specifies the precise nature of the transactions that can be carried out by a specific fund. The special funds have been introduced to provide greater flexibility, as by their very nature, the annual time framework of the ordinary budget is not appropriate for certain types of government expenditures. In particular, this is the case for investment expenditures as the completion phase of projects is often stretching over several years. In principle, special funds receive annual endowments, which are recorded as expenditures in the ordinary budget. Unlike ordinary expenditures, the funds available in a special fund need not be spent within a single budget year but expenditures can be spread over several years. Furthermore, this implies that the balance available in a fund at the end of a budget year can be carried over into the next budget year.

The balance of the government's special funds is forecast to develop as follows:

	<i>Balance on 31 Dec. 2003</i>	<i>Balance on 31 Dec. 2004</i>	<i>Change 03/04</i>
Fund for the development of social and family-related infrastructures	131.3	71.7	-59.6
Fund for public health and sanitary investments	67.9	63.4	-4.5
Fund for the development of hospital infrastructures	166.9	67.8	-99.1
Fund for the development of administrative infrastructures	315.7	227.5	-88.2
Fund for the development of school infrastructures	288.4	242.1	-46.3
Fund for the development of roads and motorways	72.4	12.2	-60.2
Fund for the development of the rail infrastructure	124.2	55.1	-69.0
Other special funds	661.3	475.3	-186.1
Total	1,828.0	1,215.0	-613.0
in % of GDP	7.9%	5.0%	

Note: Amounts shown in this table are in million €.

II.2. The medium term fiscal policy framework

In its declaration to Parliament on 12 August 1999, the government insisted on the fact that in the medium- to long-run, the prosperity of the country can only be preserved if the government succeeds in maintaining the pre-conditions for balanced public finances, which are a solid basis on which to found governmental action.

In the long-term, the strategic objective of the government is to assure a balanced development of the public finances. In order for this strategy to be successful, the government needs to strictly control expenditure growth. This is also a sine qua non condition for maintaining taxes and social contributions at their very low present level.

The draft budget for 2004 was established against the backdrop of difficult economic circumstances. In fact, in 2001-2003 real economic growth in Luxembourg was around 1% per annum. For 2004, the growth forecast is slightly more optimistic (+2%) but economic growth remains sluggish compared to the growth rates observed in the recent past. The labour market is also adversely affected by the economic slowdown. As a result, total employment growth slows down while the unemployment rate increases rapidly. However, from an international perspective, the unemployment rate remains extremely low.

The less favourable macroeconomic conditions also have repercussions for public finances: on the one hand, tax revenues are less buoyant and on the other hand certain types of expenditures – for instance transfer payments to households – are

increasing more rapidly than would be the case if the economy was growing more rapidly.

The draft budget for 2004 clearly demonstrates that the government will strictly control the growth of public spending while at the same time trying to minimise potential negative spillover effects from an overly restrictive fiscal policy.

In this context, it should be pointed out that the government did not attempt to shore up faltering tax revenues by increasing tax or social contribution rates as such a decision would, in all likelihood, have stalled the economic recovery. Furthermore, the reasons for the fairly strong growth of private consumption can, at least in part, be traced back to the tax reform implemented by the current government in two stages in 2001 and 2002.

On the expenditure side, one should mention that since 2002, a new institutional framework for the monitoring of public spending decisions is in place which promotes the efficient use of public funds and which is already producing positive effects.

Some public expenditures are directly tied to the automatic indexation scale. In 2004, these expenditures amount to some 70 million € (+/- 0.3% of GDP). STATEC forecasts an inflation rate of 1.8% for 2004 and the average wage indexation scale is expected to reach 620.75 points (+1.4%) in 2004:

	2003	2004
<i>Consumer price index</i>		
Annual percentage change	+2.0%	+1.8%
<i>Wage indexation scale</i>		
Annual percentage change	+2.1%	+1.4%
Level	611.92	620.75

The draft budget for 2004 also provides for a continued sustained effort by the government in order to improve business-related and social infrastructures. In fact, the government responds to an increasing demand for modern infrastructures (school, health-care facilities, retirement homes, telecommunications infrastructures, rail and road networks etc.) by expanding supply. Consequently, the government is firmly intent on maintaining a high level of public investment spending.

In this context, it should be underlined that the investment effort in Luxembourg – as measured by the ratio between gross fixed capital formation by general government and GDP – is significantly higher than the EU average. In fact, in 2003, this ratio is expected to reach 4.9% in Luxembourg, compared to an EU average of 2.3%.

It is also important to point out that the string of budget surpluses recorded in the recent past have been allocated to a very large extent to the government's special investment funds. Consequently, the special investment funds have at their disposal substantial reserves that will allow them to finance the government's ambitious investment programme in 2004 and also thereafter. At the end of 2003, these reserves will amount to 2.5 billion € (10.4% of GDP), half of which stems from the four-year period 1999-2002 that yielded a series of high budget surpluses.

The table below shows how the budgetary reserve and the reserves of the special funds developed during the period 1990-2002:

<i>Year</i>	<i>Budgetary reserve</i>	<i>Reserves of the special funds</i>	<i>Total</i>	<i>in % of GDP</i>
1990	180.4	517.5	697.9	7.6%
1991	150.6	358.5	509.1	5.0%
1992	66.8	209.6	276.5	2.6%
1993	66.4	283.8	350.2	3.0%
1994	105.4	372.7	478	3.8%
1995	128.9	466.5	595.5	4.5%
1996	199.6	625.1	824.7	5.9%
1997	330.4	1017.5	1347.9	8.7%
1998	380.7	1322.3	1703	10.0%
1999	501	1284.4	1785.4	9.5%
2000	503.2	1744.3	2247.5	10.6%
2001	505.6	2613.6	3119.2	14.2%
2002	564.8	2515.5	3080.3	13.8%

Note: Amounts shown in this table are in million €.

III. GENERAL GOVERNMENT BUDGETARY DEVELOPMENTS IN 2002-2006

III.1. Fiscal year 2002

The fiscal year 2002 closed with a general government surplus of 547.4 million € or 2.4% of GDP. This result is much better than the forecast of a deficit of 0.3% of GDP that was made in late 2002 as part of the 4th update of the Stability and Growth Programme.

The difference between these figures is mainly due to two factors. On the one hand, public spending turned out to be lower than forecast in autumn 2002. In fact, the existence of bottlenecks prevented the investment funds from realising their entire spending plans as intended. On the other hand, tax revenues turned out higher than expected due to particularly buoyant taxes during the fourth term. This holds in particular for the corporate income tax (IRC) and for the wealth tax. The exceptionally high revenues for these two taxes were mainly due to arrears collection in relation to activities carried out prior to 2002.

The two above-mentioned factors had a positive effect mainly on the central government balance. In fact, in 2002 central government records only a small deficit of 0.2% of GDP while the previous update of the Stability Programme forecast a deficit of 2.2% of GDP. The local government balance is positive (+0.2% of GDP). This result is also better than the forecast of the 4th update of the Stability Programme. The underlying explanation is similar to that provided for central government, given that the main source of income of local government – the municipal business tax (ICC) – closely follows the trend observed for the IRC. Finally, social security recorded another large surplus (+2.4% of GDP). Despite the economic slowdown, the labour market exhibited a fair degree of resilience to the adverse shock thus accounting for the large social security surplus.

III.2. Fiscal year 2003

In 2003, the effect of the economic slowdown on the public finances will be felt much more strongly at the level of the three sub-sectors of general government. As a result, the general government balance will decline to -0.6% of GDP.

The adverse economic conditions exhibit particularly negative consequences for the central government finances. In fact, central government revenues increase by only 4% while expenditures rise by 12%. As a result, the central government balance will deteriorate to -2.5% of GDP.

The rapid increase in central government spending is due to high levels of investment spending, which on the one hand responds to an increasing demand stimulated by a growing population and on the other hand reflects the government's efforts to stimulate economic activity. Furthermore, collective consumption increases more rapidly than the nominal GDP growth rate. This can be explained by the fact that when the draft budget for 2003 was prepared (in 2002) the severity of the impending economic downturn was not fully anticipated (neither by the Luxembourg forecasters, nor by anyone else). Finally, one should point out that the rapid increase in unemployment also has a negative effect on public spending.

On the revenue side, 2003 is characterised by IRC and ICC revenues that are clearly less buoyant than in years gone by. In fact, the 2002 tax reform coincided with the entry into a phase of economic quasi-stagnation that adversely affected corporate profits. The joint effect will start to make itself felt in 2003 and then carry over into 2004 and 2005. Furthermore, the subscription tax that is linked to developments in the financial markets has been severely affected by the bursting of the speculative stock market bubble.

TABLE 2: General government budgetary developments

<i>in % of GDP</i>	2002	2003	2004	2005	2006
General government	2.4	-0.6	-1.8	-2.3	-1.5
Central government	-0.2	-2.5	-3.2	-3.6	-3.1
Local government	0.2	0.1	-0.2	-0.2	-0.1
Social security	2.4	1.8	1.6	1.5	1.7
Total receipts	46.7	47.1	45.7	44.9	44.9
Total expenditures	44.2	47.7	47.5	47.2	46.6
Budget balance	2.4	-0.6	-1.8	-2.3	-1.7
Net interest payments	0.3	0.2	0.2	0.2	0.2
Primary balance	2.7	-0.4	-1.6	-2.1	-1.5
Taxes	30.0	30.0	28.7	27.9	28.0
Social contributions	12.4	12.8	12.7	12.8	12.6
Property income	1.8	1.6	1.7	1.7	1.7
Other	2.5	2.7	2.6	2.5	2.6
Total receipts	46.7	47.1	45.7	44.9	44.9
Collective consumption	12.3	13.0	13.0	12.8	12.4
Social transfers in kind	5.1	5.2	5.4	5.4	5.3
Social transfers other than in kind	15.7	16.9	16.8	16.8	16.5
Interest payments	0.3	0.2	0.2	0.2	0.2
Subsidies	1.7	1.9	1.8	1.7	1.7
Gross fixed capital formation	4.7	4.9	4.5	4.5	4.5
Other	4.6	5.6	5.8	5.8	5.8
Total expenditures	44.2	47.7	47.5	47.2	46.4

The resilience of employment and private consumption to the adverse economic shock has contributed to stabilising tax revenues related to their respective tax bases. In fact, the withholding tax on wages and salaries, the value added tax and the excise taxes collected jointly with Belgium as part of the BLEU (Belgium-Luxembourg Economic Union) agreement are all growing robustly.

The local government balance deteriorates somewhat but remains in positive territory (+20 million € or +0.1% of GDP). Certain types of local government revenues (e.g.

ICC) are adversely affected by the prevailing economic conditions. However, local government has managed to constrain expenditure growth more effectively than central government, for instance by slowing down the growth rate of investment spending. Overall, local government investment spending remains however at a very high level (+/- 2% of GDP).

Finally, the slowdown in the rate of job creation adversely affects the social security balance via a negative effect on social contributions. However, the social security balance remains overwhelmingly positive, exceeding 400 million € (+1.8% of GDP).

III.3. Medium-term forecast (2004 to 2006)

In 2004, the Luxembourg economy will slowly start its recovery. Nevertheless, at the level of the public finances, the full impact of the economic slowdown between 2001 and 2003 will only be felt in 2004 and 2005. As a result, general government is expected to record a deficit of -1.8% of GDP in 2004 and in 2005 the deficit is likely to exceed the 2% threshold. In 2006, the public finances situation will improve considerably. In fact, the deficit will be reduced to -1.5% of GDP.

The forecasts suggest that in 2004, the general government deficit can rise up to 1.8% of GDP. At the level of the sub-sector, the central government deficit is expected to reach 3.2% of GDP and the local government deficit is forecast to amount to 0.2% of GDP. Social security will continue to yield a surplus, which is forecast to reach 1.6% of GDP.

On the revenue side, it is expected that in 2004 corporate tax (IRC and ICC) revenues will fall by some 150-200 million € (+/- 0.6-0.8% of GDP) relative to the previous fiscal year. Furthermore, the slowdown of the labour market will adversely affect the growth rate of social contributions. As a result, the ratio between general government revenue and GDP is expected to decline from 47.1% in 2003 to 45.7% in 2004.

On the expenditure side, the draft budget for 2004 will result in a fairly sharp reduction of the growth rate of public expenditures. However, the government is fully aware of the adverse effects on the economy that too sharp a reduction of public spending could potentially have. Consequently, the government will allow for the adverse shock to be tempered by the automatic stabilizers. Overall, the ratio between general government spending and GDP will decrease somewhat from 47.7% in 2003 to 47.5% in 2004.

Despite the recovery of the economy, the public finance situation will remain tense in 2005. In fact, it is forecast that the general government deficit will further deteriorate to -2.3% of GDP.

The growth rate of corporate tax revenues will be negative for a second year running and as a result, total tax revenues will increase less rapidly than the growth rate of nominal GDP. Consequently, the ratio between general government revenue and GDP will decrease from 28.7% in 2004 to 27.9% in 2005.

The nominal growth rate of general government spending is forecast to be lower than the growth rate of nominal GDP and consequently the ratio between public spending and GDP will decrease from 47.5% to 47.2%.

In 2006, the pressure on the public finance situation will ease and the general government deficit will improve from -2.3% of GDP in 2005 to -1.5% in 2006.

The significant improvement of the general government balance in 2006 is on the one hand due to the stabilisation of the ratio between revenues and GDP (after falling for two years in a row in 2004 and 2005) and on the other hand, is due to the fact that the government pursues its strict policy of expenditure control (the ratio between public spending and GDP decreases from 47.2% in 2005 to 46.4% in 2006).

The reduction of the ratio between public spending and GDP is based on the assumption that the government will rigorously control public expenditure growth in 2005 and 2006. Furthermore, social transfers in kind and other than in kind will also grow less rapidly than over the last few years (i.e. less rapidly than during those years that witnessed increases in the generosity of transfers, e.g. as a result of the decisions of the *Rentendesch*).

IV. PUBLIC DEBT AND RESERVES: A POSITIVE NET BALANCE

IV.1. Central government financial situation

The appraisal of the financial situation of central government is incomplete if one only looks at public debt – which remains at a very low level – without taking into account the existence of the considerable reserves. These reserves were built up during the period of rapid economic growth that yielded a string of large budget surpluses. In fact, these surpluses were largely put in reserve, instead of re-injecting them into the budgetary circuit in order to finance current expenditure.

The general account (*compte général*), which closes at the end of the fiscal year, provides detailed information regarding the financial resources of central government. The government's general accounting plan matches resources to their uses, hence providing the possibility to establish the patrimonial situation of central government in the shape of a financial statement.

On 31 October 2003, this statement looked as follows:

Resources (liabilities):

• Government own resources (reserves and counterpart of financial assets)	5,095 million €
• Third party assets deposited with the Government	97 million €
• Third party assets borrowed by the Government (net public debt)	404 million €

Uses (assets):

• Bank financial assets	3,026 million €
• Non-bank financial assets	2,250 million €
• Balance (net borrowing)	320 million €

The analysis of the general account for the fiscal year 2002 – which has been submitted to Parliament for approval by the government – shows that at the end of the fiscal year 2002, central government had at its disposal, in addition to borrowed funds, reserves totalling 3,080 million € (> 13% of GDP). These reserves correspond to the cumulative sum of the net budget surpluses realised during the fiscal years 1944 to 2002.

Of these, 2,516 million € have been transferred to the special funds i.e., they have been used to realise the specific objective for which each special fund was set up via a special law. On the basis of the final result of the fiscal year 2002, a supplementary endowment to the special funds of 59 million € is planned. Over the course of a fiscal year, the resources available in the special funds fluctuate due, on the one hand, to the inflow of the budgetary endowments, and, on the other hand, the outflows relating

to the payment of completed works. At the end of October 2003, resources available in the special funds amounted to 2,554 million €.

The special funds are typically used to finance projects that by their very nature are not appropriate to be dealt with via the ordinary budget. In fact, these are typically large investment projects that take several years to complete and where the relevant expenditures are spread out over several fiscal years.

The expenditures of the special funds are not tied to a specific fiscal year and funds available at the end of a fiscal year can be carried over to the next. This allows the government to build up reserves in the special funds that can be used in order to finance future investment projects.

Due to the existence of these sizeable reserves, the ordinary central government budget is less sensitive to fluctuations in economic activity. Furthermore, the existence of the reserves allows the government to maintain a high level of investment spending, even when the economy is slowing down. Consequently, the future deficits forecast in this update are offset by the existing reserves.

The balance of these reserves, amounting to 565 million € at the end of the fiscal year 2002, has not been allocated to any special purpose. This is the budgetary reserve that is the cumulative sum of budget surpluses realised since 1944. This reserve, whose fluctuations are a function of the central government balance, is used to ensure that the financial situation of central government is balanced, for instance in circumstances where revenues decrease due to an economic slump.

The existence of the budgetary reserve provides additional degrees of freedom to the government in order to react to a deterioration of the financial situation of central government without having to use alternative channels, e.g. issuing new debt or increasing the tax burden.

The budgetary reserve is used to carry out payments relating to previous fiscal years in cases where the settlement was not previously possible for technical reasons (145 million €), or to overcome short-term cash-flow problems caused by the non-synchronicity of government receipts and expenditures. On 31 October 2003, it amounted to 292 million €.

Furthermore, the government has occasionally acquired financial assets via participations or loans given. At the end of October 2003, the value of these assets amounted to 2,250 million €. The accounting counterpart of these assets increases the government's own resources.

The sum of the government's own resources, borrowed funds and third party assets deposited with the government are invested in a variety of bank and non-bank financial assets, and the returns that they are yielding represent an additional source of income for the government.

The balance between the assets and liabilities, amounting to some 320 million € at the end of October 2003, represents net government borrowing and is equivalent to the amount of uncovered public debt (Treasury bills and loans).

IV.2. Public debt

Article 104 of the EC Treaty stipulates that the ratio of public debt to GDP must not exceed 60%. Furthermore, the level of public debt determines the net borrowing capacity. Consequently, it is particularly important to monitor debt levels and the ensuing financial burden.

Central government debt

Monetary signs

The quantity of monetary signs issued by the Treasury as coins has increased rapidly since the replacement of Belgian and Luxembourg *francs* coins with euro coins.

On 31 October 2003, euro coins worth 77.56 million € were in circulation. Furthermore, *francs* coins worth 5.67 million € have, to this date, not yet been returned. The Treasury is committed to convert these coins until 31 December 2004. In addition, the Treasury will reimburse in 2005 the residual amount of 0.61 million € relating to a Treasury bond emitted per contra *francs* notes issued by BIL.

Treasury bills

The Treasury bills issued by the government are not actually reimbursable funds collected by the government. Instead, these bills enact long-term commitments *vis-à-vis* international financial institutions (EBRD, UNCTAD, IFAD, GEF, IDA, MIGA). These bills do not carry interest and they are paid if and when they are due. On 31 October 2003, outstanding bills totalled 8.54 million €. The payment of the Treasury bills is carried out via the special fund dedicated to the repayment of the public debt. On 31 October 2003, available reserves in this fund amounted to 6.09 million €, implying that the net debt in the form of Treasury bills is equal to 2.45 million €.

Government loans

The government has not issued new loans during the fiscal years 1998 to 2003. The government intends to repay the public debt as and when it is falling due.

On 31 October 2003, gross public debt in the form of government loans amounted to 473.77 million € (2.04% of GDP). Of these, 156.27 million € are currently covered by the reserves of the special fund dedicated to the reimbursement of the public debt, implying that the net debt in the form of government loans totals 317.49 million €.

A breakdown of total outstanding public debt by financial instruments produces the following situation:

- Linear loans (OLUX): 82.76%
- Bonds: 7.85%
- Bank loans: 9.39%.

The public debt contracted by the government is almost entirely denominated in euros. Only a small number of loans come under the category foreign debt, either because they are denominated in CHF, or based on the characteristics of the creditor. Foreign debt amounts to 9.39% of the total.

Other features of the public debt as of 31 October 2003 are as follows:

- Weighted average interest rate: 6.32%
- Debt per capita: 1,056.80 €
- Average duration: 1 year and 354 days

On this basis, central government debt and the ensuing financial burden will develop as follows:

Year	<i>Public debt outstanding on 31 December (in million €)</i>	<i>Financial burden: capital plus interest (in million €)</i>
2002	642.37	...
2003	435.49	248.31
2004	392.12	71.22
2005	248.59	169.46
2006	94.45	168.58
2007	0	99.64

Over the five fiscal years 2003 to 2007, the repayment of the principal and the interest of the public debt will impose a total cost of 826.54 million €, or on average 165.31 million € per fiscal year. As part of this burden is already covered by the reserves accumulated in the special fund dedicated to the repayment of the public debt, the actual financial burden only amounts to an average of 100.18 million € for the fiscal years 2003 to 2007.

The draft budget for 2004 foresees the possibility for central government to issue new debt up to a total of 120 million € in order to finance investment projects via special funds dedicated to roads and motorway construction as well as to railroads construction. Given that the overall financial situation of central governments yields a positive net balance, the use of debt financing is not unavoidable. However, in the short term, debt financing is justified in order to benefit from low interest rates, while in the medium term it guarantees a higher degree of liquidity to the Treasury given the ambitious spending plans as set out in the multi-annual capital spending programme. Furthermore, this update of the Stability Programme assumes – in line with the multi-annual capital spending programme – that the central government will issue new debt of up to 150 million € per annum in 2005 and 2006. This information is included in Table 3, which furthermore assumes that central government will continue to reimburse the existing debt as planned.

Local government debt

The conditions under which local authorities may contract new loans are very stringent. In fact, they may only contract new loans to finance extraordinary expenditures, and only if no other source of finance is either available or economically efficient. In addition, local authorities must provide guarantees regarding their ability to repay the debt. The budgets of the local authorities must be approved by the Home Secretary (*Ministre de l'Intérieur*) who, if necessary, amends

the budget in order to ensure that it complies with the relevant rules and regulations. Furthermore, the legislation stringently regulates the conditions under which local authority syndicates may contract new loans.

TABLE 3: General government debt developments

<i>in % of GDP</i>	2002	2003	2004	2005	2006
Gross debt level	5.7	4.9	5.2	5.0	4.4
Central government	3.4	2.6	2.8	2.6	2.2
Local government	2.3	2.3	2.4	2.4	2.2
Social security	0.0	0.0	0.0	0.0	0.0
Change in gross debt	0.3	-0.6	0.3	-0.2	-0.6
Contributions to change in gross debt					
Primary balance	2.7	-0.4	-1.6	-2.1	-1.3
Interest payments	0.3	0.2	0.2	0.2	0.2
Nominal GDP growth	0.02	0.00	-0.02	-0.02	-0.01

The level of outstanding debt of the Luxembourg local authorities remains small in relation to GDP (roughly 2.3% of GDP). The debt level is expected to increase marginally in 2004 and 2005. The aggregate debt of the local authorities totalled 510 million € at the end of 2002.

Social security debt

The Luxembourg social security has recently generated a string of structural surpluses and consequently its debt tends towards zero.

V. CYCLICALLY-ADJUSTED BALANCE AND SENSITIVITY ANALYSIS

V.I. Cyclically-adjusted balance

The cyclically-adjusted balance provides information on budgetary developments if the level of economic activity is taken into account. This is done by re-estimating general government revenues and expenditures under the assumption that the economy fully utilizes its productive resources. During an economic downturn, resources are under-utilized relative to the potential utilization rate. The output gap is the difference between observed/actual and potential GDP.

However, potential output cannot be observed and it must therefore be estimated. In the literature, there are several methods to compute potential output, but they do not all necessarily yield the same results. STATEC recently published potential output estimations for Luxembourg (see Note de conjoncture No. 2-03) using the so-called production function method. The relevant production function is a Cobb-Douglas type function with constant returns to scale. Furthermore, it is assumed that factor markets are perfectly competitive. Notice, however, that in Luxembourg, the relevant labour supply is not the domestic or 'national' labour supply. In fact, the presence of more than 100,000 cross-border workers on the Luxembourg labour market clearly demonstrates that the relevant labour market stretches well beyond the national boundaries of Luxembourg and into the neighbouring countries. This particular feature of the Luxembourg economy makes the estimation of potential output via the production function method considerably more difficult than in other circumstances.

TABLE 4: Cyclical developments

<i>in % of GDP</i>	2002	2003	2004	2005	2006
GDP growth rate at constant prices	1.3	1.2	2.0	3.0	3.8
Actual balance	2.4	-0.6	-1.8	-2.3	-1.5
Interest payments	0.3	0.2	0.2	0.2	0.2
Potential GDP growth	5.2	4.7	4.6	4.7	4.2
Output gap	1.6	-1.8	-4.4	-6.1	-6.6
Cyclical budgetary component	-3.0	-3.0	-3.1	-3.1	-2.9
Cyclically-adjusted balance	5.4	2.4	1.0	0.6	1.2
Cyclically-adjusted primary balance	5.7	2.7	1.2	0.8	1.4

For the time period 2003 to 2006, STATEC bases itself on the exogenous assumption that the potential growth rate of the economy amounts to approximately 4.5% per annum. However, in the presence of a prolonged negative shock, the potential output of a small open economy is likely to fall over time, as has been the case for Luxembourg in the past. Consequently, it may well be that towards the end of the forecast horizon the potential output estimated via the production function method is too high. On the other hand, the positive output gap in 2002 can be explained by the relative inertia of potential GDP and the very high actual growth rates observed during 1997-2000.

Throughout the years 2002 to 2006, the potential growth rate is higher than the actual growth rate. From 2003 onwards, the output gap is negative. According to the production function method, the output gap is very high during 2004-2006 and the trend is increasing.

The cyclically-adjusted balance deteriorates considerably between 2002 and 2006, but it nevertheless remains positive throughout. This clearly demonstrates the negative effects that the economic slowdown exerts on the public finances. The magnitude of the gap between the actual balance and the cyclically-adjusted balance clearly shows that budgetary developments in Luxembourg heavily rely on the stability and growth of the European Union economies. Finally, these data suggest that the public finance situation is likely to improve rapidly as soon as a stable growth pattern returns to the Luxembourg economy.

V.2. Comparison with the previous Stability Programme and sensitivity analysis

The analysis of future budgetary developments is subject to a high degree of uncertainty. This is clearly visible from Table 5, which shows the divergences from the previous Stability Programme.

With respect to GDP growth, the divergences between the latest and the previous update are much smaller than used to be the case in previous years. On the one hand, this may be traced back to improvements in the STATEC forecasting abilities. On the other hand, it should be noted that the economy was not recently exposed to large unanticipated negative shocks, as had been the case in previous years.

With respect to the public finance situation, it should be noted that the latest forecasts for 2003 roughly correspond to the forecasts of the previous update. However, the medium term outlook has worsened considerably since the last update.

The differences between the current and previous forecasts are mainly due to revised expenditure forecasts and, albeit to a lesser extent, to revised revenue forecasts. In fact, in the previous update, the forecasts for the revenue to GDP ratios were 46.0% for 2004 and 45.6% for 2005. In the latest update, these ratios have been revised downwards to 45.7% in 2004 and 44.9% in 2005. Part of the explanation is provided by the lower than expected economic growth. However, the main reason resides with developments in the financial sector. In fact, the financial sector accounts for a substantial share of total tax revenue. The sector was hit much harder than any other sector by the current economic downturn and its recovery is also expected to be slower. Furthermore, the negative shock to the financial sector does not have an immediate negative effect on tax revenue, but it affects revenue with a lag of 2 to 3 years. For this reason, revenue forecasts for 2004 and especially 2005 have been revised downwards.

On the expenditure side, the previous update forecast that the expenditure to GDP ratio would decrease at a fairly sustained rate between 2003 and 2005, while the current programme merely assumes that this ratio will stabilize. On the one hand, the resilience of public spending is a consequence of the economic downturn and the increase in the unemployment rate, which led to increases in transfer payments to households. On the other hand, the government refrained from indiscriminately slashing public spending in order to avoid adverse spillover effects that would have

undermined the economic recovery (e.g. by maintaining a high level of investment spending).

TABLE 5: Divergence from previous update

<i>in % of GDP</i>	2002	2003	2004	2005
GDP growth				
Previous update	0.5	1.2	2.4	3.1
Latest update	1.3	1.2	2.0	3.0
Difference	+0.8	+/-0	-0.4	-0.1
Actual budget balance				
Previous update	-0.3	-0.3	-0.7	-0.1
Latest update	2.4	-0.6	-1.8	-2.3
Difference	+2.1	-0.3	-0.7	-2.2
Gross debt levels				
Previous update	5.1	4.1	3.8	2.9
Latest update	5.7	4.9	5.2	5.0
Difference	+0.8	+0.8	+1.4	+2.1

Finally, the latest update also forecasts an increase in public debt relative to the previous update. This is due to the fact that the previous update did not foresee the issue of new public debt over the forecasting horizon, whereas in the latest update it is assumed – in accordance with the 2004 draft budget and the multi-annual capital spending programme – that central government will issue new debt in 2004 and thereafter.

The preceding analysis has shown that budgetary developments are highly dependent upon a series of factors that are themselves subject to uncertainty. Thus, the forecasts of the latest update are based on certain assumptions and the results are likely to change if the assumptions turn out to be incorrect. As a result, it is worthwhile examining the likely impact on our forecasts of assumptions that ex post may turn out to have been erroneous.

For this reason, we have carried out a sensitivity analysis that examines the sensitivity of our forecasts to changes in the underlying economic growth assumptions. In fact, we are examining two alternative scenarios: first, we examine the effects on the budget balance of lower than expected economic growth and second we examine the effects of higher than expected economic growth.

Notice that the two alternative growth scenarios should not be interpreted as providing lower and upper bounds for GDP growth. They are purely technical assumptions and their sole purpose is to demonstrate the sensitivity of the public finance forecasts to changing economic conditions.

	2004	2005	2006
GDP growth rate			
'baseline'	2.0	3.0	3.8
'low growth' scenario	1.5	2.5	3.5
'high growth' scenario	2.5	3.5	4.1
General government budget balance			
'baseline'	-1.8	-2.3	-1.5
'low growth' scenario	-2.2	-2.5	-1.8
'high growth' scenario	-1.7	-2.0	-1.2

The sensitivity analysis shows that under less favourable economic conditions, the budgetary situation of general government will further deteriorate with the deficit reaching a ceiling of -2.5% of GDP in 2005. Note that the 'direct' effect of lower than anticipated economic growth in 2005 is relatively subdued as most of the deterioration of the government balance in 2005 is due to the weak economic conditions in 2001-2004.

Under the hypothesis of higher than expected economic growth, the general government deficit will stabilise in the region of 2% of GDP in 2004 and 2005. In 2005, the government balance will improve substantially relative to the 'baseline' as there will be higher tax revenues directly related to current economic conditions (e.g. value-added tax, withholding tax on wages and salaries) and lower transfer payments.

Besides the uncertainty regarding future economic developments, budgetary developments are also likely to be affected by a series of other factors some of which are briefly discussed below.

On the expenditure side, the uncertainty stems from three sources. First, regarding the wages and salaries of public employees, this update of the Stability Programme assumes that in 2005 and 2006 they will only increase in line with the automatic wage indexation scale. Furthermore, the Programme assumes that in 2005 pensions will be increased by 2% in real terms. In fact, the existing legislation provides for an adjustment of pensions to the real wage growth in the economy. This adjustment is supposed to take place every two years. Increasing all pensions by 2% will cost approximately 80 million € per annum ($\pm 0.3\%$ of GDP). Note that the adjustment does not occur automatically but must be decided upon by the government. Finally, for the projections regarding future central government investment spending, the current update is based on the multi-annual capital spending plan. These projections are based upon a certain number of assumptions, for instance regarding the speed at which investment projects are completed. It is therefore possible that for purely technical reasons (e.g. bottlenecks) certain investment projects will stretch over a longer than expected period. Furthermore, the government has considerable discretionary powers to control the expenditures of the special funds should the budgetary situation of general government necessitate such a step.

On the revenue side, one should point out that the IRC and ICC revenue forecasts underlying the current update are extremely prudent. However, the margin of error of these forecasts is considerable though it is not possible to pin an exact number to it.

In fact, these revenues are a function of two variables. The first are the quarterly payments of taxes by way of advance, which depend on current economic conditions. The other are the final settlements of tax due which mainly depend on economic conditions in years gone by (between 1 and 5 years). Given that future and past growth trajectories are diverging from each other, it is currently extremely hazardous to provide an accurate forecast of these tax revenues. With respect to general government property income, it should also be pointed out that the current update is based on a very conservative estimate regarding the expected return of the reserves of the public pension system (+/- 3.5% during 2004-2006). However, draft legislation has been laid before Parliament as a result of which the expected return of the reserves (+/- 25% of GDP) will be gradually optimized (see Chapter VI below) starting from 1 January 2004.

Finally, it should be pointed out that the budgetary implications of the Tripartite (policy discussion forum bringing together the government, employers and employees) discussions of November 2003 as well as the budgetary amendments decided upon by the government in late November 2003 have been integrated into the current update (to the extent possible given the 1st December deadline for submission of the Stability Programme).

VI. LONG TERM SUSTAINABILITY OF PUBLIC FINANCES

The government has recently undertaken a number of initiatives in order to reinforce the long-term sustainability of public finances.

In 2002, new legislation regarding the transition from work to invalidity was introduced. This legislation starts producing effects from 2003 onwards. The goal of the new legislation is to maintain in work for as long as possible those workers that could previously exit the labour market by gaining access to the disability pension regime. In fact, the incidence of disability pensions is particularly high in Luxembourg, and much higher than the EU average. In 2001, approximately one in three new pensions were disability pensions. It is expected that as a result of the newly introduced legislation the effective retirement age will eventually increase.

A second initiative regards the investment strategy of the reserve of the public pension system.

In 2000, the International Labor Organization (ILO) examined the actuarial and financial sustainability of the Luxembourg public pension system. In its final report, the ILO issued a clean bill of health regarding the financial sustainability of the pension system, in particular because of the existence of a sizeable financing reserve.

The reserves of the public pension system are continuing to increase. In fact, on 31 December 2002, the reserve amounted to 5.2 billion € or 23.1% of GDP. Despite the slowdown in employment growth, the reserve has continued to increase in 2003. It is expected that by the end of 2003, the reserve will have increased to 24.5% of GDP. This positive trend will continue during 2004-2006 and the reserve is expected to reach 26.5% of GDP by 2006.

Growth of the reserves of the public pension system

<i>year</i>	<i>reserve</i>	<i>in % of GDP</i>
1985	1016.2	17.4%
1990	1783.3	19.4%
1995	2809.4	21.3%
2000	4149.3	19.5%
2001	4768.8	21.7%
2002	5176.1	23.1%
2003	5653.0	24.5%
2004	6041.2	25.0%
2005	6571.0	25.7%
2006	7160.6	26.5%

Note: The amounts shown in this table are in million €.

The ILO report served as a basis for the discussions of the Round Table on pensions (*Rentendesch*) that was convened between March and July 2001. With respect to the reserve of the public pension system, the *Rentendesch* decided to review the investment strategy of the reserve.

In fact, the investment strategy, as defined by articles 247 to 249 of the Social Insurance Code, is extremely prudent. However, a careful assessment of the investment strategy arrived at the conclusion that the return on the investments could be optimised without incurring additional risk.

Consequently, in order to ensure a higher return on the investment of the reserves of the public pension system, a new investment strategy was devised that foresees the investment of the reserve in a range of instruments. The portfolio will be managed by a mutual investment fund overseen by the Minister in charge of social security.

The reserve will be invested according to the following strategic weights:

<i>Instrument</i>	<i>Strategic weight</i>
Bonds (and the like)	26%
Stocks (and the like)	20%
Real estate	6%
Loans	20%
Secured debt	14%
Liquid assets (and the like)	14%
Total	100%

The board of the mutual investment fund may periodically review the strategic weights assigned to the different types of instruments. However, the Minister in charge of social security must approve any changes before they become effective.

The new investment strategy will be introduced progressively from 1st January 2004 onwards.

APPENDIX

TABLE 0: Basic assumptions

	2002	2003	2004	2005	2006
Short term interest rates (annual average)	3.3	2.3	2.3	3.0	3.5
Long term interest rates (annual average)	4.9	4.4	4.3	4.7	5.1
€/USD exchange rate (1 € = ... \$)	0.95	1.12	1.13	1.13	1.13
EU-15 GDP growth rate	1.1	0.5	1.9	2.4	2.4
Economic growth in the relevant foreign markets*	-0.6	2.2	5.2	6.2	6.2
World import prices (export prices of the main trading partners, in €)	0.7	-0.3	0.9	1.7	1.7
Oil prices (\$/barrel)	24.9	28.1	25.7	25.0	25.0

* Arithmetic mean goods + services (excl. financial services)