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Introduction

In accordance with Council Regulation EC 1466/97, the Grand Duchy of Luxembourg presented its first stability and growth programme to the Council and the European Commission at the beginning of 1999. The present document is the eighth update of this programme, covering the 2005-2009 time period.

The present update of the stability and growth programme has been prepared in parallel with the 2007 draft budget law. The draft budget was presented to Parliament on 11 October 2006 and will be the subject of a final vote towards mid-December 2006. The draft budget is available on the website of the *Inspection générale des finances* under <http://www.igf.etat.lu/pb2007.pdf>. This update also takes into account the key data of the multi-annual investment spending plan for the 2007-2010 time period.

The 8th update of the Luxembourg stability and growth programme has been approved by the Cabinet and transmitted to Parliament. It is available on the website of the Ministry of Finance under <http://www.etat.lu/FI/>.

Parliament has also been notified of the Council's opinion on the previous update of the stability and growth programme.

I. General guidelines and objectives of fiscal policy

From 1993 to 2003, the Luxembourg general government budgetary situation generated a surplus. In 2001, the budget surplus reached a peak of 6.1% of GDP. The economic slowdown of 2001-2003, however, had a significant impact on public finances and, as a result, these budget surpluses disappeared.

In 2004, the general government budget balance became negative. The Government appointed following the June 2004 legislative elections pledged to maintain stable public finances and to continue to implement a fiscal policy in strict compliance with the Stability and Growth Pact. To this end, the governmental programme foresees in particular that public expenditure growth is maintained at a rate compatible with the medium-term economic growth and that public debt is maintained at a low level.

Nevertheless, following the “structuralisation” of these budgetary difficulties, the Government faced new challenges.

In a first stage, the deterioration of public finances was indeed economic in nature. In order to stabilise economic activity and to promote a rapid return to trend growth, the Government allowed automatic stabilisers to work freely and it actively implemented a counter-cyclical fiscal policy, in particular by maintaining a high level of investment spending. In a second stage, however, the budget deficit became persistent. Once the initial growth shock had worn off, the economy experienced “remanence” effects, in particular in terms of unemployment and inflation rates, which rose to levels well above historical figures. The increase in unemployment and the growth of other social transfers put substantial upward pressure on public spending. Furthermore, the acceleration of inflation in conjunction with the automatic indexation mechanism contributed to a disanchoring of public spending growth.

In early 2006, the Government engaged in talks with social partners in a bid to enhance the competitiveness of the Luxembourg economy and to regain a balanced position of public finances by means of structural measures.

In April 2006, the Tripartite Coordinating Committee agreed on a set of measures following the principle of “restoring equilibriums, securing the future”. The Government and the social partners diagnosed a number of problems, primarily concerning public finances, the labour market and the level of inflation.

In terms of public finances, the Tripartite Coordinating Committee endorsed the assessment that the deterioration of the budgetary situation could essentially be explained by too rapid a growth in public expenditure. As a result, budgetary consolidation efforts would have to concentrate on expenditure, while including – in addition – a “revenue” component. The ultimate objective of the Government is to achieve a durable reduction in trend growth of public expenditure and to avoid the re-emergence of a structural deficit in public finances.

Owing to the high level of uncertainty surrounding the estimate of output gaps and cyclically-adjusted budgetary balances, in particular in a small and very open economy, the Government has set itself a budgetary objective expressed in nominal terms. The Government and the social partners have stressed the need to regain a balanced budgetary position in nominal terms as soon as possible and at the latest in 2009. The objective of a balanced budget in nominal terms by the end of the projection horizon of the current stability programme update is compatible with the medium-term objective of a budget balance of -0.8% of GDP in structural terms as defined in the 7th update of the stability and growth programme.

Despite restoring a balanced budgetary position at general government level by 2009 at the latest, the central government budget balance will remain negative throughout the projection horizon of the present stability programme update ($> 2\%$ of GDP in 2006-2009). In order to guarantee medium- and long-term stability of public finances and to maintain a low level of public debt, budget consolidation efforts will thus need to be undertaken at central government level beyond the projection horizon of the stability programme, with the aim of regaining a balanced budgetary position of all general government sub-sectors.

II. Economic situation and developments

II.1. The Luxembourg economy in 2006

In 2005, the GDP growth rate reached 4.0%, i.e. a slight increase compared with 2004 (3.6%). Despite the slowdown in economic growth in Europe and the United States, the Luxembourg economy has exhibited resilience, owing in particular to the dynamic nature of the activities of its financial centre.

In 2006, the Luxembourg economy took advantage of a favourable international environment, in particular following the acceleration in economic growth in the eurozone, reaching its highest level since 2000. As a result of the impetus from the sharp increase in exports, supported by the regained dynamism of domestic demand, the GDP growth rate is forecast to accelerate to 5.5% in 2006.

Inflation (HICP), which in 2004 and 2005 exceeded 3% per year, will once more fall below 3% in 2006. It should be noted that, according to the national consumer price index (NICP), the inflation rate was clearly below 3% in 2004 and 2005 and will remain below 3% in 2006. The weighting of oil prices is higher in the HICP than in the NICP and, as a result, the sharp rise in oil prices has had a more marked impact on the HICP than on the NICP.

In order to control inflation and to avoid the self-ignition trap via the automatic wage indexation mechanism in the event of new oil price shocks, the Government – with the support of the social partners – decided to adjust the automatic indexation system. Thus, the wage adaptation, which in theory was to take place in July 2006, was postponed to December 2006.

Developments on the labour market continue to be contradictory. On the one hand, domestic employment is in full swing, increasing by 3.9% in 2006. On the other hand, despite the acceleration in economic growth, the unemployment rate remains high – even increasing to 4.8% in 2006 – suggesting that unemployment is essentially a structural, rather than a cyclical, problem.

In the April 2006 agreement, the Tripartite Coordinating Committee called upon the sense of responsibility of all parties to restore the labour market situation and to reduce unemployment. To ensure a rapid labour market integration or reintegration, the effectiveness of training and employment tools will be improved. To avoid long-term unemployment, which often leads to a state of dependency on social safety benefits, measures will be taken to eliminate disincentives to seeking or accepting employment, in particular as far as young unemployed people are concerned. The Tripartite Coordinating Committee also agreed on the principle of promoting active policies aimed at keeping workers in the labour market, policies targeting more specifically “employment security” rather than “job security”. The objective is above all to

prevent workers from entering unemployment. Even on the assumption that original jobs may be lost, the focus is to facilitate anticipated changeovers in a bid to avoid transition periods of unemployment. Conditions governing unemployment entitlement criteria (residence clause) and the compensation period (which from now on will no longer exceed the period of actual employment) will also be modified. In the medium and long term, additional measures pertaining to education and vocational training will be implemented in order to improve the balance between labour supply and demand and to improve the efficiency of the *Administration de l'Emploi* (Department of Employment - ADEM).

II.2. The international economic environment: main assumptions

The economic outlook for Luxembourg in the medium term remains favourable.

The macroeconomic scenario is based on the assumption of a slight cooling down of the international economy in 2007, but world economic growth will continue to be robust, at a rate of close to 5%.

The main negative impact is likely to come from a slowdown of the economy in the United States, following the adjustment of the real estate market. For the time being, however, the central scenario remains that of a “soft landing”.

The VAT increase in Germany on 1 January 2007 is forecast to have a temporary negative impact on economic growth in the eurozone. Nevertheless, economic activity in the eurozone will continue to benefit from strong international demand, in particular from Asia. In addition, the resumption of private consumption and investment will increase the resilience of the eurozone to external growth shocks.

Inflation patterns are largely determined by oil price developments. Oil prices have recently exhibited a high degree of volatility. In accordance with the European Commission’s “common external assumptions”, the medium-term macroeconomic forecast is based on the technical assumption of oil prices exceeding USD 65/barrel in 2007-2009.

II.3. Medium-term macroeconomic forecast, 2007-2009

In 2007-2009, economic growth in Luxembourg is expected to reach 4-5% per year. In 2007, the slowdown of the economy in the eurozone in general, and in Germany in particular, will lead to growth slowing down to 4%. In 2008, economic growth is forecast to reach 5%, fuelled by domestic demand and the restored dynamism of the German economy. In 2009, economic growth is estimated to slow down to 4%, owing in particular to the slowdown in investment following increased borrowing costs and to a certain slowdown of international economic growth.

Inflation is expected to slow down significantly in comparison with the 2003-2006 time period. In 2007-2009, the inflation rate measured by the HICP is indeed likely to be situated at 1.4-2.0% per year, thus restoring price stability. Pursuant to the “Tripartite” agreement on the adjustment of the automatic wage indexation and taking into account inflation developments, no wage adaptation to price developments is foreseen for 2007. It is expected that the threshold triggering the automatic indexation mechanism will be exceeded in November 2007 and at the end of 2008, but in accordance with the “Tripartite” agreement, wage adaptation will be deferred to March 2008 and March 2009.

Domestic employment will continue to be very dynamic in 2007-2009, increasing by 3.6-3.7% per year. Similarly, unemployment is likely to drop, albeit slowly, from 4.8% in 2006 to 4.4% in 2009.

III. Budgetary situation and public debt

III.1. General guidelines of fiscal policy and medium-term objectives

The general government budgetary situation reached a deficit in 2004 and remained at a deficit in 2005. In 2006, the combined deficit of the three sub-sectors is estimated at 1.5% of GDP. In April 2006, the Government and the social partners, meeting within the “Tripartite”, reached an agreement on a set of measures to regain a balanced budgetary position as soon as possible and at the latest in 2009.

The Tripartite Coordinating Committee recognised that “the deterioration of the budgetary position is essentially due to too rapid a growth in expenditure. Consequently, budgetary consolidation efforts will concentrate on the expenditure side, while also including a ‘revenue’ component”. The main budgetary consolidation measures adopted by the Government and the social partners are as follows:

- Increase of effectiveness of public spending by reducing the relative share of current operating expenditures in total public expenditures and by limiting the taking on of new staff in the public sector.
- Adjustment of the automatic indexation system leading to a slowing down of the “automatic” growth of a significant share of public expenditure.
- Optimisation of Government investment spending, of which the relative share calculated in relation to GDP will nevertheless continue to be situated well above the average of the Member States of the European Union.
- Adjournment and staggering of adjustment of allowances and old-age pensions foreseen for 1 January 2007: allowances and pensions will be increased by 1% on 1 July 2007, followed by 0.9% on 1 July 2008.
- Increase of long-term care insurance contribution rate payable by the insured party, which on 1 January 2007 will increase from 1% to 1.4%, while freezing the government contribution in nominal terms.
- Increase of VAT rate from 12% to 15% for certain services from 1 January 2007 onwards.
- Increase of solidarity tax from 2.5% to 3.5% for households and from 4% to 5% for corporations from 1 January 2008 onwards.

These budget consolidation measures aim on the one hand to regain a balance in public finances and on the other hand to create sufficient budgetary leeway for the financing of the Government's important financial commitments and policies, which are to be implemented in favour of long-term economic growth, without however increasing fiscal pressure or placing an excessive burden on future generations. In terms of these political commitments, policies that merit particular attention include those involving employment (in particular those aiming to reduce unemployment), education and research, the development of a more efficient public transport service and the protection of the environment.

As shown in the table below, these budget consolidation measures, in conjunction with a favourable economic environment, will enable a gradual reduction of the budget deficit and the regaining of a balanced budgetary position in nominal terms in 2009:

	2006	2007	2008	2009
General government	-1.5%	-0.9%	-0.4%	+0.1%
Central government	-3.1%	-2.9%	-2.8%	-2.3%
Local government	-0.1%	-0.1%	+0.1%	+0.1%
Social security	+1.7%	+2.1%	+2.3%	+2.3%

Note: in % of GDP

According to the above forecast, the Government will meet the general government objective of a balanced position in nominal terms in 2009. Between 2006 and 2009, the nominal balance will improve by 0.5% of GDP per year in nominal terms.

The adjustment path of the deficit in nominal terms is compatible with the achievement of the medium-term objective of -0.8% of GDP in structural terms, as defined in the 7th stability programme update. This medium-term objective reflects the high potential growth ($\pm 4\%$) and the low level of public debt (debt ratio < 10% of GDP) of Luxembourg, while maintaining an appropriate budgetary safety margin below the 3% of GDP reference value for the public deficit.

The medium-term budgetary objective should be achievable from 2007 onwards and the structural balance should become positive in 2009. It should be noted, however, that in the case of Luxembourg, the computation of the cyclically-adjusted balance (and thus of structural balances) is affected by a relatively wide margin of imprecision. The "community" method for estimating the output gap is based on the computation of a "natural" unemployment rate (Nairu). Due to the strong presence of non-resident workers on the Luxembourg labour market, however, the Nairu concept poses a problem owing to the fact that labour supply is highly elastic. Alternative methods for estimating the output gap (e.g. by Statec) yield results that differ markedly from output gap estimations based on the "community" method.

Taking into account these methodological difficulties and the ensuing uncertainty, the Government prefers to express its budgetary objectives in nominal terms and to set as its medium-term objective the return to a balanced position in nominal terms.

III.2. Budgetary situation in 2005 and 2006

On 1 October 2006, Luxembourg notified the European Commission of a general government deficit amounting to 1% of GDP in 2005 and to 1.5% of GDP in 2006.

The deterioration of the budgetary situation by 0.5% of GDP can be explained by the deterioration of the central government balance from -2.3% of GDP in 2005 to -3.1% of GDP in 2006 (while local government and social security balances improved by 0.1% of GDP and 0.2% of GDP, respectively).

In terms of revenue and expenditure breakdown, it should be noted that both public revenue and expenditure have decreased in relation to GDP. Indeed, the ratio of expenditures has decreased from 43.2% in 2005 to 42.0% in 2006, whereas the ratio of revenues has decreased even more, from 42.2% to 40.5%.

The ratio of public expenditures decreased in particular owing to a strong reduction in relation to GDP of social transfers in cash and in kind (from 25% to 24.1%), but also as a result of a reduction in public consumption and investment in relation to GDP. It should be noted that the increase of “other expenditure” from 5% in 2005 to 5.4% in 2006 can be explained by an exceptional transaction, in this case the acquisition by the Government of non-financial, non-produced assets (acquisition of land).

Despite the robust economic growth in 2006, the revenue-to-GDP ratio decreased by 1.7%. In general, taxes on production and imports are less than unit-elastic with respect to GDP. In addition, the year 2006 was characterised by a slowdown in excise duty revenue. This revenue slowdown also mirrors a change in policy aimed at achieving better qualitative results in terms of health provision and environmental protection (“Kyoto”). Another explanatory factor is the sluggish development of VAT during the first half of 2006. Of note, however, is the highly dynamic development of the subscription tax in 2006, reflecting the favourable development of international stock markets.

In terms of current taxes on income and wealth, the decrease in relation to GDP can be explained to a large extent by the payment in January 2006 of a corporate income tax balance, amounting to 0.5% of GDP. In accordance with the implementation of the “time-adjusted cash” principle, this transaction was registered in 2005. Without taking this payment into account, other current taxes on income and wealth exhibited an elasticity slightly superior to unity with respect to GDP.

III.3. Budget for 2007 fiscal year

On 11 October 2006, the Government submitted to Parliament the draft budget for the 2007 fiscal year. The 2007 draft budget presents a general government deficit of €309 million, i.e. 0.9% of GDP.

Looking at the sub-sectors, the central government deficit will reach 2.9% of GDP, i.e. a 0.2% reduction compared with 2006. The local government budgetary situation is close to balance, albeit showing a slight deficit. In addition, the positive social security budget balance will improve from 1.7% of GDP in 2006 to 2.1% of GDP in 2007.

As a result of the impetus from the budget consolidation measures adopted in the “Tripartite” context regarding central government and social security, the ratio between public expenditure and GDP will decrease by 1.9%, of which 1.2% can be attributed directly to the “Tripartite” decisions.

Nevertheless, the revenue-to-GDP ratio will also continue to decrease, from 40.5% in 2006 to 39.2% in 2007, i.e. a reduction of 1.3%. This can be explained in particular by the reduction by 0.7% of the GDP share of taxes on production and imports. The factors underlying this development include the continued slowdown of excise duty revenues, already previously identified as an explanatory factor in the ratio decrease observed in 2006, and a near-stagnation of VAT revenues due in particular to the termination of activities in Luxembourg of a company with activities in the area of electronic commerce.

The share in GDP of current taxes on income and wealth will decrease by 0.5%. This reduction can in one respect be explained by the exceptionally high level of taxes levied in 2006 in the form of taxes on income from capital (withholding tax on “outbound” dividends). This tax is extremely volatile and its development lies largely outside the scope of control of the Luxembourg authorities. The strong increase in revenues in 2006 can be explained essentially by one single operation. Despite this transaction being in principle a recurrent one, uncertainty remains regarding its amount. Furthermore, the 2007 draft budget foresees a reduction in 2007 of the withholding tax rate from 20% to 15%. Consequently, the Government arrived at a prudent estimate of revenue in 2007, by foreseeing a decrease of €130 million (0.4% of GDP) in relation to the anticipated revenue for the 2006 fiscal year. The prudent estimate of the withholding tax on income from capital thus is the main factor in explaining the decrease of current taxes on income and wealth in relation to GDP. Despite the favourable development of personal income tax revenue – in particular due to dynamic employment – the moderate growth of corporate income tax revenue in 2006 and 2007 should be pointed out. Indeed, the development of this tax is to a large extent dependent on the economic developments over the course of the previous 3-5 years. As a result, the economic slowdown from the early 2000s is still being felt in corporate income tax revenues. Nevertheless, this “remanence effect” will fade from 2008 onwards.

It should be noted that, following the environmental reform of motor vehicle taxation, these tax revenues will increase by 0.12% of GDP from 2007 onwards. Additional revenues generated by this tax will be allocated to the reduction of greenhouse gas emissions, in particular via the flexibility mechanisms defined in the Kyoto Protocol.

III.4. Medium-term forecast, 2008-2009

The consolidation measures adopted in the context of the “Tripartite” will continue to generate effects in 2008 and 2009 and the general government budgetary balance will improve at a rate of 0.5% of GDP per year in nominal terms, to reach a slightly positive balance (+0.1% of GDP) in 2009. It should be pointed out that the Government is determined to implement additional budget consolidation measures if these prove to be necessary in order to ensure that the consolidation path outlined in the current stability programme update is respected.

All three sub-sectors contribute to the improvement of the general government budget balance from -0.9% of GDP in 2007 to +0.1% of GDP in 2009, i.e. an improvement of 1% in total. The most important adjustment will take place within central government, which will reduce its deficit by 0.6% of GDP. The social security balance will continue to yield a large surplus and an improvement of 0.2% of GDP is forecast between 2007 and 2009. In addition, the local government budgetary situation will undergo a slight improvement by going from a deficit of 0.1% of GDP in 2007 to a surplus of 0.1% of GDP in 2008 and 2009. Local government revenues – in particular the municipal business tax and the revenue share of the *Fonds Communal de dotation financière* directly linked to the developments of certain indirect taxes – are forecast to increase in line with GDP. In addition, as far as expenditure developments are concerned, local government must observe the same budgetary rigour as that imposed at central government level.

Between 2007 and 2009, the ratio between public expenditure and GDP will undergo a new reduction from 40.1% to 38.2%, i.e. -1.9% in total. It should be pointed out that the ratio between public expenditure and GDP will fall below the threshold of 40% and reach a level comparable to that of the 1999-2001 time period.

In accordance with the “Tripartite” agreement, developments of “operating” and remuneration expenditure in the public sector will be subject to strict control. In addition, public investment will be progressively reduced from 4.3% of GDP to 4.0% of GDP. It should be noted that compared with the average of the Member States of the eurozone and the European Union as a whole, investment spending will continue to be at a very high level, despite this reduction in relative terms.

The share in GDP of social transfers will decrease by 1.6%. Expenditure developments will slow down significantly following the decisions adopted in the “Tripartite” context, in particular regarding the adjustment of automatic indexation and the adjournment and staggering of the adjustment of allowances and old-age pensions to the general wage trend. Furthermore, the

slowdown of the expenditure growth of social transfers provided in kind can be explained by a certain set of structural measures implemented gradually from 2005 onwards with the aim of guaranteeing the financial sustainability of the health care system. The objective of these measures is to guarantee the quality and accessibility of health care. They aim to achieve a more efficient use of resources (regarding prescriptions of pharmaceutical products, for instance) and to introduce additional control mechanisms to prevent unwarranted use of the system for non-urgent care (spa treatment courses, re-education and rehabilitation treatment courses, for instance).

The increase of the share in GDP of “other expenditure” can be explained essentially by the increase in expenditures relating to greenhouse gas emissions, in particular via the flexibility mechanisms defined in the Kyoto Protocol.

The share in GDP of revenues will continue to decrease in the course of the 2007-2009 time period, going from 39.2% in 2007 to 38.3% in 2009, i.e. a reduction of 0.9% in total.

The ratio between taxes and GDP will decrease by 0.4% over the course of the 2007-2009 time period. The share in GDP of current taxes on income and wealth will stabilise on the projection horizon of the stability programme. Personal income tax and corporate income tax revenues will exhibit an elasticity superior to unity with respect to GDP. It should be noted that the effect of the solidarity tax increase from 2008 onwards will amount to approximately 0.1% of GDP in 2008 and 2009. Nevertheless, the elasticity of wealth taxes is lower and the withholding tax on income from capital is characterised by a high level of volatility, such that the current taxes on income and wealth will develop at the same rate as that of the growth of nominal GDP. The share in GDP of taxes on production and imports will continue to decrease, from 11.6% in 2007 to 11.3% in 2009. In general, indirect taxes (in particular VAT) will show an elasticity with respect to GDP that is below unity and, in addition, the level of excise duty revenue will stabilise as a result of changes in public behaviour patterns brought about by policies targeting health and the environment.

The share in GDP of social contributions will decrease from 11.4% in 2007 to 11% in 2009. The drop in the ratio between social contributions and GDP reflects a “normalisation” process. Indeed, over the course of the 1995-2000 time period, the ratio was stable at around 11%. Following the growth slowdown in 2001-2004, the ratio between social contributions and GDP was pushed upwards in particular by employment, the growth of which resisted the economic slowdown. Following the resumption from 2005 onwards of an economic growth closer to trend growth, social contributions showed an elasticity with respect to GDP that was inferior to unity, given also the ceiling applied to “contributory” revenues.

It should be pointed out that as a result of the smallness of territory and the high degree of openness of economy, public revenue developments are characterised by a relatively high level of volatility. Furthermore, “one-off” phenomena have a more significant impact on the general government budget balance than they would in larger Member States.

III.5. Public debt

Luxembourg general government debt remains well below the 60% of GDP reference value foreseen in Article 104 of the EC Treaty.

Indeed, in 2006, the ratio of general government gross debt to GDP is situated at 7.5%.

	2005	2006	2007	2008	2009
General government 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

Note: in % of GDP

At the same time, the central government has reserves at its own disposal (special funds and budgetary reserve) amounting to 6.3% of GDP. These reserves were accumulated in particular during the 1997-2001 time period, which was characterised by a series of large budget surpluses. The availability of these reserve funds allowed central government to implement a counter-cyclical fiscal policy during the years 2002-2004 and to maintain investment spending at a high level, without the need to issue new public debt, despite the central government budget balance having been negative since 2002.

Furthermore, the social security sector regularly generates surpluses and these surpluses are put in reserve in order to pay for future social transfers (mainly pensions). At the end of 2006, social security has accumulated a pensions reserve amounting to more than €7 billion or 26% of GDP. Considering the central government's own reserves and the social security pensions reserve, the general government net debt is negative.

In addition to the government debt detailed hereafter, the central government debt also includes debt of public institutions.

The quantity of monetary signs issued by the Treasury as coins has increased rapidly since the replacement of Belgian and Luxembourgish franc coins with euro coins. On 31 October 2006, euro coins worth €139.2 million were in circulation.

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 (AsDB, AsDF, EBRD, IFAD, GEF, IDA, MIGA, “Kyoto” carbon funds). These bills do not carry interest and they are paid if, and when, they are due. On 31 October 2006, outstanding bills totalled €29.7 million. The payment of the Treasury bills is carried out via the public debt fund or the “Kyoto” fund. According to currently known deadlines, the depreciation charges of the Treasury bills will amount to €19.0 million in 2006, €14.2 million in 2007, €7.7 million in 2008, and €7.8 million in 2009.

The Government did not issue new bonds during the fiscal years 1998 to 2005. For each of the years 2005 and 2006, the Government has been authorised to issue new debt with a view to financing infrastructure projects via the railway fund and the road construction fund, amounting to €100 million per year per fund. These authorisations were fully used by the issue in 2006 of bank loans contracted for ten years to a total amount of €400 million.

In addition, the Government in 2006 carried out the repayment of an OLUX loan that was due, to the amount of €163.74 million.

On 31 October 2006, gross public debt (excluding public institutions and the *Fonds pour la Loi de Garantie*) in the form of government bonds or bank loans amounted to €494.48 million (1.5% of GDP). It is denominated entirely in euro.

The 2007 draft budget foresees an authorisation enabling the Government to again borrow two times €100 million to allocate to the two above-mentioned funds.

To this will be added an authorisation to borrow €132 million for the benefit of the railway fund, for the purpose of the government acquisition of the rail infrastructure owned by Arcelor S.A., which will be the subject of a specific law.

The 2006 budget law also authorises the Government to borrow an amount of €300 million to cover the budget deficit. This authorisation has not (yet) been used, so that an additional authorisation is not foreseen in the 2007 budget law.

For the purpose of the stability and growth programme and in accordance with the multi-annual capital spending programme, this update assumes that only the loans for the railway fund (€132 + 100 million) and the road construction fund (€100 million) shall be provided in 2007, in parallel with the repayment of the existing debt, which will end in 2007 with the repayment of the final OLUX loan, for a capital amount of €94.48 million. This update also assumes that loans in favour of the two above-mentioned funds (2 x €100 million) will be issued during each of the years 2008 and 2009.

Furthermore, the Government has granted financial guarantees to property developers in view of the construction of certain public infrastructures (*Loi de Garantie*). In accordance with the Eurostat decision regarding the statistical treatment of public-private partnerships (Press release of 11 February 2004), these transactions are recorded as imputed loans in the general government

accounts. Over the course of the 2006-2009 time period, the impact of this decision on the ratio between gross debt and GDP will vary between 1.2-1.4% per year.

Consequently, central government debt will increase from 5.2% of GDP in 2006 to 8.2% of GDP in 2007 and it will reach 8.5% of GDP in 2008 and 2009.

The reserves of the special fund dedicated to the repayment of the public debt will total close to €100 million at the end of 2006, so that, taking into account the credit foreseen in the 2007 budget, the servicing of the debt, in terms of capital and interest, is already ensured for 2007. In the subsequent fiscal years, this debt service can be restricted to the repayment of the Treasury bills that are due and to the interest payable on contracted bank loans. The interest burden, which amounts to €27 million in 2006, will increase to €36 million in 2007, €41 million in 2008, and €51 million in 2009.

The Luxembourg local government debt remains at a low level in relation to GDP (2.3% of GDP in 2005). The aggregate debt of the local authorities and syndicates thus totals approximately €750 million at the end of 2006.

Local authorities may contract new loans only to finance extraordinary expenditures, only if no other source of finance is either available or economically efficient and only if annuities are regularly repaid. The legislation stringently regulates the conditions under which local authority syndicates may contract new loans.

The social security debt is marginal, given that this sector regularly generates surpluses.

IV. Sensitivity analysis and comparison with previous update

IV.1. Sensitivity analysis

The 8th update of the stability programme is based on an “accommodating” macroeconomic scenario. Following the economic slowdown of 2001-2004, the Luxembourg economy resumed its trend growth from 2005 onwards and the stability programme is based on the assumption of an average growth of > 4% per year in 2007-2009.

Nevertheless, as a result of the smallness of its territory and the high degree of openness of its economy, Luxembourg economic developments are relatively sensitive to external shocks. This translates in particular into a high volatility of economic growth, which is markedly higher than that observed in the majority of the Member States of the European Union. As witnessed over the course of the 1998-2003 time period, this volatility is not without consequences for the development of public finances.

In order to examine the sensitivity of the budget adjustment path outlined in the current stability programme to changes in the international economic environment, two alternative scenarios are developed.

In the first scenario, the Luxembourg economy is subjected to an adverse external shock in terms of international demand. The alternative scenario is based on the assumption of a drop in world demand of 0.4% and of a GDP volume reduction of the European Union (EU-15) of 1%. Furthermore, the scenario assumes that this shock is also transmitted via international financial markets, which is significant owing to the weight of the financial sector in the Luxembourg economy. The assumption is that the shock originates in 2006 and that it generates its effects on public finances from 2007 onwards.

On a macroeconomic level, the effect of the shock would generate a slowdown in economic growth in relation to the central scenario, a slowdown in domestic employment and unemployment would decrease less rapidly. The slowdown of the economy would also have an effect on price developments: in 2007, inflation would be close to that envisaged in the central scenario, but in 2008 and 2009 inflation would be inferior to that of the central scenario.

The modification of the inflation path would not be without consequences for public finances, given that it has an impact on the due dates for wage adaptation according to the automatic indexation mechanism. Indeed, in conjunction with the “Tripartite” decisions on the adjustment of automatic indexation, the slowdown of inflation would imply that a living cost adjustment would fall due in March 2008 (no divergence from the central scenario), but that no living cost adjustment would fall due in 2009 (in the central scenario, a living cost adjustment would fall due in March 2009).

	2007		2008		2009	
Real GDP (%)	3.5	(4.0)	4.7	(5.0)	3.9	(4.0)
Domestic employment (%)	3.2	(3.6)	3.4	(3.7)	3.4	(3.7)
Unemployment rate	4.9	(4.7)	4.8	(4.5)	4.7	(4.4)
Inflation (NICP)	1.9	(2.0)	2.0	(2.2)	1.9	(2.1)
General government budget balance (% of GDP)	-1.2	(-0.9)	-0.8	(-0.4)	-0.3	(+0.1)

Note: values in brackets correspond to the central scenario

In the alternative scenario, the improvement in public finances in 2007-2009 would be weaker than anticipated. In 2007, the general government deficit would remain above 1% of GDP and the balanced budgetary position would not be restored in 2009.

The transmission of the external shock on public finances would be seen primarily on the revenue side. The negative impact of the shock on the financial sector would lead to a significant slowdown of revenues from this sector. In this case, the alternative scenario is based on the assumption of a stagnation of subscription tax revenues in comparison with levels foreseen in 2006.

Despite this negative shock on growth, the stabilisation of public finances would continue, albeit at a slower rate than anticipated, given that the budgetary consolidation strategy implemented by the Government is based on the consolidation of public expenditures. The negative effects of the growth shock on expenditure developments would be relatively weak in 2007-2009 and would materialise in particular in higher than anticipated cash social transfers, owing to the greater persistence of unemployment (unemployment benefits and the cost of active measures in favour of employment represent approximately 3% of public expenditures). In 2009, the adjournment of the anticipated living cost adjustment foreseen for March would contribute towards the control of public expenditure growth.

Owing to the high level of volatility of oil prices and the effect on inflation, the second scenario is based on an external technical assumption concerning oil price developments that diverges from the “common external assumptions” of the European Commission, notably a reduction of the price of oil of 10% over the course of the 2007-2009 time period compared with the basic assumption of the central scenario. In the analysis of this scenario, particular attention is paid to the inflation dynamics resulting from a fall in oil prices and the impact on wage indexation. Indeed, the “Tripartite” agreement of April 2006 foresees the adjustment of the automatic indexation system. Taking into account the significant part of public expenditures that develop

directly or indirectly with automatic indexation, this adjustment contributes to slow down significantly the “automatic” growth of public expenditures.

In the central scenario, two living cost adjustments would fall due over the course of the 2007-2009 time period, i.e. in March 2008 and in March 2009. A reduction of 10% in petrol prices over the course of this reference period would lead to a deceleration of inflation (NICP) from 2% to 1.7% in 2007 and from 2.2% to 1.7% in 2008. In 2009, the inflation rate would remain unchanged at 1.9%. With an inflation established permanently below 2%, no living cost adjustment would fall due in 2007 and 2008, and the next wage adaptation pursuant to automatic indexation would take place in January 2009.

The delaying of the due dates for automatic wage adaptation further to the reduction of inflationary pressures would accelerate the convergence towards a balanced budgetary position. In fact, owing to the less rapid growth of public expenditures than anticipated, and taking into account the negative “spillover” effects on public revenues, the general government budget balance would reach -0.1% of GDP in 2008 (instead of -0.4% of GDP in the central scenario) and +0.2% of GDP in 2009 (instead of +0.1% of GDP in the central scenario).

IV.2. Comparison with previous stability programme

The 8th update of the stability programme confirms that in 2005, economic growth reached 4%. The growth in 2006 is better than anticipated in the context of the previous update. In fact, during the preparation of this update at the end of 2005, the acceleration of economic growth in the eurozone and the European Union as a whole in 2006 was underestimated. Following a stronger than anticipated resumption of European economic growth, the estimation of economic growth in 2006 was significantly revised upwards, from 4.4% in the previous update to 5.5%. For 2007, the previous programme forecast a growth acceleration from 4.4% in 2006 to 4.9%. In the present update, the forecast for 2007 has been revised downwards, owing mainly to a less favourable international environment and in particular to the growth slowdown forecast to take place in Germany and the eurozone in 2007, as well as to considerably higher oil prices than anticipated in the context of the previous update. For 2008, the divergence compared to the previous stability programme update is marginal.

In terms of the general government budget balance, the divergence with reference to 2005 is significant. In fact, the 8th update presents a budget balance improved by 1.3% of GDP compared with that presented in the previous update. Of a total improvement of 1.3% of GDP, 0.2% is attributable to a “base effect”, in this case the re-estimation of GDP at current prices resulting in an upwards revision of the “denominator” of more than 8.5%. In addition, the payment in January 2006 of a corporate income tax liability amounting to 0.5% of GDP that, pursuant to the application of the “time-adjusted cash” principle, was registered in 2005, was not anticipated during the drawing up of the previous stability programme. These “technical” adjustments account for over half the improvement of the general government budget balance in 2005. The

“underlying” improvement of the budgetary balance consequently amounts to some 0.6% of GDP (approximately €160 million). It reflects a more favourable development than anticipated of taxes towards the end of 2005, owing to the economy gathering speed, which was already set in motion in mid-2005. This improvement of the budgetary balance is thus essentially linked to cyclical, not structural, factors.

The budgetary balance expected for 2006 presents an improvement of 0.3% compared with the forecast of the previous stability programme update. The factors explaining this improvement are once again essentially cyclical in nature, i.e. linked to the more dynamic than anticipated development of certain categories of public revenue (in particular subscription tax and withholding tax on income from capital).

For the years 2007 and 2008, the divergences compared with the previous stability programme update are marginal. In fact, in the 7th update of the stability programme, the Government was clearly committed to bringing public deficit back to a position close to balance towards the end of the programme period. The Government had defined the broad guidelines of its strategy of deficit reduction, but in the absence of a political agreement at that stage, specific measures had not yet been adopted. Following the “Tripartite” agreement of April 2006, these measures were specified in more detail and implemented in order to generate their effects from the 2007 fiscal year onwards.

Compared with the previous stability programme update, the forecasts regarding the developments of public debt have been revised upwards. The revision is marginal for 2005 (-0.3% of GDP) and essentially conveys a “base effect” following the re-estimation of GDP (see above). For the years 2006-2008, revisions are more significant, amounting to 2% of GDP per year and concerning central government only. In fact, thanks to the existence of significant budget reserves accumulated “in good times”, it was possible to finance central government deficits by a partial use of reserves, and public debt has increased less rapidly than anticipated. In addition, and in accordance with the provisions of the preventive arm of the Stability Pact, the Government has used the additional revenues resulting from a better growth performance than anticipated towards reducing the public deficit, rather than increasing public expenditures.

V. Quality of public finances

The global situation of Luxembourg's public finances cannot be correctly appreciated if one looks only at the budgetary balance or public debt – which remains at a very low level –, without taking into account the existence of central government (and social security) reserves. These reserves were built up during the period of rapid economic growth that yielded a string of large budget surpluses, which in turn were not injected into the budgetary circuit and therefore not used for the financing of current expenditures.

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 the Government in the shape of a financial statement.

On 31 October 2006, this statement was as follows:

Resources (liabilities):

- | | |
|--|----------------|
| • Government's own resources (special funds resources and budgetary reserve) | €2,027 million |
| • Government's own resources corresponding to financial fixed assets acquired by budgetary expenditure | €1,656 million |
| • Third party assets deposited with the Government | €308 million |
| • Third party assets borrowed by the Government (gross public debt) | €672 million |

Uses (assets):

- | | |
|-----------------------------|----------------|
| • Bank financial assets | €2,482 million |
| • Non-bank financial assets | €1,657 million |
| • Balance (net borrowing) | €524 million |

In addition to borrowed funds, the Government has its own funds in the form of reserves. These reserves correspond to the cumulative sum of the net budget surpluses realised during the fiscal years 1944 to 2004.

These reserves are essentially transferred to the different special Government investment funds and are used to achieve the specific objective for which each special fund was set up via a special law. Over the course of a fiscal year, the resources available in the special funds fluctuate due, on the one hand, to the inflow of budgetary endowments and, on the other hand, to the outflow

relating to payments for work completed. At the end of October 2006, resources available in the special funds amounted to €1,971 million.

The special investment 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 to finance future investment projects.

Due to the existence of these sizeable reserves, the budget is less sensitive to fluctuations in economic activity. Furthermore, the existence of the reserves allows the Government to maintain the 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 constitutes a free reserve, the budgetary reserve. At the end of October 2006, it amounted to €56 million. This reserve, the fluctuations of which 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 this budgetary reserve provides additional degrees of freedom to the Government 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.

Furthermore, the Government has occasionally acquired financial assets via participations or loans. At the end of October 2006, the value of these assets amounted to €1,656 million, well below the market value. 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 yield represent an additional source of income for the Government.

The difference between the assets and liabilities, amounting to €524 million at the end of October 2006, represents net government borrowing and is equivalent to the amount of uncovered public debt (Treasury bills and loans).

VI. Long-term sustainability of public finances

The budget consolidation measures adopted by the Government in consultation with the social partners and presented in the current stability programme will restore the balance of public finances in the medium term, i.e. in 2009 at the latest.

These measures aim in particular to slow down trend growth of public expenditures, while including a “revenue” component. The objective of the budgetary strategy implemented by the Government is the structural stabilisation of public finances. Given the high level of volatility of public revenues characteristic of a small and very open economy, budgetary consolidation via the control of expenditures is an essential condition to avoid a resurgence of structural deficits in the future. Furthermore, consolidation via expenditure control enables Luxembourg to maintain a fiscal and parafiscal burden that is relatively favourable in international comparison and thus conducive to employment creation, which is another essential condition for the guarantee of the budgetary balance of social security in the medium term.

Due to its relatively young workforce in comparison with the European average, a public debt that is among the lowest in the entire European Union (< 10% of GDP) and significant budget reserves of the pension system (26% of GDP in 2006), Luxembourg has an advantageous starting point for confronting the economic and budgetary challenges associated with demographic ageing, challenges that the Government explicitly recognises.

The long-term projections prepared by the *Inspection générale de la sécurité sociale* (IGSS) in the context of the work undertaken by the Economic Policy Committee of the European Union and the European Commission show that, with unchanged policies, public expenditures linked to demographic ageing will experience a sharp increase from 2020 onwards and place a considerable burden on the long-term viability of public finances.

The forecasts are based on the assumption of a potential growth, which will slow down from a current rate of approximately 4% to one of 3% from 2015 onwards, and on a constant rate of unemployment of 4.2%. Following the demographic ageing process, the portion of the population of working age will decrease from the current 67% to 61% in 2040-2050. In parallel, the ratio of the old-age dependency ratio will increase from the current 21% to 36% in 2040-2050. The forecasts are furthermore based on the assumption of an increase in the participation rate in general, and, more particularly, on an increase in the participation rate of older workers from a current 32% to 42% in 2040-2050.

For the projection period, expenditures in relation to population ageing (pensions, health care, education, unemployment) will undergo a strong increase. The weight of these expenditures in GDP will increase from 19.5% over the course of the 2004-2010 time period to more than 27% over the course of the 2040-2050 time period, i.e. an increase amounting to 8% of GDP. The key factor of this increase is linked to pension expenditures (private and public sectors combined). In

fact, according to these projections, the share in GDP of pension expenditures will increase by $\geq 7\%$ of GDP by 2040-2050.

Social contributions will undergo a moderate rise between 2006 and 2050. Nevertheless, pension reserves will continue to increase until 2020 to reach approximately 40% of GDP. With unchanged policies, the social security budget balance will become negative around 2025 and pension reserves will start gradually to decline. Indeed, in 2035 these reserves will have disappeared and the social security deficit will have to be financed by an increase in public debt.

Assuming that the medium-term budgetary objective of a structural balance of -0.8% of GDP will be achieved in 2010, long-term projections of the European Commission forecast that the debt ratio will go from the current $< 10\%$ of GDP to $> 200\%$ of GDP around 2050. Furthermore, the threshold of 60% of GDP foreseen in Article 104 of the CE Treaty will be exceeded before 2030. It should be pointed out, however, that in the context of the current stability programme update, the Government has set itself the budgetary objective of returning to a balanced position in nominal terms by 2009 and of maintaining this balanced position beyond 2009, i.e. a budgetary objective that, on the face of it, is more restrictive than that of a structural balance of -0.8% of GDP in 2010. This has consequences for the developments of public debt, which will increase, but at a slower rate than anticipated in these long-term projections.

The projections show that adjustments will need to be envisaged in the medium term to ensure the sustainability of public finances in general and to maintain the financial viability of the social security system. In order to guarantee that Luxembourg will be ready to tackle the consequences of demographic ageing, the Tripartite Coordinating Committee concluded in April 2006 that “the social partners and the Government will proceed with the creation of a discussion group, 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”.

ANNEXES:**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

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

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

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
<i>Taxes on production and imports</i>	<i>D.2</i>	<i>3,880</i>	<i>13.2</i>	<i>12.3</i>	<i>11.6</i>	<i>11.5</i>	<i>11.3</i>
<i>Current taxes on income and wealth</i>	<i>D.5</i>	<i>4,104</i>	<i>14.0</i>	<i>13.3</i>	<i>12.8</i>	<i>12.9</i>	<i>12.8</i>
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
<i>Social transfers in kind</i>	<i>D.63</i>	<i>3,010</i>	<i>10.2</i>	<i>10.0</i>	<i>9.8</i>	<i>9.3</i>	<i>8.9</i>
<i>Social transfers in cash</i>	<i>D.62</i>	<i>4,347</i>	<i>14.8</i>	<i>14.1</i>	<i>13.6</i>	<i>13.2</i>	<i>12.8</i>
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

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	...

Table 4: Public debt

in % of GDP	2005	2006	2007	2008	2009
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
<i>P.M.: implicit interest rate on public debt</i>	<i>3.1</i>	<i>2.6</i>	<i>1.8</i>	<i>2.4</i>	<i>2.4</i>
Liquid financial assets	35.6	37.2	...	...	...
Net debt	-29.5	-29.7	...	...	...

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

Table 6: Divergences from previous programme update

	2005	2006	2007	2008
Real economic growth (%)				
7 th update	4.0	4.4	4.9	4.9
8 th 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)				
7 th update	-2.3	-1.8	-1.0	-0.2
8 th 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)				
7 th update	6.4	9.6	9.9	10.2
8 th update	6.1	7.5	8.2	8.5
Difference	-0.3	-2.1	-1.7	-1.7

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

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