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**ECONOMIC ASSESSMENT  
OF THE CONVERGENCE PROGRAMME OF CYPRUS  
(UPDATE OF DECEMBER 2006)**

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The Stability and Growth Pact requires each EU Member State to present an annual update of its medium-term fiscal programme, called “stability programme” for countries that have adopted the euro as their currency and “convergence programme” for those that have not. The most recent update of Cyprus’s convergence programme was submitted on 1<sup>st</sup> December 2006.

The attached technical analysis of the programme, prepared by the staff of, and under the responsibility of, the Directorate-General for Economic and Financial Affairs of the European Commission, was finalised on 26 February 2007. Comments should be sent to Polyvios Eliofofotou ([Polyvios.ELIOFOTOU@ec.europa.eu](mailto:Polyvios.ELIOFOTOU@ec.europa.eu)), Georgios Moschovis ([George.MOSCHOVIS@ec.europa.eu](mailto:George.MOSCHOVIS@ec.europa.eu)) or Mateo Capó Servera ([Mateo.CAPO@ec.europa.eu](mailto:Mateo.CAPO@ec.europa.eu)). The main aim of the technical analysis is to assess the realism of the budgetary strategy presented in the programme as well as its compliance with the requirements of the Stability and Growth Pact. However, the analysis also looks at the overall macro-economic performance of the country and highlights relevant policy challenges.

Based on this technical analysis, the European Commission adopted a recommendation for a Council opinion on the programme on 24 January 2007. The ECOFIN Council is expected to adopt its opinion on the programme on 27 February 2007.

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

**[http://ec.europa.eu/economy\\_finance/about/activities/sgp/main\\_en.htm](http://ec.europa.eu/economy_finance/about/activities/sgp/main_en.htm)**

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## SUMMARY AND CONCLUSIONS<sup>1</sup>

As part of the preventive arm of the Stability and Growth Pact, each Member State that does not use the single currency, such as Cyprus, has to submit a convergence programme and annual updates thereof. The most recent programme, covering the period 2006 - 2010, was submitted on 6<sup>th</sup> December 2006.

Cyprus is a small open economy, thus highly exposed to external shocks. It is experiencing a successful process of nominal and real convergence with the EU. Averaging 3.5% p.a. over the last ten years, GDP growth is robust, while inflation is low. HICP inflation hovered at levels below 3% for most of the decade. The Cypriot economy has enjoyed almost full employment conditions. Long-term unemployment is at very low levels, while productivity growth is high by international standards. However, nominal wage growth and unit labour costs (ULC) tended to increase relatively faster than in its trade partners. Nonetheless, export-oriented services sectors, which account for the bulk of total exports, are performing well, although large surpluses of the trade in services have not fully offset the deficit in trade of goods. Thus, Cyprus's current account balance has been negative over the last ten years. Nonetheless, its financing has remained unproblematic via portfolio and direct investment inflows and non-resident deposits with resident financial institutions. The fiscal consolidation programme currently implemented has reduced the deficit to 2% of GDP in 2006 and the government debt is on a declining path.

Against this background, the Cypriot economy faces the following challenges. First, in the area of stabilisation, fiscal policy has an important role to play. Based on past experience, there seems to be an asymmetric behaviour of the fiscal policy in the two phases of the cycle (downturns and booms) in Cyprus. The countercyclical response of fiscal policy during slowdowns/recessions has created large general government deficits and increased general government debt, which have not been fully corrected during the upside of the cycle. Therefore, a main challenge for Cyprus in the short run would be to reverse the policies run until now so as to create room for fiscal policy to react to downturns, notably by allowing the automatic stabilisers to operate fully. In this way, fiscal policy could contribute to offset the pervasive effects of international shocks to which the Cypriot economy is highly exposed. Second, on the long-term sustainability front, Cyprus would be at high risk if it does not take sufficient measures to address the projected increases in ageing populations-related expenditure. The challenge for Cyprus is to ensure that the debt-to-GDP ratio is sufficiently diminishing towards the 60% reference value, while public pension expenditure is kept under control. Equally, if not more importantly, the challenge of a timely implementation of reforms in the areas of social security and health care remains to be tackled. Finally, regarding efficiency, improving the quality and composition of government expenditure remains as a challenge, despite the national authorities' efforts during the last couple of years to address it. Fiscal consolidation until now has been mainly revenue-driven and has relied on one-off measures. Expenditure trends have not been reversed but they have always remained positive. A stricter control over non-productive expenditure, would free

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

resources to strengthen the economy's productive potential through investment in human, and physical capital and knowledge.

The macroeconomic scenario underlying the updated convergence programme envisages that real GDP growth will pick up from 3.7% in 2006 to 4.1% on average over the programme period. The programme foresees domestic demand to be the main driver of growth, underpinned by buoyant private consumption, which in turn is supported by wage and employment gains as well as low interest rates and rapid credit expansion. Although investment is expected to decelerate, it should remain strong supported by a stable macroeconomic environment, the implementation of structural reforms (e.g. liberalisation in energy and communication sectors) and plans for infrastructure projects. Exports are projected to rise throughout the programme period on the back of a dynamic tourism sector and good performance of exports of services. Imports are forecast to decelerate sharply in 2007, reflecting the projected deceleration of the investment activity. Consequently, the update projects the contribution to growth of the external sector to turn positive as of 2007. Assessed against currently available information, this scenario appears to be based on plausible growth assumptions. The programme's projections for inflation also appear realistic. The macroeconomic outlook presented in the update would qualify for rather neutral cyclical conditions (neither economic 'good' nor 'bad' times).

For 2006, the general government deficit is estimated at just below 2% of GDP in the Commission services' autumn 2006 forecast, as targeted in the previous update of the convergence programme. With real GDP growth lower than projected in the previous update (3.7% instead of 4.2%), total expenditure is estimated to be higher than planned in the December 2005 update. This was mainly due to higher than expected social transfers by 1.7 percentage points of GDP. However, higher revenues are estimated to offset the rise in total expenditures, through higher tax receipts and other revenues (1.5% of GDP) and higher property income and social contributions (0.2% of GDP). No one-offs are included, as the initially budgeted 0.3% of GDP from temporary revenues from building permits have not materialised.

After the correction of the excessive deficit in 2005 and the abrogation of the excessive deficit procedure in July 2006, the programme aims at further consolidating public finances. The general government balance is projected to improve from a deficit of 1.9% of GDP in 2006 to a balanced position in 2010 entirely through expenditure retrenchment as the revenue ratio remains constant over the programme period. While total expenditure is projected to fall by 1 $\frac{3}{4}$  percentage point of GDP over the programme period, of which 1 percentage point of GDP corresponds to declining interest payments, social transfers are planned to increase by 1 $\frac{1}{4}$  percentage point. The primary surplus is planned to rise from 1 $\frac{1}{2}$ % of GDP in 2006-07 to just above 2% of GDP in 2008 and to remain constant thereafter. A key element of the fiscal consolidation strategy presented in the programme is to keep public expenditure growth below that of nominal GDP. The update underlines the importance of the introduction as from 2007, for the first time, of a medium-term budgetary framework (MTBF) for the 3-year period 2007-2009. Through MTBF, the update envisages limiting the practice of supplementary budgets, to introduce gradually quantifiable programme targets and performance-based budgeting and rationalise the public finances. Government gross debt, which is estimated to have reached 64 $\frac{3}{4}$ % in 2006, is projected to fall below the 60% of GDP reference value in 2008 and to attaining just above 46% of GDP by the end of the programme period.

The structural balance is planned to improve from a deficit of around 1 $\frac{1}{2}$ % of GDP in 2006 to a surplus of some  $\frac{1}{4}$ % of GDP at the end of the programme period. As in the

previous update of the convergence programme, the medium-term objective (MTO) for the budgetary position presented in the programme is a structural deficit of 0.5% of GDP, which the programme aims to achieve by 2008, one year earlier than in the previous update. The MTO is in line with the Pact.

The risks to the budgetary projections in the programme appear broadly balanced. The target for 2007 seems plausible when compared with the Commission services' autumn 2006 forecast and, for the year 2008, when the primary surplus is planned to improve, there is relatively detailed information in the programme about the measures that support the adjustment. However, there is some risk of spending slippages given the high degree of expenditure restraint envisaged while information on the spending ceilings and their enforcement is limited. On the other hand, the overall track record with respect to the achievement of the budgetary targets is good. Furthermore, given that the macroeconomic scenario underlying the targets is plausible, the macroeconomic risks to achieving the fiscal targets are mainly associated to the vulnerability of the Cypriot economy to external shocks due to its size and openness.

In view of this risk assessment, the budgetary stance in the update seems sufficient to ensure that the MTO is achieved by 2008, as envisaged in the programme. In addition, it seems to provide a sufficient safety margin against breaching the 3% of GDP deficit threshold with normal macroeconomic fluctuations throughout the programme period. The pace of adjustment towards the MTO implied by the programme is in line with the Stability and Growth Pact, which specifies that, for euro-area and ERM II Member States, the annual improvement in the structural balance should be 0.5% of GDP as a benchmark and that the adjustment should be higher in good economic times and could be lower in bad economic times. After the achievement of the MTO, the fiscal policy stance implied by the programme is also in line with the Pact.

As mentioned above, the long-term budgetary impact of ageing in Cyprus is among the highest in the EU, influenced notably by a very large increase in pension expenditure as a share of GDP. The initial budgetary position contributes to easing part of the projected considerable long-term budgetary impact of an ageing population, but it is not sufficient to cover it. Moreover, the current level of gross debt is above the Treaty reference value. Continuing the consolidation of the public finances simultaneously with adopting pension reform measures aimed at containing the significant increase in age-related expenditures would contribute, as recognised by the authorities, to reducing risks to the sustainability of public finances. Overall, Cyprus appears to be at high risk with regard to the sustainability of public finances.

The Implementation Report of the National Reform Programme (NRP) of Cyprus, provided in the context of the renewed Lisbon strategy for growth and jobs, was submitted on 17 October 2006. The NRP identifies as key challenges/priorities: fiscal sustainability; quality of public finances; R&D, innovation and ICT; increasing the diversification of the economy; competition and business environment; environmental sustainability; infrastructure; human capital; and social cohesion. The Commission's assessment of this programme (adopted as part of its December 2006 Annual Progress Report<sup>2</sup>) showed that Cyprus is making good progress in the implementation of its NRP. Overall, the implementation of the majority of measures seems to be proceeding as planned. Against the background of strengths and weaknesses identified, Cyprus was

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

recommended to take action in the areas of reforms of the pension and healthcare systems; and employment and training opportunities for young persons.

The convergence programme and the NRP are well-integrated. In particular, both programmes envisage the gradual implementation of pension and healthcare reforms in order to address the impact of ageing populations. Also, both programmes recognise the need to enhance life-long learning, and to further increase employment and training opportunities for young persons.

The overall conclusion is that, after the correction of the excessive deficit in 2005, the updated convergence programme is making good progress towards the MTO over the programme period, owing to expenditure restraint and in a context of strong growth prospects. The general government gross debt is foreseen to approach the 60% of GDP reference value by 2007 and to continue declining in the subsequent years. However, Cyprus would be at high risk with regard to the sustainability of public finances if it does not take sufficient measures to address the projected increases in ageing populations-related expenditure. While the programme envisages pension and healthcare reforms to address the challenge of long-term sustainability, no concrete steps have been taken yet.



### Comparison of key macroeconomic and budgetary projections

		2005	2006	2007	2008	2009	2010
Real GDP (% change)	<b>CP December 2006</b>	<b>3.9</b>	<b>3.7</b>	<b>3.9</b>	<b>4.1</b>	<b>4.1</b>	<b>4.1</b>
	COM Nov 2006	3.8	3.8	3.8	3.9	n.a.	n.a.
	<i>CP December 2005</i>	<i>4.1</i>	<i>4.2</i>	<i>4.2</i>	<i>4.2</i>	<i>4.3</i>	<i>n.a.</i>
HICP inflation (%)	<b>CP December 2006</b>	<b>2.0</b>	<b>2.4</b>	<b>2.5</b>	<b>2.4</b>	<b>2.0</b>	<b>2.0</b>
	COM Nov 2006	2.0	2.4	2.0	2.4	n.a.	n.a.
	<i>CP December 2005</i>	<i>2.1</i>	<i>2.0</i>	<i>2.0</i>	<i>2.0</i>	<i>2.0</i>	<i>n.a.</i>
Output gap (% of potential GDP)	<b>CP December 2006<sup>1</sup></b>	<b>-0.9</b>	<b>-1.0</b>	<b>-1.1</b>	<b>-1.1</b>	<b>-1.1</b>	<b>-1.1</b>
	COM Nov 2006 <sup>5</sup>	-1.3	-1.3	-1.3	-1.3	n.a.	n.a.
	<i>CP December 2005<sup>1</sup></i>	<i>-0.8</i>	<i>-0.3</i>	<i>0.1</i>	<i>0.0</i>	<i>0.1</i>	<i>n.a.</i>
General government balance (% of GDP)	<b>CP December 2006</b>	<b>-2.3</b>	<b>-1.9</b>	<b>-1.6</b>	<b>-0.7</b>	<b>-0.4</b>	<b>-0.1</b>
	COM Nov 2006	-2.3	-1.9	-1.7	-1.7	n.a.	n.a.
	<i>CP December 2005</i>	<i>-2.5</i>	<i>-1.9</i>	<i>-1.8</i>	<i>-1.2</i>	<i>-0.6</i>	<i>n.a.</i>
Primary balance (% of GDP)	<b>CP December 2006</b>	<b>1.1</b>	<b>1.4</b>	<b>1.4</b>	<b>2.1</b>	<b>2.1</b>	<b>2.1</b>
	COM Nov 2006	1.1	1.4	1.4	1.4	n.a.	n.a.
	<i>CP December 2005</i>	<i>0.7</i>	<i>1.2</i>	<i>1.2</i>	<i>1.4</i>	<i>1.7</i>	<i>n.a.</i>
Cyclically-adjusted balance (% of GDP)	<b>CP December 2006<sup>1</sup></b>	<b>-2.0</b>	<b>-1.5</b>	<b>-1.2</b>	<b>-0.3</b>	<b>0.0</b>	<b>0.3</b>
	COM Nov 2006	-1.8	-1.4	-1.2	-1.2	n.a.	n.a.
	<i>CP December 2005<sup>1</sup></i>	<i>-2.2</i>	<i>-1.8</i>	<i>-1.8</i>	<i>-1.2</i>	<i>-0.6</i>	<i>n.a.</i>
Structural balance <sup>2</sup> (% of GDP)	<b>CP December 2006<sup>3</sup></b>	<b>-3.3</b>	<b>-1.9</b>	<b>-1.2</b>	<b>-0.3</b>	<b>0.0</b>	<b>0.3</b>
	COM Nov 2006 <sup>4</sup>	-2.7	-1.4	-1.2	-1.2	n.a.	n.a.
	<i>CP December 2005</i>	<i>-3.1</i>	<i>-2.1</i>	<i>-2.1</i>	<i>-1.5</i>	<i>-0.6</i>	<i>n.a.</i>
Government gross debt (% of GDP)	<b>CP December 2006</b>	<b>69.2</b>	<b>64.7</b>	<b>60.5</b>	<b>52.5</b>	<b>49.0</b>	<b>46.1</b>
	COM Nov 2006	69.2	64.8	62.2	59.6	n.a.	n.a.
	<i>CP December 2005</i>	<i>70.5</i>	<i>67.0</i>	<i>64.0</i>	<i>56.9</i>	<i>53.5</i>	<i>n.a.</i>

**Notes:**

<sup>1</sup>Commission services calculations on the basis of the information in the programme.

<sup>2</sup>Cyclically-adjusted balance (as in the previous rows) excluding one-off and other temporary measures.

<sup>3</sup>One-off and other temporary measures taken from the programme (1.3% of GDP in 2005 and 0.4% of GDP in 2006 deficit reducing. These one-off measures include 0.4% of GDP in both years, accounting for EU funds, which are not considered as one-off measures in our analysis).

<sup>4</sup>One-off and other temporary measures taken from the Commission services' autumn 2006 forecast (0.9% of GDP in 2005; deficit-reducing).

<sup>5</sup>Based on estimated potential growth of 3.9%, 3.7%, 3.9% and 4.0% respectively in the period 2005-2008.

**Source:**

*Convergence programme (CP); Commission services' autumn 2006 economic forecasts (COM); Commission services' calculations*

## **1. INTRODUCTION**

Cyprus submitted its third convergence programme update of December 2006 covering the period 2006 to 2010 on 6<sup>th</sup> December 2006, 3 working days later than the deadline of 1 December specified in the new code of conduct. The programme, which was adopted by the government on 29 November 2006, is consistent with the 2007 budget, approved by the Council of Ministers on 6<sup>th</sup> September 2006. The convergence programme will be submitted to the House of Representatives for discussion.

The programme broadly follows the model structure and data provision requirements for stability and convergence programmes specified in the new code of conduct. The programme provides all compulsory and most of the optional data prescribed by the new code of conduct, except in Table (5) “Cyclical Developments”, the contributions to Potential GDP Growth (item 4) are missing. Annex 3 provides a detailed overview of all aspects of compliance with the new code of conduct.

## **2. ECONOMIC TRENDS AND POLICY CHALLENGES**

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

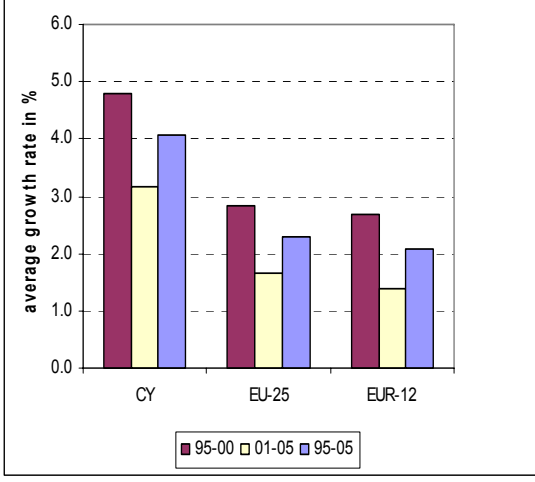
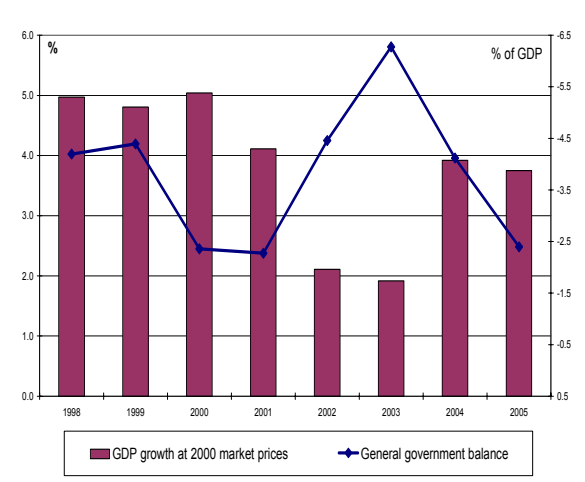
### **2.1. Economic performance**

Cyprus has been recording sustained and robust economic activity since the mid-1990s, posting an average real GDP growth rate of 3½%, more than 1 percentage point than the rate recorded in both the EU25 and the euro area. However, high growth did not enhance real convergence, since GDP per capita in purchasing power standards has remained at around 81% of the EU-25 for the last ten years, although it is still the higher within the ten recently acceded Member States (RAMS). The combination of relatively low job-content of growth (just below 1½% per year) and healthy population growth (1½% per year) seems to explain the lack of convergence with the EU.

Leaving aside the slowdown of 2002 and 2003, due to the impact of adverse-exogenous factors (post-September 11 period and Iraq war), growth has been comparable in the 1990s and the 2000s, on the back of strong domestic demand. The external sector was broadly neutral during the 1990s, but the growth contribution of the net exports turned negative in the 2000s, also due to sluggish growth in the EU, a major export market.

Labour market conditions remained tight, nearly at full employment. The unemployment rate has been at around 4½% since the mid-1990s. Reflecting fast-growing working age population alongside employment growth, the employment rate hovered at around 66%, thus comparing well vis-à-vis EU averages and the Lisbon targets. Centralised and concentrated employers and employees unions, consensus decision-making processes, limited legislative framework, low non-binding minimum wages and short-duration of unemployment benefits have, among other factors, rendered the Cypriot labour market

particularly flexible. Moreover, working permits, particularly from 2004 onwards, have been issued to foreigners leading to large-scale inflows with a view to lowering the pressure on the labour market. However, labour supply shortages and the wage-setting mechanism, including the so-called cost of living allowance (COLA)<sup>3</sup>, are sources of rigidities, while there is a large difference between male (80%) and female (60%) participation.

<p><b>Figure 1: Average GDP growth: Cyprus vs. EU25 and EU12</b></p>	<p><b>Figure 2: Cyprus GDP growth vs. General Government balance</b></p>
	
<p><u>Source:</u> Commission Services</p>	<p><u>Note:</u> General government data is only available from 1998 onwards.</p> <p><u>Source:</u> Commission Services</p>

Consistent with Cyprus' traditionally good inflation track record, HICP inflation has remained below 3% for most of the decade. Only in 2003, inflation spiked to 4%, following one-off increases in VAT and excise duties as part of the tax reform toward harmonisation with the EU *acquis*, but by the following year, it subsided to more historical levels.

Productivity grew by 2% per year, well above the 1¼% of the EU25. Nominal wages though increased faster, growing by 4¼% per year due to the relatively tight labour market conditions. As a result, unit labour costs (ULC) increased in Cyprus faster than in its trade partners, particularly during the 2000s, and the real exchange rate<sup>4</sup> rose by about 2¾%<sup>5</sup>. High wage growth also mirrors the backward-looking wage indexation system of Cyprus, COLA, which could tend to make more persistent the impact of inflationary shocks, especially those coming from the supply side. Consequently, Cyprus' export of goods and services has underperformed the rate of expansion of its major export markets<sup>6, 7</sup>. The loss of market share in cumulative terms was about 25%. In parallel, the

<sup>3</sup> Through the COLA, wages are indexed to average CPI inflation in the preceding six months twice a year, on the 1<sup>st</sup> of January and of July.

<sup>4</sup> Real exchange rate based on unit labour costs in the total economy.

<sup>5</sup> It is worth noting that while in the period 1996-2000 Cyprus pound depreciated by 3%, in the 5 subsequent years, (2001-2005) it appreciated by 5.6%.

<sup>6</sup> "Own major export markets" refers to the 35 industrial markets.

deficit in goods trade almost doubled, with imports of goods growing twice as fast as exports.

<b>Box 1: Monetary policy and exchange rate regimes of CYPRUS</b>	
<i>Peg to the ECU</i> <i>(19 June 1992)</i>	The Cypriot currency had been linked to a trade-weighted currency basket during the period 1984-1992. Cyprus's aspirations to become a member of the European Union led to a reconsideration of the currency basket in 1992. As a result, on 19 June of that year the Cyprus pound was unilaterally pegged to the ECU, with a central rate of CY£1= ECU 1,7086 and fluctuation margins of $\pm 2.25\%$ . At the time, the ECU basket did not fully reflect Cyprus's composition of trade. Nevertheless, the choice of the ECU anchor was in part necessitated by the objective to tie the pound to a currency representing a group of countries whose primary goal was price and macroeconomic stability.
<i>Introduction of wider fluctuation band</i> <i>(1 January 2001)</i>	A wider fluctuation band of $\pm 15\%$ was introduced in order to enable the Central Bank to absorb any shocks from potential destabilising capital movements and to deter speculative capital flows, in the context of capital account liberalisation. At the same time, the narrower bands of $\pm 2.25\%$ were temporarily maintained in order to anchor prices and expectations, but officially abandoned on 13 August 2001. However, in practice the Central Bank attempted to keep fluctuations limited within the narrower range of $\pm 2.25\%$ , and this was largely successful.
<i>Membership of ERM II</i> <i>(2 May 2005)</i>	Cyprus formally applies the standard $\pm 15\%$ fluctuation band. Since ERM II entry, the CY was traded close to the central parity.

However, developments in ULC, as well as goods trade may not provide an accurate indication of the competitive position of the Cypriot economy as a whole. While the manufacturing sector only represents 10% of the economy, exports of goods mainly consist of re-exports. Moreover, the services sector seems to be doing well. Specifically, banking and other financial services, international business services, and shipping appear to have successfully exploited Cyprus' comparative advantages in terms of geographic location, infrastructures, and human capital. Leaving aside transitory effects of geopolitical uncertainties, the performance of the tourism sector mainly depends on intangibles (location, nature, history, culture), whereas the sector has been increasingly

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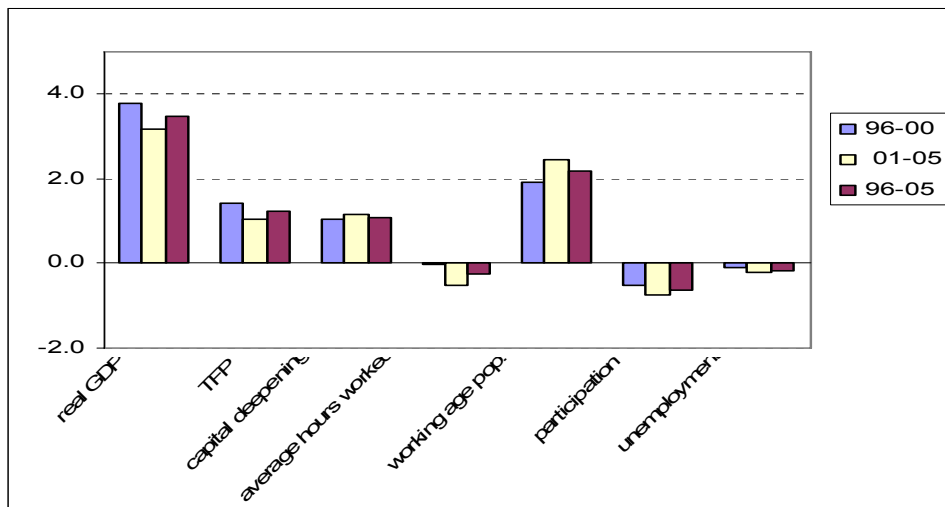
<sup>7</sup> Kontolemis, Zenon G. (1994) ("The Labour Market in Cyprus: Institutional Characteristics and Empirical Evidence," in Cyprus Journal of Economics, Vol. 7, No. 2, pp. 144-84), argued that Cyprus' low level of unemployment, which is a reflection of chronic labour shortages, in combination with the indexation mechanism and the strong union movement, have resulted in large increases in real wages and deterioration of domestic firms' competitiveness.

reliant on foreign, cheaper labour in the last few years. Finally, although the external balance deficit went above 5% of GDP in 2005, it is largely financed by long-term investment instruments, particularly FDI inflows.

## 2.2. Anatomy of medium-term growth

Within the framework of a traditional growth accounting exercise, this section dissects the sources of medium-term growth in Cyprus as well as possible differences vis-à-vis the euro area (EU12) in the last ten years. The results of the exercise, covering the period 1996-2005, are shown in Figures 3 and 4.

Figure 3: Real GDP growth and its components



Note:

Assuming a Cobb-Douglas-production function  $Y = A(L \cdot H)^\alpha K^{1-\alpha}$  where  $Y$  denotes the level of GDP,  $L$  employment,  $H$  the average hours worked per person employed,  $K$  the capital stock and  $\alpha$  the labour share in income, real GDP can be written as

$$Y = \frac{Y}{H \cdot L} H \cdot L = A \cdot \left( \frac{K}{H \cdot L} \right)^{1-\alpha} H \cdot WP \cdot PART \cdot (1 - ur)$$

where  $WP$  stands for working age population,  $PART$  denotes the participation ratio as a share of  $WP$  and  $ur$  the rate of unemployment. In terms of growth rates  $g$  this is:

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

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

Source:

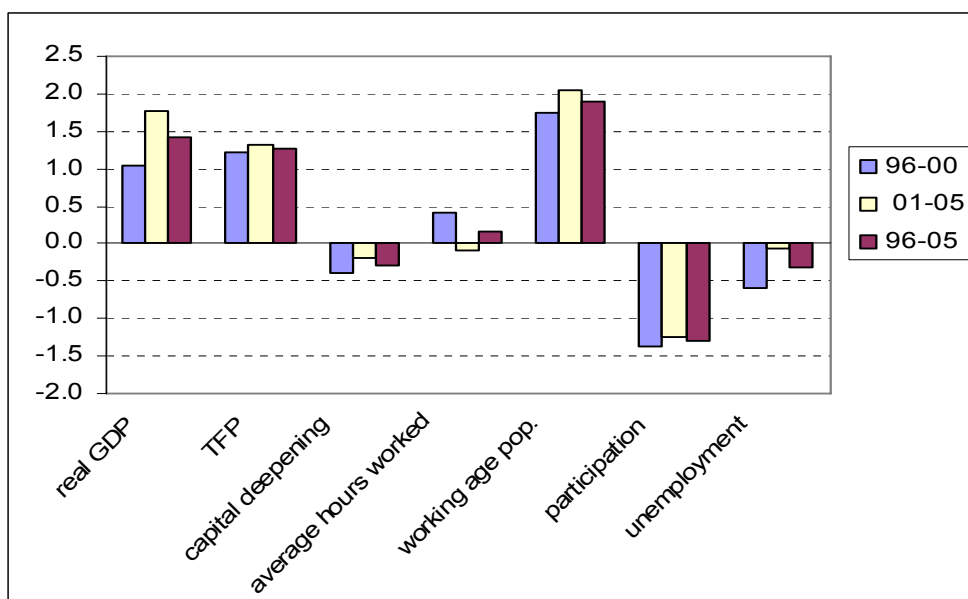
Commission services

Three main factors have been driving economic growth in Cyprus. Demographic trends, as reflected by the contribution of the working age population, which growing at 2% per year, accounts for more almost 2/3 of GDP growth. This was more pronounced in the second half of the decade, when large immigration inflows of foreign workers took place. Capital deepening and TFP together explain the rest, only marginally offset by diminishing hours worked and participation. Such growth accounting is not only valid for the decade as a whole, but also for the second half of the 1990s and the first half of the

2000s, which bears witness of the transitory impact of the 2001-2002 crisis in the Cypriot economy.

Compared to euro area, GDP growth in Cyprus has been outperforming it by about 1½ percentage points per year over the decade. This appears consistent with an economy like Cyprus, which is still in the catching up process, even if at a more advanced stage than most of the other new Member States. In accordance to this, Figure 4 suggests that higher TFP growth and working-age population growth largely explain the growth differential with the euro area. Particularly, the latter, due to foreign labour immigration, attracted by a fast-growing construction sector and further diversification of the economy towards services both of which are labour intensive, pulled significantly economic activity.

**Figure 4: Real GDP growth and its components: Difference vis-à-vis the Euro Area average**



Note:

See note of Figure 3

Source:

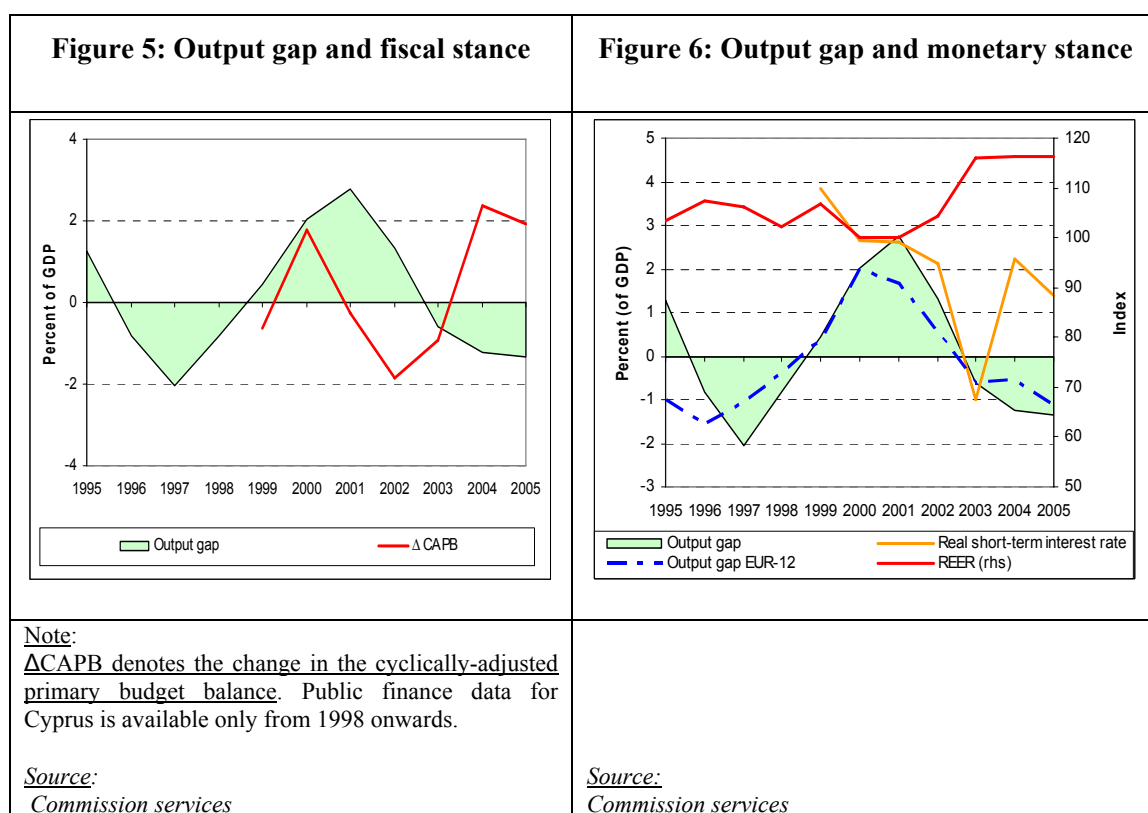
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### 2.3. Macro-policies against the backdrop of the economic cycle

Annual GDP growth in Cyprus has hovered between 5% and 2% since the mid-1990s and the output gap has developed largely in line with the EU25 and the euro area (Figures 5 and 6). However, typical for a small open economy, Cyprus has also been more exposed to external shocks, and, therefore, shows a more pronounced business cycle. After slowing down to below 2% in 1996, due to geopolitical factors, which interplayed with political instability within Cyprus, high GDP growth resumed the year after and until the early 2000, with the output gap turning positive already in 1998. The economic recovery was mainly driven by strong private consumption and investment. During this expansionary phase of the economy, fiscal policy initially played a countercyclical role. Cyprus, like the rest of Europe, was exposed to the global slowdown of the early 2000s, and the output gap turned negative. Economic activity was supported by domestic demand, including public consumption, and the fiscal policy stance continued being countercyclical. On the back of a regained consumer confidence,

private consumption drove GDP growth beyond 3% in 2004 and 2005. However, during this time, the fiscal stance became restrictive, with the fiscal tightening reflecting the consolidation effort implemented by the Cypriot authorities in compliance with the Council recommendations within the framework of the excessive deficit procedure.

Given the small size and openness of the Cypriot economy, the exchange rate policy has been historically geared towards maintaining macroeconomic stability via the linkage of the Cyprus pound with a currency anchor, consisting of a fluctuation band of  $\pm 2.25\%$  with the ECU since June 1992 and, since 1 January 1999, with the euro. The monetary conditions, as indicated by the fall in real short-term interest rates was expansionary until 2003, primarily to mitigate the impact of the global slowdown following the post-September 11 period but also to close the gap with the euro area interest rates. However, in the run-up to EU accession on 1 May 2004, the political uncertainty that prevailed in Cyprus in connection with the Annan Plan referendum, together with full capital liberalisation upon accession, fed the expectations of a possible devaluation of the Cyprus pound. In response, the Central Bank reacted, by increasing interest rates by 100 basis points. During 2005, a low inflation outlook, the enhanced levels of confidence the Cyprus pound enjoyed after joining ERM II (2 May 2005), as well as good progress in the consolidation of public finances, prompted a reduction of interest rates by 125 basis points.



## 2.4. Public finances

The general government balance in Cyprus has been in deficit over the last eight years<sup>8</sup>. The comparison of 1998 and 2005 reveals that the deficit decreased by around 1¾% points of GDP, from 4¼% of GDP in 1998 to less than 2½% of GDP in 2005. This reduction seems to be independent of cyclical factors, since the cyclically-adjusted primary balance passed from a deficit of ¾% of GDP in 1998 to a surplus of around 1¼% in 2005. In addition, although the stock of debt increased by 10% of GDP, from 59¼% in 1998 to 69¼% in 2005, interest payments increased only slightly (¼% of GDP), mainly on the back of the steady fall recorded by interest rates (see Section 2.3). Total revenues recorded an increase close to 8½ percentage points of GDP, with indirect taxes accounting for 2/3, while direct taxes remained broadly constant. Total primary expenditures increased by 7%. The sharp rise recorded by social benefits (4 percentage points) is largely behind this development.

Three different periods can be distinguished in the situation of the Cypriot public finances since 1998. Up to 2000, Cyprus implemented a countercyclical fiscal policy in good times, which improved the government balance from -4¼% of GDP in 1998 to -2¼% of GDP in 2000. However, debt-increasing stock-flow adjustments, kept debt-to-GDP up ratio at close 60% of GDP. The improvement in the government accounts went beyond the effect of cyclical conditions. The cyclically-adjusted primary balance improved by around 1¼% of GDP, from a deficit of ¾% of GDP in 1998 to a surplus of about ½% of GDP. However, the adjustment was revenue-led, with rising expenditures partially offsetting the almost 2½% of GDP increase in direct and indirect taxes.

In 2001, fiscal policy became expansionary and the deficit peaked at 6¼% of GDP in 2003, while the debt-to-GDP ratio went up to close to 70¼% of GDP. As witnessed by the cyclically-adjusted primary balance, which deteriorated by 2¾ percentage points, the worsening of the fiscal position went beyond the pure effect of economic conditions. Moreover, it took place on the spending side. Although total revenues rose by nearly 2½% points of GDP, mainly due to revenue raises from indirect taxes (¾% points of GDP), significant increases of social benefits and compensation of employees (around 2¼% points each) clearly outpaced higher government receipts.

In 2004, the Council required the Cypriot authorities to correct the excessive deficit of Cyprus by 2005<sup>9</sup>. Cyprus implemented a strong fiscal adjustment in 2004 and 2005 that allowed cutting the government deficit by nearly 4% of GDP to around 2¼% of GDP. In 2005, the debt-to-GDP ratio decreased for the first time since the late nineties and attained about 70% of GDP. The cyclically-adjusted primary surplus improved by 4% points and recorded a surplus of 1¼% of GDP in 2005. This time the fiscal adjustment was driven by both, revenues and expenditures, but especially by the former. Total revenues increased by ¾% of GDP, while total primary expenditure was reduced by less than ½% points.

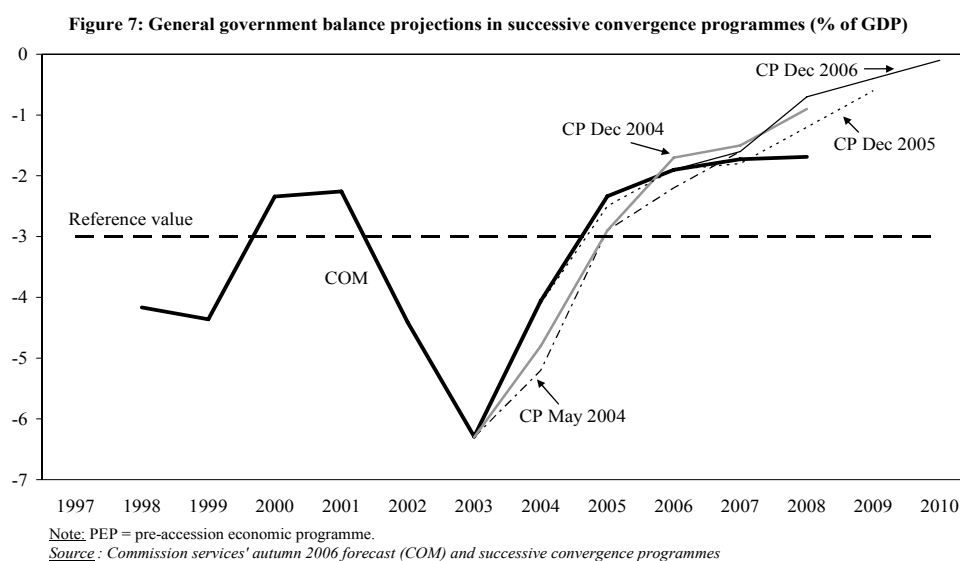
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<sup>8</sup> Statistical information about budgetary positions for Cyprus is available from 1998 onwards.

<sup>9</sup> Council Decision 2005/184/EC published on 9.3.2005 in the Official Journal: OJ L062, p.19



**Figure 7: General government balance projections in successive stability programmes (% of GDP)**



Source:  
 Commission services and national convergence programmes

## 2.5. Medium and long-term policy challenges for public finances

Cyprus is a small open economy, thus highly exposed to external shocks. It is experiencing a successful process of nominal and real convergence with the EU. Averaging at 3.5% p.a. over the last ten years, GDP growth is robust, while inflation is low. Consumer price index inflation hovered at levels below 3% for most of the decade. The Cypriot economy has enjoyed almost full employment conditions. Long-term unemployment is at very low levels, while productivity growth is high by international standards. However, nominal wage growth and unit labour costs tended to increase relatively faster than in its trade partners. Nonetheless, export-oriented services sectors, which account for the bulk of total exports, are performing well, although large surpluses of the trade in services have not fully offset the deficit in trade of goods. Thus, Cyprus's external balance has been negative over the last ten years. Nonetheless, its financing has remained unproblematic via portfolio and direct investment inflows and non-resident deposits with resident financial institutions. The fiscal consolidation programme currently implemented has reduced the deficit to 2% of GDP in 2006 and the government debt is on a declining path.

Against this background, the Cypriot economy faces the following challenges:

Stabilisation: Fiscal policy, particularly within an EMU context, has an important role to play. Based on past experience, there seems to be an asymmetric behaviour of the fiscal policy in the two phases of the cycle (downturns and booms) in Cyprus. The countercyclical response of fiscal policy during slowdowns/recessions has created large public deficits and increased government debt, which have not been fully corrected during the upside of the cycle. Therefore, a main challenge for Cyprus in the short run would be to reverse the policies run until now so as to create room for fiscal policy to react to downturns, notably by allowing the automatic stabilisers to operate fully. In this

way, fiscal policy could contribute to offset the pervasive effects of international shocks to which the Cypriot economy is highly exposed.

Sustainability: On the long-term sustainability front, Cyprus would be at high risk if it does not take sufficient measures to address the projected increases in ageing populations-related expenditure. The challenge for Cyprus is to ensure that the debt-to-GDP ratio is sufficiently diminishing towards the 60% reference value, while public pension expenditure is kept under control. Equally, if not more importantly, the challenge of a timely implementation of reforms in the areas of social security and health care remains to be tackled.

Efficiency: Last but not least, improving the quality and composition of government expenditure remains as a challenge, despite the national authorities' efforts during the last couple of years to address it. Fiscal consolidation until now has been mainly revenue-driven and has relied on one-off measures. Expenditure trends have not been reversed but they have always remained positive. A stricter control over non-productive expenditure, would free resources to strengthen the economy's productive potential through investment in human, and physical capital and knowledge.

**Table 1: Key economic indicators**

	Cyprus						Euro area					
	Averages			2003	2004	2005	Averages			2003	2004	2005
	'96-'05	'96-'00	'01-'05				'96-'05	'96-'00	'01-'05			
<b>Economic activity</b>												
Real GDP (% change)	3.5	3.8	3.2	1.9	3.9	3.8	2.1	2.7	1.4	0.8	2.0	1.4
Contributions to real GDP growth:												
<i>Domestic demand</i>	3.9	3.8	4.0	0.8	7.3	4.0	2.0	2.7	1.3	1.4	1.8	1.7
<i>Net exports</i>	-0.4	0.0	-0.8	1.1	-3.4	-0.2	0.1	0.0	0.1	-0.7	0.2	-0.3
<b>Prices, costs and labour market</b>												
HICP inflation (% change)	N/A		2.5	4.0	1.9	2.0	1.9	1.7	2.2	2.1	2.1	2.2
Labour productivity (% change)	2.0	2.4	1.6	0.9	2.3	2.2	1.2	1.5	0.8	-0.1	-1.0	-0.8
Real unit labour costs (% change)	0.3	0.2	0.5	4.0	-1.5	-1.2	-0.5	-0.6	-0.5	-0.1	-1.0	-0.8
Employment (% change)	1.4	1.3	1.5	1.1	1.5	1.5	1.2	1.5	0.9	0.7	0.7	0.8
Unemployment rate (% of labour force)	4.5	4.6	4.3	4.1	4.7	5.3	9.1	9.8	8.5	8.7	8.9	8.6
<b>Competitiveness and external position</b>												
Real effective exchange rate (% change) (1)	0.2	-1.8	2.2	10.3	0.3	0.5	N/A	N/A	N/A	N/A	N/A	N/A
Export performance (% change) (2)	-2.9	-3.6	-2.2	-3.6	-3.1	-2.0	N/A	N/A	N/A	N/A	N/A	N/A
External balance (% of GDP)	-2.9	-2.2	-3.5	-0.9	-5.2	-5.6	1.9	1.7	2.0	2.1	2.1	1.5
<b>Public finances</b>												
General government balance (% of GDP)	N/A	N/A	-3.9	-6.3	-4.1	-2.3	-2.3	-2.1	-2.5	-3.0	-2.8	-2.4
General government debt (% of GDP)	61.8	56.5	67.0	69.1	70.3	69.2	70.8	72.3	69.3	69.3	69.8	70.8
Structural budget balance (% of GDP) (3)	N/A	N/A	N/A	-7.9	-4.7	-2.7	N/A	N/A	N/A	-3.2	-2.9	-2.2
<b>Financial indicators (4)</b>												
Long term real interest rate (%) (5)	N/A	N/A	2.6	-0.2	3.3	2.3	3.1	4.1	2.1	2.0	2.2	1.5
Household debt (% of GDP) (6)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Corporate sector debt (% of GDP) (7)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**Notes:**

More detailed tables summarising the economic performance of the country are included in Annex 4.

(1) Unit labour costs relative to rest of a group of industrialised countries (USD): EU24 (=EU25 excl. LU), BG, RO, TR, CH, NR, US, CA, JP, AU, MX and NZ.

(2) Market performance of exports of goods and services on export-weighted imports of goods and services of 35 industrial markets.

(3) Cyclically-adjusted budget balance net of one-off and other temporary measures.

(4) Data available up to 2004.

(5) Using GDP deflator.

(6) Households' and non-profit institutions serving households' debt, defined as loans and securities other than shares.

(7) Non-financial corporate sector debt, defined as loans and securities other than shares.

*Source: Commission Services (AMECO)*

### **3. MACROECONOMIC OUTLOOK**

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

#### **3.1. External assumptions**

The external assumptions underpinning the macroeconomic scenario of the December 2006 update are broadly in line with the Commission services' autumn 2006 forecast. World GDP growth is estimated to attain about 5% over 2006-07 with some easing in 2007, predominantly due to a projected slowdown in the United States. Output growth in the EU is expected to reach 2.8% in 2006 and 2.4% in 2007, while in the UK -the most important economic partner of Cyprus- is expected to reach 2.7% in 2006 and 2.6% in 2007. The exchange rates of the euro and Cyprus pound against major currencies are projected to remain unchanged from the average level of October 2006. Oil prices assumptions are also in line with the Commission services' forecasts for 2006, but a bit higher from 2007 onwards (US-Dollar 68 per barrel in 2007 and just under US-Dollar 70 per barrel afterwards). Regarding interests rates, the update assumes that they would converge to that of the euro area in the medium term.

#### **3.2. Economic activity**

Following an estimated real GDP growth of 3.7% for 2006, the update projects a marginal increase in 2007 and 2008 to 3.9% and 4.1% respectively. Real GDP is projected to grow at 4.1% per year, close to potential, until the end of the programme period (Table 2).

The programme foresees domestic demand to be the main driver of growth, underpinned by buoyant private consumption, which in turn is supported by wage and employment gains as well as low interest rates and rapid credit expansion. Although investment is expected to decelerate, it should remain strong supported by a stable macroeconomic environment, the implementation of structural reforms (e.g. liberalisation in energy and communication sectors) and plans for infrastructure projects. Exports are projected to rise throughout the programme period on the back of a dynamic tourism sector and good performance of exports of services. Although re-export activity is projected to decline significantly from the high levels of the last two years, the impact on the overall external balance position is not considered significant. Imports are forecast to decelerate sharply in 2007, reflecting the projected deceleration of the investment activity. Consequently, the update projects the contribution to growth of the external sector to turn positive as of 2007.

The Central bank raised its key interest rates in September 2006 by 25 basis points, to 4.5%, with a view to put a break on a too rapid credit expansion. The planned reduction of reserve requirements by banks, needed as part of the convergence and harmonisation

of the monetary policy framework with that of the ECB, was delayed<sup>10</sup>. However, according to the update, the target for complete alignment by the end of 2007 remains unchanged.

The growth projections for 2006-2007 are broadly consistent with the Commission services' autumn 2006 forecast, while for 2008 they are somewhat more optimistic. Beyond 2008, the update projects GDP growth just above potential as calculated according to the commonly agreed methodology and based on the figures of the programme. Regarding GDP components, the programme's projections on domestic demand are in line with the Commission services autumn 2006 forecast and past trends. However, the deceleration of investment projected in the update deviates from the Commission services forecast, which expects a rather stable growth path, over the period 2006-2008. Consequently, while the Commission services' forecast projected a rather flat profile for the imports of goods and services, the programme projects a deceleration of imports in 2007, which would reflect, in turn, the foreseen deceleration of the investment activity.

**Table 2: Comparison of macroeconomic developments and forecasts**

	2006		2007		2008		2009	2010
	COM	CP	COM	CP	COM	CP	CP	CP
Real GDP (% change)	3.8	3.7	3.8	3.9	3.9	4.1	4.1	4.1
Private consumption (% change)	4.1	4.6	3.5	3.3	3.5	3.6	3.6	3.7
Gross fixed capital formation (% change)	5.0	5.7	4.8	4.1	4.8	4.2	4.3	4.3
Exports of goods and services (% change)	5.7	3.7	6.2	4.0	6.2	3.9	4.3	4.5
Imports of goods and services (% change)	5.5	5.3	5.5	2.6	5.6	3.1	3.0	3.2
<i>Contributions to real GDP growth:</i>								
- Final domestic demand	4.4	4.4	3.7	3.2	3.8	3.6	3.3	3.3
- Change in inventories	-0.4	0.2	0.0	-0.1	0.0	0.0	-0.3	-0.6
- Net exports	-0.2	-0.9	0.2	0.6	0.1	0.3	0.6	0.6
Output gap <sup>1</sup>	-1.3	-0.9	-1.3	-1.0	-1.3	-1.1	-1.1	-1.1
Employment (% change)	1.5	1.4	1.5	1.2	1.5	1.2	1.3	1.3
Unemployment rate (%)	5.4	4.8	5.3	4.8	5.6	4.7	4.6	4.4
Labour productivity growth (%)	2.3	2.2	2.4	2.6	2.5	2.8	2.7	2.7
HICP inflation (%)	2.4	2.4	2.0	2.5	2.4	2.4	2.0	2.0
GDP deflator (% change)	2.6	2.7	2.1	2.7	2.3	2.5	2.1	2.1
Comp. of employees (total, % change)	5.1	4.6	5.0	5.1	5.0	5.2	4.7	4.7
Real unit labour costs (% change)	-1.4	n.a.	-1.0	n.a.	-1.2	n.a.	n.a.	n.a.
External balance (% of GDP)	-6.0	-6.4	-5.9	-5.8	-5.9	-5.4	-4.8	-4.2
<u>Note:</u>								
<sup>1</sup> In percent of potential GDP, with potential GDP growth as reported in Table 4 below.								
<u>Source:</u>								
Commission services' autumn 2006 economic forecasts (COM); convergence programme (CP)								

<sup>10</sup> The ECB requires credit institutions to hold compulsory deposits on accounts with the Central Banks: these are called "minimum" or "required" reserves. The amount of required reserves to be held by each institution is determined by its reserve base. The legal framework for the Eurosystem's minimum reserve system is based on Article 19 of the Statute of the ESCB. The details of the minimum reserve system are contained in several legal acts, the most important being Council Regulation (EC) No 2531/98 concerning the application of minimum reserves by the European Central Bank and Regulation (EC) No 2818/98 of the European Central Bank on the application of minimum reserves (ECB/1998/15), as amended.

In 2007 and 2008, cyclical conditions, as measured by the output gap calculated with the commonly agreed method on the basis of the programme figures, are negative yet somewhat more favourable than in the Commission services' forecasts. This would be explained by slightly different projections in the programme for both headline and potential GDP growth. According to the update, the output gap would remain unchanged for 2009 and 2010, in line with the Commission services' projections. In this regard, the successive Commission services' forecast exercises and convergence programmes show a significant degree of volatility of real-time estimates of the potential growth (Table 3), while the revisions of headline growth rates have been relatively modest.

**Table 3: Output gap estimates in successive Commission services' forecasts and convergence programmes**

(% of potential GDP)	2006		2007		2008	
	COM	CP <sup>1</sup>	COM	CP <sup>1</sup>	COM	CP <sup>1</sup>
December 2006	-	-1.0	-	-1.1	-	-1.1
Autumn 2006	-1.3	-	-1.3	-	-1.3	-
Spring 2006	-0.5	-	0.0	-	-	-
December 2005	-	-0.3	-	0.1	-	0.0
Autumn 2005	-0.2	-	-0.4	-	-	-
Spring 2005	0.2	-	-	-	-	-
CP December 2004	-	-0.1	-	0.0	-	0.0

Note:  
<sup>1</sup>Commission services' calculations according to the commonly agreed method based on the information in the programme.

Source:  
*Commission services' forecasts, convergence programmes and Commission services*

### 3.3. Potential growth and its determinants

The estimate of potential output growth, as recalculated by Commission services on the basis of the information provided in the programme according to the agreed methodology, is broadly in line with the Commission service's autumn 2006 forecast. It also coincides with the average GDP growth in the past ten years.

However, the main factors driving GDP growth in the long term are changing over the programme horizon. While capital accumulation shows a stable contribution to potential output growth and remains one of the largest contributors, the contribution of TFP increases over the programme period at the expense of that of labour. This pattern seems to be explained by implementation of structural reforms that contribute to significantly raising TFP growth. Specifically, reforms to promote research and development and reforms in the labour market aiming at enhancing human capital, should accelerate technological change and deliver productivity gains.

**Table 4: Sources of potential output growth**

	2006		2007		2008		2009	2010
	COM	CP <sup>2</sup>	COM	CP <sup>2</sup>	COM	CP <sup>2</sup>	CP <sup>2</sup>	CP <sup>2</sup>
Potential GDP growth (%) <sup>1</sup>	3.7	3.8	3.9	3.9	4.0	4.1	4.0	4.1
<i>Contributions:</i>								
- Labour	1.4	1.2	1.4	1.2	1.4	1.2	1.0	1.0
- Capital accumulation	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
- TFP	0.9	1.1	0.9	1.2	1.0	1.3	1.5	1.5
<b>Notes:</b>								
<sup>1</sup> Based on the production function method for calculating potential output growth.								
<sup>2</sup> Commission services' calculations on the basis of the information in the convergence programme (CP).								
<i>Source:</i>								
Commission services' autumn 2006 economic forecasts (COM); Commission services' calculations								

### 3.4. Labour market developments

According to the programme, employment is projected to increase by an annual average of 1¼% over 2006-2010, broadly in line with past trends. This is made possible by a rise in the share of foreign workers, which has already attained around 16% of the total labour force in 2006, and the gradual long-term increase in the participation rate mainly of female and old-aged workers, with the latter related to the gradual rise of retirement age. Concurrently, the programme projects the unemployment rate to fall from an estimated 4¾% in 2006 to just below 4½% by 2010, on the back of strong economic growth. The programme foresees that the contribution of labour to GDP growth will remain stable over 2006-2008, which is broadly in line with the Commission services' autumn 2006 forecast. However, it decreases by around ¼ percentage point in 2009. This is not an indication of labour market deficiencies but rather the result of the projected total factor productivity (TFP) growth, compared to historical trends. Productivity growth is actually projected to accelerate in the medium term, following large investment projects, undertaken in recent years, for the utilisation of new technologies and the development of human capital.

### 3.5. Costs and price developments

Following the developments in the oil market, after the price hike of the first months of 2006, pressures are expected to ease and HICP inflation to finish at 2.4% for the year. Although the impact of the falling oil prices would be further carried over in the beginning of 2007, the programme projects inflation to remain unchanged mainly due to the impact of the imposition of VAT rates to products that are now taxed at a reduced or zero VAT rates, following the ECOFIN Council decision of February 2006. Consistently, with the Commission services' autumn 2006 forecast, HICP is projected to remain around that level until 2008, and further decrease to 2%, until the end of the programme horizon. The programme's inflation projections appear realistic.

The programme projects nominal unit labour costs to increase by some 2% over the programme period. The update also expects that the restrictive wage policy followed over the very recent past, through the collective agreements covering the years up to 2007, will continue over the period 2008-10. Since productivity growth is expected to rise to slightly above 2½% over the period, the evolution of labour cost should not induce inflationary pressures. These projections are broadly consistent with the Commission services autumn 2006 forecast.

### 3.6. Sectoral balances

The update estimates the external deficit (net borrowing vis-à-vis the rest of the world) to increase to 6½% of GDP in 2006, up from 5¾% of GDP in the previous year. This development is mainly explained by higher imports, largely reflecting the impact of higher oil prices, and slower-than-expected growth of exports of goods, mainly due to subdued re-export activity. Another important factor affecting the external deficit is profits accruing of foreign firms based in Cyprus, which amounted to about 4% of GDP in 2006. However, this does not represent a problem from the financing point of view since profits are reinvested and re-appear as FDI inflows in the financial account. In 2006, the increase in the external deficit occurs despite a further reduction in the general government deficit. This suggests a worsening in the private sector savings-investment balance, partly linked to higher private investment.

Beginning from 2007 though, net borrowing vis-à-vis the rest of the world is projected to steadily decrease, reaching 4¼% of GDP in 2010, in tandem with the reduction in the general government deficit and private sector savings, more than offsetting the projected pick-up in private sector investment. Over the same period, the expected rebound in export markets (including tourism) and the envisaged continuation of structural reforms, particularly the ones in the field of export-oriented services, are expected to enhance the external competitiveness and support export performance. The update's projections are more optimistic than the Commission services' autumn 2006 forecast, which projects a rather stable profile for the net borrowing vis-à-vis the rest of the world, around 5¾% until 2008.

### 3.7. Assessment

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

#### 3.7.1. *Plausibility of the macroeconomic scenario*

According to the update, economic activity in Cyprus should remain strong, with domestic demand and, to a lesser extent exports, the main drivers of growth in the medium-term. This reflects mainly buoyant investment activity and vibrant growth of private consumption.

The programme's macroeconomic outlook is broadly in line with the Commission services' autumn 2006 forecast, although it would appear slightly optimistic for 2008. For the period thereafter until 2010, it is also broadly in line with the Commission services' estimate of potential GDP growth, as recalculated on the basis of the information provided in the programme according to the agreed methodology. Although there are some differences in the composition of growth, particularly regarding the update's somewhat more optimistic contribution of the external sector to real GDP growth, overall the macroeconomic assumptions seem plausible. Although the size and openness of the Cypriot economy renders it vulnerable to external shocks, the risks regarding the macroeconomic outlook presented in the update seems to be fairly balanced over the medium term.



### 3.7.2. *Economic good vs. bad times*

On the basis of the Commission services' autumn 2006 forecast, the output gap for Cyprus, remains negative up to 2008. However, GDP growth has been consistently close to 4% since 2004 and is projected at a similar rate until 2010 along with a declining path in the rate of unemployment, buoyant tax receipts, with tax elasticity permanently higher than 1, and rapid credit growth among others. Consequently, given the degree of volatility of the calculations of the output gap, as already mentioned in Section 3.2 and shown in Table 3, the macroeconomic outlook would qualify for rather neutral cyclical conditions (neither economic 'good' nor 'bad' times).

## 4. GENERAL GOVERNMENT BALANCE

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

### 4.1. Budgetary implementation in 2006

For 2006, the programme estimates the deficit to decrease to 1.9% of GDP from 2.3% in 2005. This is the same target as in the 2005 December update, in spite of a real GDP growth rate below that projected in last year's update (3.7% instead of 4.2%), and as in the Commission services' autumn 2006 forecast with a comparable macroeconomic scenario. Total expenditure for 2006 is estimated at 44% of GDP, in line with the Commission services' autumn forecast and much higher than budgeted in the December 2005 update (just below 42% of GDP). This was mainly due to higher than expected social transfers other than in kind by 1.7 percentage points of GDP, on the reasons for which the update does not provide further information. However, higher revenues are estimated to offset the rise in total expenditures, through higher tax receipts and other revenues (1.5% of GDP) and higher property income and social contributions (0.2% of GDP), in line with the Commission services' autumn 2006 forecast. No one-offs are included, as the initially budgeted 0.3% of GDP from temporary revenues from building permits have not materialised.

The cyclically adjusted deficit from around 2% of GDP in 2005 is estimated to decline to about 1½% of GDP in 2006. Since deficit-reducing one-off measures in 2005 amounted to almost 1% of GDP, the structural balance (the cyclically-adjusted balance net of one-offs), which was at almost 3% of GDP in 2005, is estimated to improve by around 1½% of GDP in 2006.

**Table 5: Evolution of budgetary targets in successive programmes**

		2005	2006	2007	2008	2009	2010
General government balance (% of GDP)	<b>CP December 2006</b>	<b>-2.3</b>	<b>-1.9</b>	<b>-1.6</b>	<b>-0.7</b>	<b>-0.4</b>	<b>-0.1</b>
	CP December 2005	-2.5	-1.9	-1.8	-1.2	-0.6	n.a.
	<i>CP December 2004</i>	-2.9	-1.7	-1.5	-0.9	n.a.	n.a.
	COM Nov 2006	-2.3	-1.9	-1.7	-1.7	n.a.	n.a.
General government expenditure (% of GDP)	<b>CP December 2006</b>	<b>43.6</b>	<b>44.0</b>	<b>43.8</b>	<b>43.0</b>	<b>42.7</b>	<b>42.2</b>
	CP December 2005	43.8	41.9	41.8	40.8	39.7	n.a.
	<i>CP December 2004</i>	43.0	42.2	42.1	41.5	n.a.	n.a.
	COM Nov 2006	43.6	43.9	44.0	43.9	n.a.	n.a.
General government revenues (% of GDP)	<b>CP December 2006</b>	<b>41.2</b>	<b>42.1</b>	<b>42.2</b>	<b>42.3</b>	<b>42.3</b>	<b>42.1</b>
	CP December 2005	41.2	40.0	40.0	39.6	39.1	n.a.
	<i>CP December 2004</i>	40.1	40.5	40.6	40.6	n.a.	n.a.
	COM Nov 2006	41.2	42.0	42.2	42.2	n.a.	n.a.
Real GDP (% change)	<b>CP December 2006</b>	<b>3.9</b>	<b>3.7</b>	<b>3.9</b>	<b>4.1</b>	<b>4.1</b>	<b>4.1</b>
	CP December 2005	4.1	4.2	4.2	4.2	4.3	n.a.
	<i>CP December 2004</i>	4.0	4.4	4.5	4.5	n.a.	n.a.
	COM Nov 2006	3.8	3.8	3.8	3.9	n.a.	n.a.
<i>Source:</i>							
<i>Convergence programmes (CP) and Commission services' autumn 2006 economic forecasts (COM)</i>							

## 4.2. The programme's medium-term budgetary strategy

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

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

Building on the reduction of the deficit to 2.3% of GDP in 2005, and the consequent abrogation of the excessive-deficit procedure in last July's ECOFIN Council, the programme aims at further consolidating public finances. The objective is to attain the country-specific medium-term objective (see below in Section 4.2.3) of a structural deficit (i.e. a cyclically-adjusted deficit net of one-off and other temporary measures) of 0.5% of GDP by 2008 and to bring the public finances into balance by the end of the programme period.

After declining sharply to 2.3% of GDP in 2005, from 4.1% of GDP in 2004, the general government deficit is projected to gradually decline to 0.1% of GDP in 2010 from 1.9% in 2006. The improvement is about 0.3 percentage point of GDP each year in nominal terms, except in 2008, when the headline deficit according to the programme declines by almost 1 percentage point of GDP.

**Table 6: Composition of the budgetary adjustment**

(% of GDP)	2005	2006	2007	2008	2009	2010	Change: 2010-2006
<b>Revenues</b>	<b>41.2</b>	<b>42.1</b>	<b>42.2</b>	<b>42.3</b>	<b>42.3</b>	<b>42.1</b>	<b>0.0</b>
<i>of which:</i>							
- Taxes & social contributions	35.5	35.7	36.0	36.5	36.7	36.5	0.8
- Other (residual)	5.8	6.4	6.2	5.9	5.6	5.6	-0.8
<b>Expenditure</b>	<b>43.6</b>	<b>44.0</b>	<b>43.8</b>	<b>43.0</b>	<b>42.7</b>	<b>42.2</b>	<b>-1.8</b>
<i>of which:</i>							
- Primary expenditure	40.2	40.7	40.8	40.2	40.2	39.9	-0.8
<i>of which:</i>							
Collective consumption	10.0	9.7	9.3	8.9	8.8	8.7	-1.0
Transfers in kind, other than in kind & subsidies	21.5	22.2	22.7	23.0	23.2	23.4	1.2
Gross fixed capital formation	3.1	3.1	3.1	3.1	3.1	3.1	-0.0
Other (residual)	5.6	5.7	5.7	5.2	5.1	4.7	-1.0
- Interest expenditure	3.4	3.3	3.0	2.8	2.5	2.3	-1.0
<b>General government balance (GGB)</b>	<b>-2.3</b>	<b>-1.9</b>	<b>-1.6</b>	<b>-0.7</b>	<b>-0.4</b>	<b>-0.1</b>	<b>1.8</b>
<b>Primary balance</b>	<b>1.1</b>	<b>1.4</b>	<b>1.4</b>	<b>2.1</b>	<b>2.1</b>	<b>2.2</b>	<b>0.8</b>
One-offs <sup>1</sup>	1.3	0.4	0.0	0.0	0.0	0.0	
<b>GGB excl. one-offs</b>	<b>-3.6</b>	<b>-2.3</b>	<b>-1.6</b>	<b>-0.7</b>	<b>-0.4</b>	<b>-0.1</b>	<b>1.8</b>
<i>Note:</i>							
<sup>1</sup> One-off and other temporary measures. These one-off measures include 0.4% of GDP in both 2005 and 2006, accounting for EU funds, which are not considered as one-off measures in our analysis.							
<i>Source:</i>							
<i>Convergence programme update</i>							

With interest expenditure falling by about 1% of GDP over the programme period, the improvement in the primary balance is less pronounced than that of the headline balance. Particularly, after attaining a surplus of 1.4% of GDP in 2006, from a surplus of 1.1% a year earlier, the primary surplus is planned to rise to 2.2% of GDP in 2010; the improvement is concentrated in 2008.

This consolidation path is broadly consistent with that in the previous update. The planned adjustment is somewhat frontloaded compared to the previous update but against a somewhat less favourable macroeconomic scenario (especially in 2007). In particular, the update aims at achieving a deficit of 0.4% of GDP by 2009 compared to 0.6% in last year's programme.

#### 4.2.2. The composition of the budgetary adjustment

As revenues are planned to remain constant as a percentage of GDP, the narrowing of the deficit by 1.8 percentage point of GDP over the period reflects exclusively a fall in the expenditure ratio, a full percentage point of which is due to a lower interest burden. The new update envisages a series of mostly structural measures to restrain expenditure, which is where most of the slippage occurred in past years. In contrast to the practice followed in the previous years, the update does not incorporate any one-off measures.

A key element of the fiscal consolidation strategy presented in the programme is to keep public expenditure growth below that of nominal GDP. The update underlines the importance of the introduction as from 2007, for the first time, of a medium-term budgetary framework (MTBF) for the 3-year period 2007-2009. Through MTBF, the update envisages limiting the practice of supplementary budgets, to introduce gradually

quantifiable programme targets and performance-based budgeting and rationalise the public finances. The projected reduction of primary expenditures is associated to the imposition of ceilings on their annual growth rate, excluding public wages. These ceilings were introduced in 2006, but both the December 2005 and 2006 updates do not provide sufficient information and concrete data that would allow an assessment of their actual impact. In particular, according to the update, the ceilings would also be incorporated in the medium term budgetary framework for the years 2007-2009. However, the programme does not include a detailed explanation of such ceilings and their enforcement mechanism.

There is a difference between the update's 2008 target deficit of 0.7% of GDP and the Commission services' autumn 2006 forecast, which has a 2008 deficit projection of 1.7% on a no-policy change basis. However, the programme provides a relatively detailed overview of measures that support the envisaged adjustment. The deficit reduction, in nominal terms, is expected to be mainly achieved via a decrease on the expenditure side, by some 1 $\frac{3}{4}$  percentage points of GDP between 2006 and 2010 (when expenditure should reach 42 $\frac{1}{4}$ % of GDP). This reduction is planned to be achieved mainly through a decrease in current primary spending (by  $\frac{3}{4}$  percentage points), the bulk of which comes from public consumption and interest expenditure (by almost 1 percentage point each item). The programme projects a stable government investment-to-GDP ratio at just above 3% of GDP.

The key measures accounting for most of the adjustment on the revenue side are planned over 2006 and 2007 (0.8% and 0.2% of GDP, respectively). In particular, these relate to the improvement of the efficiency of the Land and Surveys Department implemented through administrative and pricing policy changes in 2006 estimated to increase revenue by some  $\frac{1}{2}$ % of GDP. It also includes the application of reduced and minimum VAT rates on specific goods and services (hitherto zero-rated), which is estimated to increase revenue by slightly above  $\frac{3}{4}$  % of GDP as from 2008. However, these are expected to be largely offset by the reduction of the taxation on motor vehicles adopted in 2006 and estimated to have a negative fiscal impact by 2008.

In 2007, the fiscal adjustment is projected to be underpinned by a marginal increase of revenues by 0.1 percentage points and a decline in the expenditure ratio of close to  $\frac{1}{4}$  percentage points. In particular, interest expenditure would decline by  $\frac{1}{4}$  percentage points while the reduction in collective consumption by almost  $\frac{1}{2}$  percentage points will be offset by an increase in transfers other than in kind and "other" expenditure. The small increase in revenues through the measures included in the 2007 Budget actually compensates the negative fiscal impact in 2007 of the termination of Cyprus' receipts of temporary compensating grants from the EU budget (estimated at slightly below  $\frac{1}{2}$ % of GDP) associated with the accession to the EU.

The reduction of the deficit in 2008 mainly reflects the fall in primary expenditure due to a reduction by 0.4 percentage points of GDP of government consumption and by 0.5 percentage points of GDP of other expenditure.

## Box 2: The budget for 2007

The 2007 budget is expected to be approved by the Parliament on 21 December 2006. The budget targets a nominal general government deficit of 1.6% of GDP.

On the revenue side, the main measures are the administrative and price-policy improvement of Land and Survey department, which increases the amount of collected taxes. On the expenditure side, the main measures include a ceiling on the rate of growth in both current and capital expenditure that is maintained, the continuation of the restrictive recruitment and wage policy in the general government sector, the limitation of the rate of growth of current transfers (pensions, monetary allowances and other benefits) to the rate of inflation, a more targeted social policy, and the reduction of net interest payments by running down the stock of debt financed by sinking fund deposits.

Table: Main measures in the budget for 2007

Revenue measures*	Expenditure measures**
<ul style="list-style-type: none"><li>○ Administrative and price-policy improvement of Land and Survey department Land and Survey department services fees (+0.5% of GDP)</li></ul>	<ul style="list-style-type: none"><li>○ Restrictive employment and wage policy in the general government sector (- 0.1% of GDP)</li><li>○ Maintaining a ceiling on the rate of growth in both current and capital expenditure (excluding wages and salaries and debt-servicing costs) compared with the previous year.</li><li>○ Limiting the rate of growth of current transfers (pensions, monetary allowances and other benefits) to the rate of inflation</li><li>○ The reduction of net interest payments by running down stock of debt financed by sinking fund deposits (0.3% of GDP)</li></ul>

\* Estimated impact on general government revenues.

\*\* Estimated impact on general government expenditure.

Sources: Commission services and December 2006 Update of the Convergence Programme.

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

The update presents a medium-term objective (MTO) for the budgetary position as a general government deficit in structural terms (i.e. in cyclically- adjusted terms and net of one-off and other temporary measures) of 0.5% of GDP, which it aims to achieve by 2008. This is the same MTO as in the previous programme, yet the new update aims to achieve it a year earlier.

The MTO aimed at by the programme is at an appropriate level, as it lies within the range indicated for euro area and ERM II Member States in the Stability and Growth Pact and the code of conduct and adequately reflects the debt ratio and average potential output growth in the long term. It also satisfies the condition of providing a safety margin against the occurrence of an excessive deficit as the minimum benchmark (which is the estimated budgetary position in cyclically-adjusted terms that provides a sufficient safety margin for automatic stabilisers to operate freely during normal economic downturns without breaching the 3% of GDP deficit reference value) for Cyprus is estimated at around 1¾% of GDP.

### **Box 3: The medium-term objective (MTO) for the budgetary position**

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

The MTO should fulfil a triple aim. First, it should provide a safety margin with respect to the 3% of GDP deficit limit. Second, it should ensure rapid progress towards sustainability. Third, taking into account the first two goals, it should allow room for budgetary manoeuvre, considering in particular the needs for public investment. The code of conduct further specifies that, as long as the methodology for incorporating implicit liabilities is not fully developed and agreed by the Council, the country-specific MTOs are set taking into account the current government debt ratio and potential growth (in a long-term perspective), while preserving a sufficient margin against breaching the 3% of GDP deficit reference value. Member States are free to set an MTO that is more demanding than strictly required by these provisions.

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

Based on Commission services' calculations on the basis of the programme according to the commonly agreed methodology, the structural balance is projected to improve by some 1<sup>3</sup>/<sub>4</sub>% of GDP over the programming period, from a deficit of 1<sup>1</sup>/<sub>2</sub>% of GDP in 2006 to a surplus of <sup>1</sup>/<sub>4</sub>% of GDP in 2010. The structural balance is planned to improve on average by around <sup>1</sup>/<sub>2</sub> percentage point of GDP per year. Nonetheless, the consolidation effort is unevenly distributed. Specifically, after an improvement of slightly above 1<sup>1</sup>/<sub>4</sub> percentage points of GDP in 2006, the programme foresees a structural adjustment of only some <sup>1</sup>/<sub>4</sub> percentage points in 2007, reflecting in fact decline in interest expenditures burden. This is attributed to the (anticipated) deterioration of the net position of Cyprus vis-à-vis the EU budget, within the framework of the 2007-2013 financial perspectives, which coincides with the termination of the provision of compensating grants through the EU budget, equivalent to slightly below <sup>1</sup>/<sub>2</sub>% of GDP. In 2008, the adjustment is almost 1 percentage point; in the last two years of the programme, it is some <sup>1</sup>/<sub>4</sub> percentage point per year. The stance of fiscal policy should be regarded as neutral in each year covered by the programme, with the exception of 2008, when the stance is restrictive.

**Table 7: Output gaps and cyclically-adjusted and structural balances**

(% of GDP)	2005		2006		2007		2008		2009	2010	Change: 2010-2006
	COM	CP <sup>1</sup>	COM	CP <sup>1</sup>	COM	CP <sup>1</sup>	COM	CP <sup>1</sup>	CP <sup>1</sup>	CP <sup>1</sup>	CP <sup>1</sup>
Gen. gov't balance	-2.3	-2.3	-1.9	-1.9	-1.7	-1.6	-1.7	-0.7	-0.4	-0.1	1.8
One-offs <sup>2</sup>	0.9	1.3	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	-
Output gap <sup>3</sup>	-1.3	-0.9	-1.3	-1.0	-1.3	-1.1	-1.3	-1.1	-1.1	-1.1	-
CAB <sup>4</sup>	-1.8	-2.0	-1.4	-1.5	-1.2	-1.2	-1.2	-0.3	0.0	0.3	1.8
change in CAB	1.8	1.8	0.4	0.5	0.2	0.3	0.0	0.9	0.3	0.3	-
CAPB <sup>4</sup>	1.6	1.4	1.8	1.8	1.9	1.8	1.9	2.5	2.5	2.6	0.8
Structural balance <sup>5</sup>	-2.7	-3.3	-1.4	-1.9	-1.2	-1.2	-1.2	-0.3	0.0	0.3	1.8
change in struct. bal.			1.3	1.4	0.2	0.3	0.0	0.9	0.3	0.3	-
Struct. Prim. balance <sup>5</sup>			1.8	1.8	1.9	1.8	1.9	2.5	2.5	2.6	0.8

**Notes:**  
<sup>1</sup>Output gaps and cyclical adjustment according to the convergence programme (CP) as recalculated by Commission services on the basis of the information in the programme.  
<sup>2</sup>One-off and other temporary measures. The programme reports these to be at 1.3% of GDP for 2005 and 0.4% of GDP in 2006, all deficit reducing. These one-off measures include 0.4% of GDP in both years accounting for EU funds, which are not considered as one-off measures in our analysis.  
<sup>3</sup>In percent of potential GDP. See Table 2 above.  
<sup>4</sup>CA(P)B = cyclically-adjusted (primary) balance.  
<sup>5</sup>Structural (primary) balance = CA(P)B excluding one-off and other temporary measures.

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

### 4.3. Risk assessment

The programme's budgetary projections are broadly in line with the Commission services' 2006 autumn forecast. There are no significant differences between the official deficit projections for 2007, while the difference of 1 percentage point for the deficit of 2008 is explained by the usual no-policy change scenario used in the Commission services' forecast. The programme provides a relatively detailed overview of measures that support the envisaged adjustment in 2008.

Given that the macroeconomic scenario underlying the targets is plausible (see Section 3 above), the macroeconomic risks to achieving the fiscal targets are mainly associated to the vulnerability of the Cypriot economy to external shocks due to its size and openness. Given Cyprus' strong specialisation in tourism, unforeseen geopolitical tensions could adversely affect growth prospects and consequently the envisaged fiscal consolidation process. Commission services' simulations of the cyclically-adjusted balance under the assumptions of (i) a sustained 1 percentage point negative deviation from the real GDP growth projections in the programme over the 2006-2010 period; (ii) trend output based on the HP-filter and (iii) no policy response, reveal that, by 2010, the cyclically-adjusted balance is 0.8 percentage point of GDP worse than the central scenario. Hence, in the case of persistently lower real growth, additional measures of around 0.8 percentage point of GDP would be necessary to keep the public finances on the path targeted in the central scenario.

The programme provides information about the measures underpinning the envisaged consolidation path, some of them complemented with its expected budgetary impact. The quantification of the budgetary impact seems broadly plausible, except for the improvement of the efficiency of the Land and Surveys Department, because of the

introduction of administrative changes, non-specified adjustment of the pricing policy and simplification of procedures, the budgetary impact of which is difficult to assess. The update underlines the importance of the introduction as from 2007, for the first time, of a 3-year budgetary framework. However, there is no fully clear indication in the programme of the extent to which it will prevent the submission of supplementary expenditure laws during the year.

The programme treats the compensating grants received from the EU budget until 2006 as one-off revenues, which amount to just below ½% of GDP for 2005 and 2006. This represents a change of treatment compared to the previous update, which did not consider them as one-offs. This new treatment is not in line with the Commission services' views, according to which EU funds granted to a Member State cannot be considered one-off revenues.

The consolidation from 2007 onwards does not rely on one-off and other temporary measures; indeed, the projected achievement of a balanced position by 2010 relies solely on structural measures.

**Table 8: Comparison of budgetary developments and projections**

(% of GDP)	2005	2006		2007		2008		2009	2010
		COM	CP	COM	CP	COM <sup>1</sup>	CP	CP	CP
<b>Revenues</b>	41.2	42.0	42.1	42.2	42.2	42.2	42.3	42.3	42.1
<i>of which:</i>									
- Taxes & social contributions	35.5	35.5	35.7	36.0	36.0	36.0	36.5	36.7	36.5
- Other (residual)	5.8	6.5	6.4	6.2	6.2	6.2	5.9	5.6	5.6
<b>Expenditure</b>	43.6	43.9	44.0	44.0	43.8	43.9	43.0	42.7	42.2
<i>of which:</i>									
- Primary expenditure	40.2	40.7	40.7	40.8	40.8	40.8	40.2	40.2	39.9
<i>of which:</i>									
Collective consumption	10.0	10.0	9.7	10.0	9.3	10.0	8.9	8.8	8.7
Transfers in kind, other than in kind & subsidies	21.5	21.8	22.2	22.0	22.7	22.0	23.0	23.2	23.4
Gross fixed capital formation	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Other (residual)	5.6	5.8	5.7	5.7	5.7	5.7	5.2	5.1	4.7
- Interest expenditure	3.4	3.3	3.3	3.1	3.0	3.1	2.8	2.5	2.3
<b>General government balance (GGB)</b>	-2.3	-1.9	-1.9	-1.7	-1.6	-1.7	-0.7	-0.4	-0.1
<b>Primary balance</b>	1.1	1.4	1.4	1.4	1.4	1.4	2.1	2.1	2.2
One-offs <sup>2</sup>	0.9	0	0.4	0	-	0	-	-	-
<b>GGB excl. one-offs</b>	-3.3	-1.9	-2.3	-1.7	-1.6	-1.7	-0.7	-0.4	-0.1

Notes:

<sup>1</sup>On a no-policy change basis.

<sup>2</sup>One-off and other temporary measures. The programme reports these to be at 1.3% of GDP for 2005 and 0.4% of GDP in 2006, all deficit reducing. These one-off measures include 0.4% of GDP in both years accounting for EU funds, which are not considered as one-off measures in our analysis.

Source:

Commission services' autumn 2006 economic forecasts (COM); convergence programme update (CP); Commission services' calculations

Table 9 presents annual changes in the overall tax-to-GDP ratio and the tax elasticity relative to GDP. Based on this data, it appears that the programme is consistent with the Commission services autumn 2006 forecast in its assumptions on the tax ratio for 2007. The composition component is negative, denoting that national authorities are more pessimistic than the Commission regarding developments in the tax base. Nonetheless, the discretionary and elasticity component is positive, albeit low, indicating that the authorities may be optimistic on the yield of measures or more in general on the performance of the tax system, especially regarding of social contributions and personal



income taxes (see Annex 5). For 2008, Table 9 seems to suggest a downward risk to the programme's tax projections, especially as regards indirect taxes (see Annex 5).

The programme highlights that improving tax collection remains a key challenge. Despite the successful strategy followed in 2004–2006 in the field of revenues collection, the estimates for 2007 and 2008 are kept conservative. In this context, the update lists a number of measures introduced in the 2007 budget aiming at improving tax collection and encouraging tax compliance. Furthermore, according to the programme, the government has already elaborated and stands ready to introduce additional corrective measures, should this be warranted by adverse growth developments and/or delays or failures to implement any of the envisaged measures for the medium term period.

The heavy reliance of the consolidation strategy on the respect of expenditure ceilings may constitute an additional risk to the achievement of the budgetary targets, especially as the ceilings were introduced in 2006 but, as indicated above, the programme provides only limited information (on their nature and their enforcement mechanism) that would allow an assessment of their actual impact. The update also does not clarify whether the ceilings, and the new medium-term budgetary framework more generally, will prevent the submission of supplementary expenditure laws during the year.

**Table 9: Assessment of tax projections**

	2007			2008			2009	2010
	CP	COM	OECD <sup>3</sup>	CP	COM <sup>1</sup>	OECD <sup>3</sup>	CP	CP
Change in tax-to-GDP ratio (total taxes)	0.4	0.5	0.4	0.4	0.0	0.0	0.2	-0.2
Difference (CP – COM)	-0.1		/	0.4		/	/	/
<i>Of which</i> <sup>2</sup> :								
- discretionary and elasticity component	0.1		/	0.6		/	/	/
- composition component	-0.3		/	-0.1		/	/	/
Difference (COM - OECD)	/	0.1		/	-0.5		/	/
<i>Of which</i> <sup>2</sup> :								
- discretionary and elasticity component	/	-0.5		/	-0.9		/	/
- composition component <sup>7</sup>	/	0.3		/	0.2		/	/
p.m.: Elasticity to GDP	1.2	1.2	1.1	1.2	1.0	1.1	1.1	0.9
<b>Notes:</b>								
<sup>1</sup> On a no-policy change basis.								
<sup>2</sup> The decomposition is explained in Annex 5.								
<sup>3</sup> Based on OECD ex-ante elasticity relative to GDP.								
<b>Source:</b>								
<i>Commission services' autumn 2006 economic forecasts (COM); Commission services' calculations and OECD (N. Girouard and C. André (2005), "Measuring Cyclically-Adjusted Budget Balances for the OECD Countries", OECD Working Paper No. 434)</i>								

Summing up, the envisaged fiscal consolidation relies to a large extent on the respect of ceilings on the primary current and capital expenditure. Taking into account the lack of detailed information and concrete data on their impact so far, there are downside risks associated with expenditure slippages. Particularly, in the face of the upcoming presidential elections in 2008. On the other hand, the Cypriot government has so far achieved the budgetary targets set in previous update. Also, for the year 2008, which is when most of the consolidation takes place, there is relatively detailed information in the programme about the measures that support the adjustment. Taking into consideration the government's readiness to adopt additional measures if needed, the risks to the budgetary targets and projections in the programme appear broadly balanced.

#### 4.4. Assessment of the fiscal stance and budgetary strategy

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

**Table 10: Overview of compliance with the Stability and Growth Pact**

	<b>Based on programme<sup>4</sup></b> (with targets taken at face value)	<b>Assessment</b> (taking into account risks to targets)
a. Safety margin against breaching 3% of GDP deficit limit <sup>1</sup>	throughout programme period	throughout programme period
b. Achievement of the MTO	from 2008 onwards	from 2008 onwards
c. Adjustment towards MTO in line with the Pact <sup>2</sup> ?	in line	in line
d. Fiscal stance in line with Pact (after achieving the MTO) <sup>3</sup> ?	in line	in line
<p><u>Notes:</u></p> <p><sup>1</sup>The risk of breaching the 3% of GDP deficit threshold with normal cyclical fluctuations, i.e. the existence of a safety margin, is assessed by comparing the cyclically-adjusted balance with the above-mentioned minimum benchmark (estimated as a deficit of around 1.9% of GDP for Cyprus). These benchmarks represent estimates and as such need to be interpreted with caution.</p> <p><sup>2</sup>The Stability and Growth Pact requires Member States to make progress towards their MTO (for countries in the euro area or in ERM II, this has been quantified as an annual improvement in the structural balance of at least 0.5% of GDP as a benchmark). In addition, the structural adjustment should be higher in good times, whereas it may be more limited in bad times.</p> <p><sup>3</sup>According to the Stability and Growth Pact, countries which have already achieved their MTO should avoid pro-cyclical fiscal policies in "good times".</p> <p><sup>4</sup>Targets in structural terms as recalculated by Commission services on the basis of the information in the programme.</p> <p><i>Source: Commission services</i></p>		

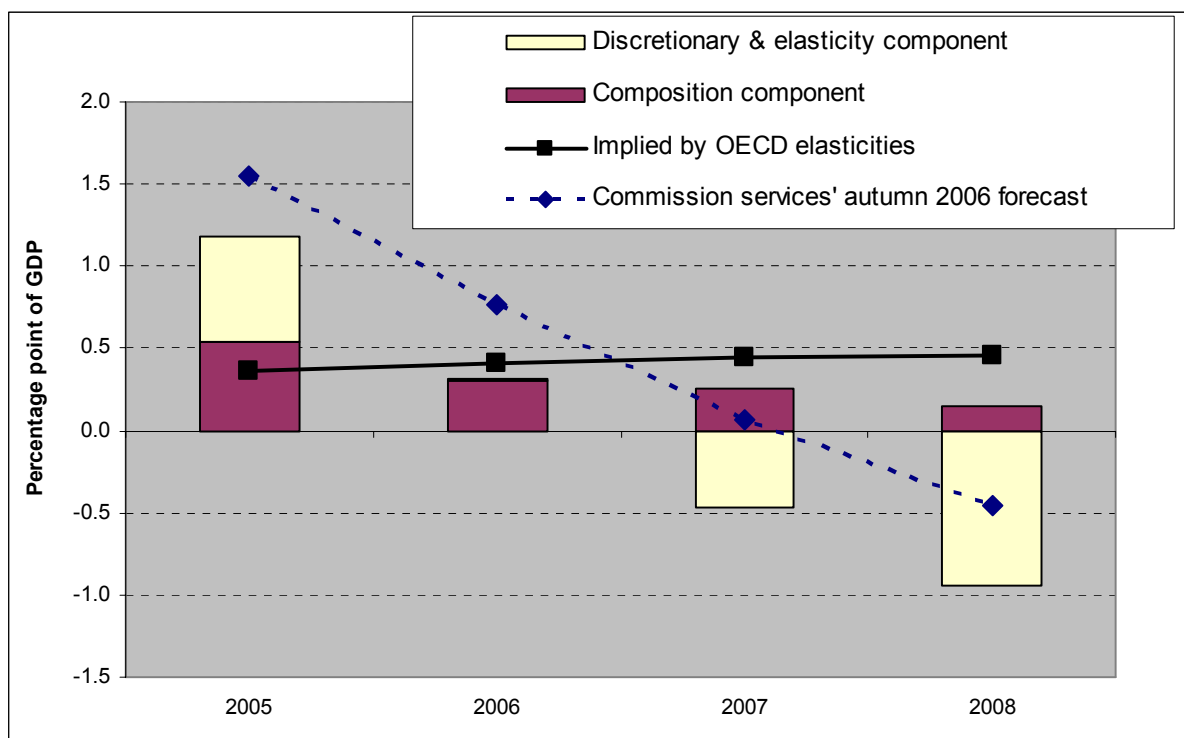
Taking into account that the risks to the budgetary targets are broadly balanced, the budgetary strategy outlined in the programme seems sufficient to ensure that the MTO (structural deficit of 0.5% of GDP) will be reached in 2008, a year earlier than planned in the previous update, and maintained thereafter.

The structural deficit, based on the Commission services' calculations on the basis of data from the programme, is estimated at 1½% of GDP in 2006 and improving thereafter. With the above-mentioned minimum benchmark estimated at a cyclically-adjusted deficit of about 1¾% of GDP, a safety margin against breaching 3% of GDP deficit threshold seems already provided from 2006 onwards.

The structural adjustment towards the MTO is around 1¼ percentage point of GDP cumulatively over the two years 2007 and 2008, i.e. in line with the 0.5% of GDP benchmark for euro area and ERM II countries. However, the adjustment is unevenly distributed, falling mainly on 2008; it also partly reflects an ongoing decline in the interest burden.

After the achievement of the MTO, the structural position is broadly unchanged (especially when taking into account the further reduction in the interest burden). Cyprus is likely to experience neither good nor bad times in this period and is thus avoiding procyclical “fiscal policies in good times”, in line with the requirements of the Pact.

**Figure 8: Changes in the tax-to-GDP ratio:  
actual/projected changes vs. changes implied by OECD elasticity**



Note:

The dashed line displays the change in the tax ratio in the Commission services' autumn 2006 forecast, for 2008, on a no-policy-change basis. The solid line shows the change in the tax ratio implied by the ex-ante OECD elasticity with respect to GDP. The difference between the two is explained by the bars. The composition component captures the effect of differences in the composition of aggregate demand (more tax rich or more tax poor components). The discretionary and elasticity component captures the effect of discretionary fiscal policy measures as well as variations of the yield of the tax system that may result from factors such as time lags, variations of taxable income that do not necessarily move in line with GDP e.g. capital gains. Both components may not add up to the total difference because of a residual component, which is generally small. The decomposition is explained in detail in Annex 5.

Source:

Commission services

## 5. GOVERNMENT DEBT AND LONG-TERM SUSTAINABILITY

Government debt is the result of the financing needs of government over the years. It corresponds primarily to an accumulation of deficits, although the build-up of financial assets and other adjustments may also play a role.<sup>11</sup> The reform of the Stability and

<sup>11</sup> On the factors other than the deficit which explain the evolution of the government debt, see “The dynamics of government debt: decomposing the stock-flow adjustment”, chapter II.2.2 of *Public Finances in EMU 2005*, European Economy, N°3/2005.

Growth Pact has raised attention to the crucial importance of government debt and of sustainability in fiscal surveillance.

This section is in two parts: a first part describes recent developments and the medium-term prospects for government gross debt; it describes the convergence programmes targets, compares them with the Commission services' 2006 autumn forecasts and assesses the associated risks. A second part looks into the government debt from a longer-term perspective with the aim of assessing the long-term sustainability of public finances.

## **5.1. Recent debt developments and medium-term prospects**

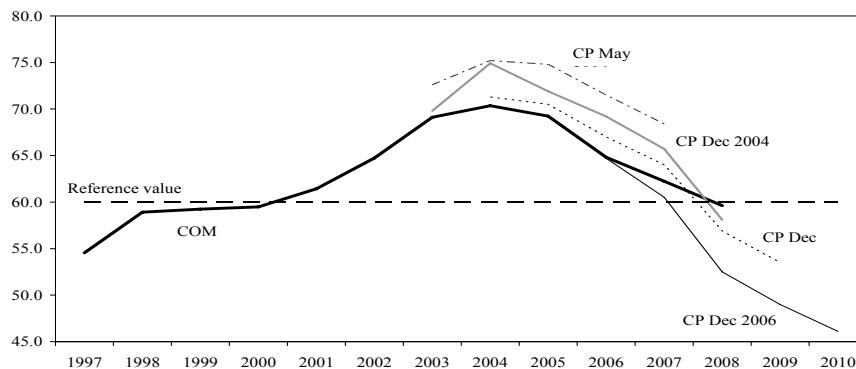
### *5.1.1. Debt projections in the programme*

The December 2006 update projects a progressively declining debt-to-GDP ratio over the programme's period planned to reach 46¼% of GDP by 2010, from 64¾% in 2006, and 60½% in 2007. These targets compare favourably with the December 2005 update's targets of 67% and 64% of GDP for 2006 and 2007 respectively, while they stand broadly in line with the Commission services' 2006 autumn forecast.

The government debt is expected to fall below the 60% of GDP reference value from 2008 onwards. The main drivers of its reduction are the increasingly positive primary balances, nominal GDP growing above the interest rate throughout the programming period, and particularly the reduction of financial assets associated with the decumulation of sinking funds. In particular, the latter, which should disappear by 2008, account for a reduction in the debt ratio of more than 6 percentage points of GDP from 2006 to 2008.

As extensively discussed in the technical assessment of the December 2004 convergence programme, Cyprus' SFAs (of a debt-increasing nature) have been among the highest in EU and the highest among the new Member States, with an annual average of about 2½% of GDP during 2000-2004. Hitherto, these SFAs have been mainly associated with the accumulation of financial assets by the government in the form of deposits in sinking funds held in the Central Bank of Cyprus. The sinking funds amount to 6½% of GDP in 2006. As of 2003, the policy of accumulating sinking funds was abolished; their decumulation is planned to be virtually completed by 2008.

**Figure 9: Debt projections in successive convergence programmes (% of GDP)**



*Source:* Commission services' autumn 2006 forecast (COM) and successive convergence programmes

**Table 11: Debt dynamics**

(% of GDP)	average 2000-04	2005	2006		2007		2008		2009	2010
			COM	CP	COM	CP	COM	CP	CP	CP
<b>Gross debt ratio<sup>1</sup></b>	70.3	69.2	64.8	64.7	62.2	60.5	59.6	52.5	49.0	46.1
Change in the ratio	2.2	-1.1	-4.4	-4.5	-2.6	-4.2	-2.6	-8.0	-3.5	-2.9
<i>Of which<sup>2</sup>:</i>										
Primary balance	0.5	-1.1	-1.4	-1.4	-1.4	-1.4	-1.4	-2.1	-2.1	-2.2
“Snow-ball” effect	-0.8	-0.8	-1.0	-1.0	-0.6	-1.0	-0.6	-0.9	-0.6	-0.6
<i>Of which:</i>										
Interest expenditure	3.3	3.4	3.3	3.3	3.1	3.0	3.1	2.8	2.5	2.3
Growth effect	-2.0	-2.5	-2.5	-2.4	-2.3	-2.4	-2.3	-2.3	-2.0	-1.9
Inflation effect	-2.2	-1.7	-1.7	-1.8	-1.4	-1.7	-1.4	-1.5	-1.1	-1.0
Stock-flow adjustment	2.4	0.8	-2.1	-2.2	-0.6	-1.8	-0.6	-5.0	-0.8	-0.1
<i>Of which:</i>										
Cash/accruals diff.	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Acc. financial assets	1.9	0.5	-2.1	-2.1	-0.6	-1.6	-0.6	-4.8	-0.6	0.0
<i>Privatisation</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Val. effect & residual	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Notes:**

<sup>1</sup>End of period.

<sup>2</sup>The change in the gross debt ratio can be decomposed as follows:

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

where  $t$  is a time subscript;  $D$ ,  $PD$ ,  $Y$  and  $SF$  are the stock of government debt, the primary deficit, nominal GDP and the stock-flow adjustment respectively, and  $i$  and  $y$  represent the average cost of debt and nominal GDP growth (in the table, the latter is decomposed into the growth effect, capturing real GDP growth, and the inflation effect, measured by the GDP deflator). The term in parentheses represents the “snow-ball” effect. The stock-flow adjustment includes differences in cash and accrual accounting, accumulation of financial assets and valuation and other residual effects.

**Source:**

*Convergence programme update (CP); Commission services' autumn 2006 economic forecasts (COM); Commission services' calculations*

### *5.1.2. Assessment*

The Commission services' autumn 2006 forecast projects a slightly slower decline in the debt-to-GDP ratio in 2007 and especially in 2008. The difference for 2008 can be partially explained by the programme's more favourable outlook for the primary balance, projected to reach 2¼% of GDP in 2008, vis-à-vis 1½% of GDP in the Commission services' autumn 2006 forecasts. Moreover, the Commission services' forecasts anticipated a much slower reduction in sinking funds' assets.

As for the deficit targets, the risks to the projected debt deduction path appear to be broadly balanced. The update builds on the overachievement of the debt targets for 2005 and 2006 as set in the December 2005 update. The programme includes an analysis of the sensitivity of the debt to real GDP growth rate and interest rate variations. Three different scenarios are considered. They assume that, while automatic stabilizers would be allowed to operate fully, the planned (non cyclical) expenditure paths could not be altered. The first alternative scenario assumes that the GDP growth rate is 1 percentage point higher each year, compared with the baseline scenario. Other things being equal, the debt to GDP ratio would decline by an additional 1.6 percentage points of GDP, by the end of the programme horizon. The second scenario assumes a lower real GDP growth rate by 2 percentage points per year. Respectively, the debt to GDP ratio would be higher by 3.2 percentage points of GDP compared with the baseline scenario, by the end of the programme horizon. The third alternative scenario assumes that interest rates remain 100 basis points below the baseline in each year during 2006-2010. The programme estimates that the debt-to-GDP ratio would be below ½ percentage point lower than the baseline, by the end of the programme's period.

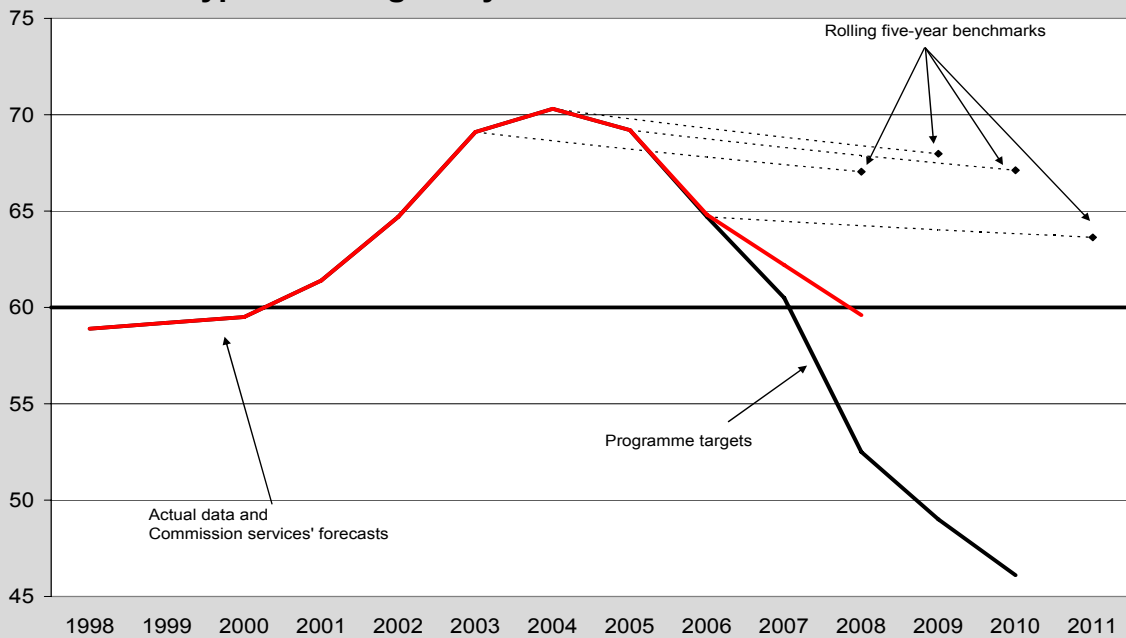
The sensitivity analysis points out the high importance of growth assumptions for the envisaged consolidation path. The moderate impact from interest rates differentials is because the bulk of the debt stock is at fixed interest rates and relatively long maturities. According to the update, during the period covered by the programme, the Government plans to maintain short-term debt (below one-year maturity) at a level of 10% of the total outstanding debt. Foreign currency exposure as a percentage of total net debt is steadily decreasing. Foreign debt amounted to 23½% of total debt during 2006, down from 30% in 2004. In view of the projected path and the broadly neutral risk assessment, the debt ratio seems to be sufficiently diminishing towards the 60% of GDP reference value, as from 2007 and it is projected to fall below the reference value from 2008.

### Box 4: The rolling debt reduction benchmark

Cyprus entered the EU in 2004 with a debt ratio in excess of 60% of GDP. A tentative assessment of the pace of debt reduction over a medium-term horizon is presented in the accompanying graph. It shows historical data, the Commission services' autumn 2006 forecasts until 2008 (which are on a no-policy change scenario) and the multi-annual debt projections in the update and compares them with the paths obtained by applying an illustrative "rolling debt reduction benchmark" (\*). The benchmark reflects the idea that a minimum debt reduction should be ensured not year after year but over a medium-term horizon (five years in the graph). For instance, the debt projection for 2007 is compared with the value obtained for the same year by applying the formula starting in 2002. Debt level projections in the programme exceeding those obtained by applying the benchmark are taken as an indicator of a slow reduction in the debt ratio.

The graph shows that the reduction of the debt ratio in the update as from 2007 is more than implied by the five-year rolling debt reduction benchmark.

**Cyprus: rolling five-year debt benchmark**



Source: Convergence programme and Commission services

(\*) The rolling debt reduction benchmark for successive five-year periods is defined as a reduction in the difference between the debt ratio and the 60% of GDP reference value of 5 percent per year:

$$\left(\frac{D_t}{Y_t}\right)_{\text{benchmark}} = \left(\frac{D_t}{Y_t}\right)_{\text{benchmark}} - 5\% \times \left[\left(\frac{D_t}{Y_t}\right)_{\text{benchmark}} - 60\right], \text{ where } t \text{ is a time subscript and } D \text{ and } Y \text{ are the stock of}$$

government debt and nominal GDP, respectively. In the first year of the five-year period, the debt ratio in the previous year is the actual debt ratio. Given the usual approximation of the change in the debt ratio

$$\frac{D_t}{Y_t} - \frac{D_{t-1}}{Y_{t-1}} = \frac{DEF_t}{Y_t} - \frac{y_t}{1+y_t} \times \frac{D_{t-1}}{Y_{t-1}} \cong \frac{DEF_t}{Y_t} - y_t \times \frac{D_{t-1}}{Y_{t-1}}$$

show that the rolling debt reduction benchmark describes the path for convergence of the debt ratio towards 60% of GDP which would take place with the deficit at 3% of GDP and nominal GDP growth at 5%. In other words, the 5 percent per year benchmark is the value that makes consistent a continuous respect of the 3% of GDP deficit threshold and an asymptotic respect of the 60% of GDP debt reference value.

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

The issue of long-term sustainability is a multi-faceted one. It involves avoiding imposing an excessive burden on future generations and ensuring the country's capacity to adjust appropriately budgetary policy in the medium and long run.<sup>12</sup>

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

The approach adopted by the Commission services and the Ageing Working Group of the Economic Policy Committee (EPC) is to project the debt, and to calculate the associated sustainability indicators (See box 6), on the basis of two different scenarios. The first scenario assumes that the structural primary balance will remain unchanged from 2006 through 2010, the final year of the convergence programme; it is called the “2006 scenario”. Debt projections in this scenario start in 2007. The second scenario assumes that the macroeconomic and budgetary plans until 2010 provided in the convergence programme will be fully respected. This is the “programme scenario”. Debt and primary balance projections in this scenario start in 2011. Both scenarios assume zero stock-flow adjustments. In addition to this quantitative analysis, other relevant factors are taken into account, which allow to better qualify the assessment with regard to where the main risks are likely to stem from and to reach an overall assessment.

### 5.2.1. Sustainability indicators and long-term debt projections

Table 12 shows the evolution of government spending on pensions, healthcare, long-term care for the elderly, education and unemployment benefits according to the EPC's projections.<sup>13</sup> Non age-related primary expenditure and revenue is assumed to remain constant as a share of GDP.

**Table 12: Long-term age-related expenditure: main projections**

(% of GDP)	2004	2010	2020	2030	2040	2050	changes
<b>Total age-related spending</b>	16,4	16,5	17,6	20,5	23,4	28,2	11,8
Pensions	6,9	8,0	9,9	12,2	15,0	19,8	12,9
Healthcare	2,9	3,1	3,4	3,6	3,9	4,0	1,1
Long-term care	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Education	6,3	5,1	4,0	4,3	4,2	4,0	-2,2
Unemployment benefits	0,4	0,4	0,4	0,4	0,4	0,4	0,0

*Source: Economic Policy Committee and Commission services.*

<sup>12</sup> For a detailed analysis of long-term sustainability issues, see “The Long Term Sustainability of Public Finances – A report by the Commission services”, European Economy n°4/2006, published in October 2006 (hereinafter Sustainability Report).

<sup>13</sup> These assumptions cover labour productivity growth, real GDP growth, participation rates, unemployment rate, demographic developments, government spending in pensions, healthcare, long-term care for the elderly, education and unemployment benefits. See Economic Policy Committee and European Commission (DG ECFIN) (2006), “The impact of ageing on public expenditure: projections for the EU25 Member States on pensions, health-care, long-term care, education and unemployment transfers (2004-2050)”, European Economy, Special Report No 1 (hereinafter Ageing Report).



The projected increase in age-related spending in Cyprus is significantly above the average of the EU, rising by 11.8% points of GDP between 2004 and 2050. The bulk of this increase is due to the expected increase in expenditure on pensions which are projected to rise by 12.9% points, the highest in the EU. The increase in health-care expenditure is projected to be 1.1% points of GDP, which is below the EU average. No projections of the long-term care were available in the Ageing Report.

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

**Table 13: Sustainability indicators and the required primary balance**

	2006 scenario			Programme scenario		
	S1	S2	RPB	S1	S2	RPB
Value	2.3	7.0	8.8	1.5	6.2	8.8
<i>of which:</i>						
Initial budgetary position	-1.7	-1.3	-	-2.5	-2.1	-
Debt requirement in 2050	-0.3	-	-	-0.3	-	-
Future changes in budgetary position	4.3	8.3	-	4.3	8.3	-

*Source: Commission services.*

### Box 6 – Sustainability indicators\*

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

#### Summarizing the sustainability indicators

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

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

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

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

Table 13 shows the sustainability indicators for the two scenarios. In the “2006 scenario”, the sustainability gap (S1) that assures reaching the debt ratio of 60% of GDP by 2050 would be 2.3% of GDP. The sustainability gap (S2) which satisfies the

intertemporal budget constraint would be 7.0% of GDP. Compared with the results of the Commission's Sustainability Report, the sustainability gaps are smaller in the present assessment, by about 1½% of GDP. This is mainly due to a significantly higher estimated structural primary balance in 2006 (at 1.8% of GDP) compared with the structural primary balance in 2005 estimated in spring 2006 (at 0.5% of GDP) that was used in the Sustainability Report.

The initial budgetary position contributes to offset part of the impact of the increase in age-related expenditure up to 2050, but is not sufficient. The programme plans a gradual strengthening of a structural budgetary consolidation by 0.8% points of GDP between 2006 and 2010, which would imply a reduction in risks to long-term sustainability of public finances by a reduction of the sustainability gap (“programme scenario”). The required primary balance (RPB) is about 8.8% of GDP, significantly higher than the structural primary balance of about 2½% of GDP in the last year of the programme’s period.

Moreover, the sustainability gap indicators would increase by at least ¼% of GDP if the planned adjustment was to be postponed by 5 years, highlighting that savings can be made over time if action is taken sooner rather than later.

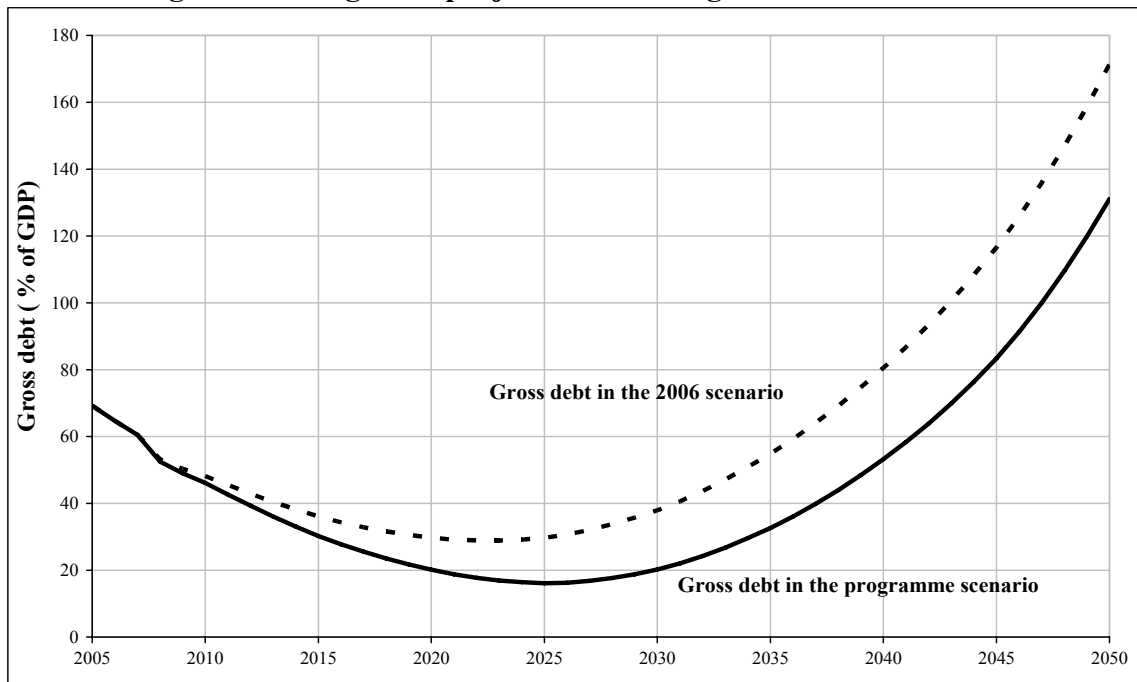
Another way to look at the prospects for long-term public finance sustainability is to project the debt/GDP ratio over the long-term using the same assumptions as for the calculations of S1 and S2. The long-term projections for government debt under the two scenarios are shown in Figure 10.

The gross debt ratio is currently above the 60% of GDP reference value, estimated in the programme at below 30% of GDP in 2006. According to the “2006 scenario”, up to 2020s, the debt ratio is projected to be on a declining curve, to below 30% of GDP. Thereafter, it is expected to reach 60% in 2030s and to increase significantly further throughout the projection period. In the “programme scenario”, debt is expected to be above 60% of GDP again in the 2040s.<sup>14</sup>

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<sup>14</sup> It should be recalled, however, that being a mechanical, partial-equilibrium analysis, the long-term debt projections are bound to show highly accentuated profiles. As a consequence, the projected evolution of debt levels should not be seen as a forecast similar to the Commission services’ short-term forecasts, but as an indication of the risks faced by Member States.

**Figure 10: Long-term projections for the government debt ratio**



*Source: Commission services.*

### 5.2.2. Additional factors

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

First, the current level of debt is higher than 60% of GDP and ensuring a reduction of debt to below the debt reference value at a satisfactory pace is necessary so as to strengthen the resilience of the public finances to adverse shocks and to reduce risks to public finance sustainability of GDP.

Second, the long-term budgetary projections presented in the convergence programme differ from those in the Ageing Report. The underlying macroeconomic assumptions are more optimistic in the programme update rather than in the EPC projections. Notwithstanding, the difference in projected increase in the age-related expenditure between the programme update (11.3% of GDP) and the Ageing Report (11.8% of GDP) is small. More optimistic assumptions in the programme update imply a lower increase in age-related spending compared to the Ageing report due to lower projected increase of pension and health care expenditure (by 2.9 p.p. of GDP), only partly countered by a less pronounced decline in education expenditure than in the Ageing report (by 1.9 p.p. of GDP) and increase in other age-related expenditure (by 0.5 p.p. of GDP).<sup>15</sup> Therefore, the programme projections may slightly underestimate the demographic ageing impact on sustainability.

<sup>15</sup> The increase in pension and health-care expenditure over the period 2005-2050 is lower in the convergence programme update with respect to the EPC/Commission projections by respectively 1.7 and 0.3% of GDP. These projected developments are countered by the lower projected decline in the education expenditure by 0.6% of GDP. In addition, the programme update projects an increase in other age-related expenditures, which are not included in the EPC/Commission projections, of 0.5% of GDP.

The programme update acknowledges that additional reform measures are necessary in order to tackle the projected budgetary burden of ageing. A number of reform measures are being discussed, some of which could be implemented in the beginning of 2007. Possible measures in the programme's 'first wave' include: i) tightening of pension eligibility criteria by increasing the number of years of contributions required to obtain full old-age pension; ii) tightening of the criteria for early pension entitlement at 63; iii) increase of social contributions, and; iv) reduction of the level of the supplementary pension part relative to basic pension. The programme indicates that the 'second wave' reforms would involve mainly further increases in contribution rates and other parametric reforms without specifying the time frame for their implementation. The implementation of the abovementioned reform measures would contribute to the long-term sustainability of public finances.

### 5.2.3. *Assessment*

The long-term budgetary impact of ageing in Cyprus is among the highest in the EU, influenced notably by a very large increase in pension expenditure as a share of GDP.

The initial budgetary position, which improved significantly compared to the last year, contributes to ease part of the projected considerable long-term budgetary impact of an ageing population, but it is not sufficient to cover it. Moreover, the current level of gross debt is above the Treaty reference value. Continuing the consolidation of the public finances simultaneously with adopting pension reform measures aimed at containing the significant increase in age-related expenditures would contribute, as recognised by the authorities, to reducing risks to the sustainability of public finances.

Overall, Cyprus appears to be at high risk with regard to the sustainability of public finances.

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

The update provides a brief presentation of the government's policy strategy for the improvement of public finances and the creation of a growth supportive environment, in the context of the Lisbon strategy.

In the framework of preparing for euro adoption, the programme points out that structural reforms will enable Cyprus to develop a robust and flexible economy, able to withstand external shocks. It also indicates that fiscal policy would support these objectives mainly by redirecting funds from current to capital expenditure through the implementation of a medium term budgetary framework (MTBF). The application of the MTBF should contain the expenditures by ministry, according to the ceilings set, while at the same time will encourage the expenditures reallocation, in favour of growth enhancing activities, which are consistent with the priorities set by the National Reform Programme

In line with the MTBF approach, the reform agenda includes also the improvement of labour, product and capital market policies, fostering a knowledge-based economy, and sustainable development via enhancing competitiveness and improving the business climate; increasing diversification; promoting R&D and innovation and facilitation of ICT diffusion; upgrading of basic infrastructures; and enhancing human capital

development. However, there is no clear and concrete evidence of the reform agenda's role in enhancing public finances management.

The update reiterates a number of planned reforms of healthcare and pension systems. Specific proposals for the reform are outlined in detail in the National Reform Programme. According to the programme, the central objectives of the proposals would be achieved by limiting the growth of health care expenditure, through, *inter alia*, exposing public hospitals to competitive pressure and ensuring efficiency gains. However, the introduction of the first part of the National Health Insurance Scheme (NHIS) concerning primary care has been planned to take place by late 2008, whereas the inclusion of the secondary care into the NHIS would follow at a later stage.

On pensions' reform, the update presents the developments that took place in 2006. The first part of the actuarial assessments of alternative parametric reforms was completed and put on the table of the dialogue with the social partners. On the other hand, main trade unions proceeded with independent actuarial studies which are also under discussion. According to the update, the government proposes a two-step reform programme. The first step of the reforms would include: tightening of pension eligibility criteria for early pension retirement and increasing the number of years required to obtain full pension, increasing social security contributions and reducing the level of the supplementary pension part relative to basic pension. The second step would consist of further parametric reforms. However, although the implementation of this two-step strategy would have a significant impact on the debt-to-GDP ratio, their implementation is not progressing, as the negotiations with the social partners reached a stalemate.

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

The macro-economic and economic policy focus in the NRP is on fiscal consolidation and debt reduction, through expenditure restraint and increased revenues. The NRP also targets the improvement of fiscal management via gradual implementation, starting from 2007, of 3-year medium-term budgetary frameworks. The improvement of the quality of public finances, by enhancing expenditure control and linking medium-term target with the annual budgetary procedure, as set out in the updated programme stands fully in line with the measures in the NRP, as described in preceding sections. The measures analysed in the December 2006 update to address the long-term sustainability of public finances, including labour supply and reforms in health care and social insurance, notably the pension system, are fully consistent within the context of the NRP.

The convergence programme contains a qualitative assessment of the overall impact of the National Reform Programme within the medium term fiscal strategy. In fact, the majority of the measures and actions planned for 2006 and 2007, included in the NRP and the relevant budgetary provisions have been included in the Budget Law for 2006 and the Budget Bill for 2007. The initiatives promoted within the framework of the implementation of the Lisbon programme are financed through, national funds, EU funds and private funds. The budgetary projections in the programme broadly reflect the public finance implications of the actions envisaged in the NRP, specifically those resulting in a reduction in current expenditure through the MTBF implementation, are consistent with the priorities of the NRP. Moreover, the update provides systematic information on the direct budgetary costs associated with the main reforms envisaged in the NRP. The proposed policies require national funds amounting to around 2% of GDP in 2006 and

2.7% in 2007 and 2008, while similar amounts thereafter. In addition, the update provides a brief description of specific measures and actions of wider economic importance, such as infrastructure projects, though their financial cost is not specifically projected.

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

The implementation report of the National Reform Programme of Cyprus, provided in the context of the renewed Lisbon strategy for growth and jobs, was submitted on 17 October 2006. The Commission's assessment of this report, which was adopted on 13 December 2006 as part of its Annual Progress Report, can be summarised as follows.

The Cypriot National Reform Programme (NRP) emphasised the objective of increasing the growth potential of the economy and living standards for citizens. It identified challenges in the following areas: fiscal sustainability; quality of public finances; R&D, innovation and ICT; increasing the diversification of the economy; competition and business environment; environmental sustainability; infrastructure; human capital; and social cohesion.

Cyprus is generally making good progress with the implementation of its NRP. The NRP provided a clear and comprehensive overview of numerous specific measures and linked them well to final objectives. For the vast majority of the R&D and employment targets presented in the NRP there has been progress in the implementation process. The efficient and effective use of the Structural and Cohesion Fund is a key factor to boost investments in several sectors, and it is therefore important that the increase in funding is matched by a similar increase in the absorption capacity.

The efforts to develop ownership of the Lisbon strategy have been strengthened significantly. It has been repeatedly announced publicly that the Lisbon strategy alongside the Convergence Programme constitute the pillars of economic policy. The implementation mechanism and the consultation process are quite extensive and they encompass the participation of all stakeholders; including the Council of Minister, a Parliamentary Committee, the creation of a National Advisory Committee (involving all stakeholders as well as social partners) and other committees.

The strengths of the reform and implementation in 2006 include; progress in the field of fiscal consolidation; a new policy to develop a comprehensive research and innovation system; and the maintenance of a good overall employment performance supported by a broad range of active labour market measures. Employment and training opportunities for young persons should be increased and attention paid to meeting the needs of the labour market. Consideration should be given to measures to encourage venture capital investments and tackle anti-competitive practices in the area of professional services.

Based on the Integrated Guidelines for Jobs and Growth and in the light of the analysis presented in the IR-NRP, it is recommended that Cyprus:

- takes steps to implement reforms of the pension and healthcare systems and sets a timetable for their implementation with a view to improving the long-term sustainability of public finances;
- enhance life long learning and increase employment and training opportunities for young people by accelerating the reforms of the vocational, education, training and apprenticeship system.

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

budgetary projections in the programme are broadly consistent with the integrated guidelines of the broad economic policy guidelines (BEPG) in the area of public finances to: secure economic stability; safeguard economic and fiscal sustainability; and promote growth- and employment-oriented policies and efficient allocation of resources (see Annex 3). The assessment of guideline 1 corresponds to the evaluation in Section 4.4 above, whereas that of the pace of debt reduction in guideline 2 (relevant for high-debt countries only) is covered in Section 5.1.2 above. Information on the different elements covered by the remaining guidelines in the table can be found in Sections 0 and 6.

Overall, the budgetary strategy in the programme is broadly consistent with the broad economic policy guidelines included in the integrated guidelines for the period 2005-2008

**Table 14: Consistency with the broad economic policy guidelines**

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

\* \* \*

## Annex 1: Glossary

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

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

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

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

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

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

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

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

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

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

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

**EDP notification** See *notification of deficit and debt*.

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

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

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



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

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

**Government debt** See *public debt*.

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

**Government net lending/borrowing** See *budget balance*.

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

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

**Intertemporal budget constraint** A basic condition imposing that current total liabilities of the government, i.e. the current public debt and the discounted value of future expenditure including the budgetary impact of ageing populations, be covered by the discounted value of future government revenue.

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

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

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

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

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

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

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

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

**Output gap** The difference between actual GDP and potential GDP in any given year, usually expressed as a percent of potential GDP. Potential GDP is an unobserved variable and needs to be estimated from actual data. It is the level of real GDP in a given year that is consistent with a stable rate of inflation. If actual output rises above its potential level, then constraints on capacity begin to bind and inflationary

pressures build; if output falls below potential, then resources are lying idle and inflationary pressures abate. See also *production function method*.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## Annex 2: Summary tables from the programme update

The tables below present the information provided in the programme in the format prescribed by the code of conduct (Annex 2 thereof).

**Table 1a: Macroeconomic Prospects**

	ESA Code	2005	2005	2006	2007	2008	2009	2010
		Level	rate of change	rate of change	rate of change	rate of change	rate of change	rate of change
<b>1. Real GDP</b>	B1*g	5953.3	3.9	3.7	3.9	4.1	4.1	4.1
<b>2. Nominal GDP</b>	B1*g	7861.6	6.4	6.5	6.7	6.7	6.3	6.3
<b>Components of real GDP</b>								
<b>3. Private consumption expenditure</b>	P.3	3993.0	4.8	4.6	3.3	3.6	3.6	3.7
<b>4. Government consumption expenditure</b>	P.3	945.7	3.4	4.6	3.3	2.7	2.9	2.9
<b>5. Gross fixed capital formation</b>	P.51	1124.8	2.6	5.7	4.1	4.2	4.3	4.3
<b>6. Changes in inventories and net acquisition of valuables (% of GDP)</b>	P.52 + P.53	30.6	0.5	0.2	-0.1	0.0	-0.3	-0.6
<b>7. Exports of goods and services</b>	P.6	3022.3	4.7	3.7	4.0	3.9	4.3	4.5
<b>8. Imports of goods and services</b>	P.7	3163.2	3.1	5.3	2.6	3.1	3.0	3.2
<b>Contributions to real GDP growth</b>								
<b>9. Final domestic demand</b>		6094.1	3.1	4.4	3.2	3.6	3.3	3.3
<b>10. Changes in inventories and net acquisition of valuables</b>	P.52 + P.53	30.6	0.5	0.2	-0.1	0.0	-0.3	-0.6
<b>11. External balance of goods and services</b>	B.11	-140.9	0.7	-0.9	0.6	0.3	0.6	0.6

**Table 1b: Price Developments**

	ESA Code	2005	2005	2006	2007	2008	2009	2010
		level	rate of change	rate of change	rate of change	rate of change	rate of change	rate of change
<b>1. GDP deflator</b>		132.1	2.4	2.7	2.7	2.5	2.1	2.1
2. Private consumption deflator		128.1	2.6	2.3	2.4	2.3	2.0	2.0
<b>3. HICP[1]</b>			2.0	2.4	2.5	2.4	2.0	2.0
4. Public consumption deflator		150.2	4.1	2.4	2.5	2.4	2.0	2.0
5. Investment deflator		132.1	4.8	4.8	3.9	3.8	3.5	3.6
<b>6. Export price deflator (goods and services)</b>		126.0	2.8	2.4	2.2	2.0	2.0	2.0
<b>7. Import price deflator (goods and services)</b>		126.7	4.5	2.6	2.2	2.2	2.2	2.2

**Table 1c: Labour market developments**

	ESA Code	2005	2005	2006	2007	2008	2009	2010
		Level	rate of change	rate of change	rate of change	rate of change	rate of change	rate of change
<b>1. Employment, persons [1]</b>		351.5	2.6	1.4	1.2	1.2	1.3	1.3
2. Employment, hours worked [2]		654.641	1.8	1.3	1.1	1.1	1.2	1.2
<b>3. Unemployment rate (%) [3]</b>		N/A	5.3	4.8	4.8	4.7	4.6	4.4
<b>4. Labour productivity, persons [4]</b>		N/A	1.3	2.2	2.6	2.8	2.7	2.7
5. Labour productivity, hours worked[5]		N/A	2.0	2.3	2.7	2.9	2.8	2.9
<b>6. Compensation of employees</b>	D.1	N/A	5.4	4.6	5.1	5.2	4.7	4.7

**Table 1d: Sectoral Balances**

% of GDP	ESA Code	2005	2006	2007	2008	2009	2010
<b>1. Net lending/borrowing vis-à-vis the rest of the world</b>	B.9	-5.6	-6.4	-5.8	-5.4	-4.8	-4.2
of which:							
- Balance on goods and services		-2.7	-3.5	-3.0	-2.6	-2.1	-1.5
- Balance of primary incomes and transfers		-2.9	-2.9	-2.8	-2.7	-2.7	-2.7
- Capital account		0.5	0.0	0.0	0.0	0.0	0.0
2. Net lending/borrowing of the private sector	B.9/EDP B.9	-3.3	-4.5	-4.2	-4.6	-4.4	-4.0
3. Net lending/borrowing of general government	B.9	-2.3	-1.9	-1.6	-0.7	-0.4	-0.1
<b>4. Statistical discrepancy</b>		optional	optional	optional	optional	optional	optional

**Table 2: General government budgetary prospects**

	ESA code		2005	2005	2006	2007	2008	2009	2010
			Level	% of GDP	% of GDP	% of GDP	% of GDP	% of GDP	% of GDP
<b>Net lending (EDP B.9) by sub-sector</b>									
<b>1. General government</b>	S.13		-183.6	-2.3	-1.9	-1.6	-0.7	-0.4	-0.1
<b>2. Central government</b>	S.1311		-409.7	-5.2	-4.8	-4.4	-3.3	-2.8	-2.4
<b>3. State government</b>	S.1312		-	-	-	-	-	-	-
<b>4. Local government</b>	S.1313		-7.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
<b>5. Social security funds</b>	S.1314		233.5	3.0	3.0	2.8	2.6	2.5	2.3
<b>General government (S13)</b>									
<b>6. Total revenue</b>	TR		3242.8	41.2	42.1	42.2	42.3	42.3	42.1
<b>7. Total expenditure</b>	TE[1]		3426.4	43.6	44.0	43.8	43.0	42.7	42.2
<b>8. Net lending/borrowing</b>	EDP B.9		-183.6	-2.3	-1.9	-1.6	-0.7	-0.4	-0.1
<b>9. Interest expenditure (incl. FISIM)</b>	EDP D.41 incl. FISIM		270.0	3.4	3.3	3.0	2.8	2.5	2.3
<b>pm: 9a. FISIM</b>			2.9	0.0	0.0	0.0	0.0	0.0	0.0
<b>10. Primary balance</b>	[2]		86.4	1.1	1.4	1.4	2.1	2.1	2.2
<b>Selected components of revenue</b>									
<b>11. Total taxes (11=11a+11b+11c)</b>			2136.2	27.2	27.3	27.5	28.0	28.2	28.0
<b>11a. Taxes on production and imports</b>	D.2		1328.3	16.9	17.5	17.6	17.9	18.1	17.9
<b>11b. Current taxes on income, wealth, etc</b>	D.5		729.1	9.3	9.7	9.9	9.9	10.0	10.0
<b>11c. Capital taxes</b>	D.91		78.8	1.0	0.1	0.1	0.1	0.1	0.1
<b>12. Social contributions</b>	D.61		650.1	8.3	8.4	8.5	8.5	8.5	8.5
<b>13. Property income</b>	D.4		77.9	1.0	1.0	0.9	0.9	0.9	0.9
<b>14. Other (14=15-(11+12+13))</b>			378.6	4.8	5.4	5.2	4.9	4.8	4.7
<b>15=6. Total revenue</b>	TR		3242.8	41.2	42.1	42.2	42.3	42.3	42.1
<b>p.m.: Tax burden (D.2+D.5+D.61+D.91-D.995)[3]</b>			2782.3	35.4	35.6	36.0	36.4	36.6	36.5
<b>Selected components of expenditure</b>									
<b>16. Collective consumption</b>	P.32		786.2	10.0	9.7	9.3	8.9	8.8	8.7
<b>17. Total social transfers</b>	D.62 + D.63		1632.3	20.8	21.6	22.1	22.5	22.7	22.9
17a. Social transfers in kind	P.31 = D.63		634.3	8.1	8.5	8.8	8.9	8.8	8.7
17b. Social transfers other than in kind	D.62		998.0	12.7	13.1	13.4	13.6	13.9	14.3
<b>18.=9. Interest expenditure (incl. FISIM)</b>	EDP D.41 incl. FISIM		270.0	3.4	3.3	3.0	2.8	2.5	2.3
<b>19. Subsidies</b>	D.3		55.3	0.7	0.6	0.6	0.5	0.5	0.5
<b>20. Gross fixed capital formation</b>	P.51		246.4	3.1	3.1	3.1	3.1	3.1	3.1
<b>21. Other (21=22-(16+17+18+19+20))</b>			436.2	5.5	5.7	5.7	5.2	5.2	4.8
<b>22=7. Total expenditure</b>	TE[4]		3426.4	43.6	44.0	43.8	43.0	42.7	42.2
<b>Pm: compensation of employees</b>	D.1		1127.3	14.3	14.5	14.4	14.2	14.1	13.9

**Table 3: General government expenditure by function**

% of GDP	COFOG Code	Year 2003	Year 2003	Year 2004	Year 2005	Year 2006	Year 2007	Year 2008	Year 2009	Year 2010
1. General public services	1	9.1	9.0	9.1	9.0	8.9	8.7	8.6	8.5	8.3
2. Defence	2	3.2	3.1	2.1	2.1	2.1	2.0	1.8	1.7	1.6
3. Public order and safety	3	2.0	1.9	2.4	2.0	2.0	2.0	1.9	1.9	1.8
4. Economic affairs	4	6.2	6.2	4.6	6.1	4.6	4.6	4.3	4.2	4.0
5. Environmental protection	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6. Housing and community amenities	6	4.1	4.0	3.4	4.0	3.7	3.7	3.6	3.6	3.8
7. Health	7	3.2	3.1	2.9	3.0	3.0	3.1	3.2	3.2	3.3
8. Recreation, culture and religion	8	0.5	0.8	0.7	0.6	0.7	0.7	0.7	0.7	0.7
9. Education	9	5.7	5.6	6.3	6.8	6.9	6.9	6.8	6.8	6.8
10. Social protection	10	11.3	11.5	11.4	10.0	12.1	12.1	12.1	12.1	12.1
<b>11. Total expenditure (= item 7=26 in Table 2)</b>	<b>TE</b>	<b>45.3</b>	<b>45.3</b>	<b>43.0</b>	<b>43.6</b>	<b>44.0</b>	<b>43.8</b>	<b>43.0</b>	<b>42.7</b>	<b>42.2</b>

**Table 4: General government debt developments**

% of GDP		2005	2006	2007	2008	2009	2010
<b>1. Gross debt[1]</b>		69.2	64.7	60.5	52.5	49.0	46.1
<b>2. Change in gross debt ratio</b>		-1.2	-4.5	-4.2	-8.0	-3.5	-2.9
<b>Contributions to changes in gross debt</b>							
<b>3. Primary balance[2]</b>		1.1	1.4	1.4	2.1	2.1	2.2
<b>4. Interest expenditure (incl. FISIM) [3]</b>		3.4	3.3	3.0	2.8	2.5	2.3
<b>5. Stock-flow adjustment</b>		0.9	-2.0	-1.6	-4.8	-0.6	0.0
- Differences between cash and accruals[4]		0.2	0.1	0.0	0.0	0.0	0.0
- Net accumulation of financial assets[5]		0.4	-2.1	-1.6	-4.8	-0.6	0.0
of which - privatisation proceeds		0.0	0.0	0.0	0.0	0.0	0.0
- Valuation effects and other[6]		0.1	0.0	0.0	0.0	0.0	0.0
<b>p.m. implicit interest rate on debt[7]</b>		4.9	4.7	4.7	4.7	4.7	4.7
<b>Other relevant variables</b>							
6. Liquid financial assets[8]		9.8	7.8	6.2	1.4	0.8	0.8
7. Net financial_debt (7=1-6)		59.4	56.9	54.3	51.1	48.2	45.3

**Table 5: Cyclical developments**

% of GDP	ESA Code	2005	2006	2007	2008	2009	2010
<b>1. Real GDP growth (%)</b>		3.9	3.7	3.9	4.1	4.1	4.1
<b>2. Net lending of general government</b>	EDP B.9	-2.3	-1.9	-1.6	-0.7	-0.4	-0.1
<b>3. Interest expenditure (incl. FISIM recorded as consumption)</b>	EDPD.41 + FISIM	3.4	3.3	3.0	2.8	2.5	2.3
4. Potential GDP growth (%) (1)		3.7	3.7	3.7	3.7	3.7	3.7
contributions:							
- labour		n.a	n.a	n.a	n.a	n.a	n.a
- capital		n.a	n.a	n.a	n.a	n.a	n.a
- total factor productivity		n.a	n.a	n.a	n.a	n.a	n.a
5. Output gap		-1.7	-1.6	-1.4	-1.0	-0.6	-0.2
6. Cyclical budgetary component		-0.8	-0.7	-0.6	-0.5	-0.3	0.0
7. Cyclically-adjusted balance (2-6)		-1.6	-1.2	-1.0	-0.3	-0.1	-0.1
8. Cyclically-adjusted primary balance (7-3)		1.9	2.1	2.0	2.6	2.4	2.2

**Table 6: Divergence from previous update**

	ESA Code	2005	2006	2007	2008	2009	2010
<b>Real GDP growth (%)</b>							
<b>Previous update</b>		4.1	4.2	4.2	4.2	4.3	n/a
<b>Current update</b>		3.9	3.7	3.9	4.1	4.1	4.1
<b>Difference</b>		0.2	0.5	0.3	0.1	0.2	n/a
<b>General government net lending (% of GDP)</b>	EDP B.9						
<b>Previous update</b>		-2.5	-1.9	-1.8	-1.2	-0.6	n/a
<b>Current update</b>		-2.3	-1.9	-1.6	-0.7	-0.4	-0.1
<b>Difference</b>		-0.2	0.0	-0.2	-0.5	-0.2	n/a
<b>General government gross debt (% of GDP)</b>							
<b>Previous update</b>		70.5	67.0	64.0	56.9	53.5	n/a
<b>Current update</b>		69.2	64.7	60.5	52.5	49.0	46.6
<b>Difference</b>		1.3	2.3	3.5	4.4	4.5	n/a



**Table 7: Long-term sustainability of public finances***(baseline scenario)*

% of GDP	2000	2005	2010	2020	2030	2040	2050
Total expenditure	37.0	43.6	42.2	45.5	51.0	N/A	65.0
Of which: age-related expenditures	14.3	16.7	17.7	19.4	22.7	N/A	28.0
Pension expenditure	6.2	6.9	7.3	9.1	11.9	N/A	17.0
Social security pension	4.3	4.8	5.1	6.8	9.2	N/A	13.4
Old-age and early pensions	3.8	4.4	4.5	6.0	8.2	N/A	11.8
Other pensions (disability, survivors)	0.5	0.4	0.6	0.8	1.0	N/A	1.6
Occupational pensions (if in general government)	1.9	2.1	2.2	2.3	2.7	N/A	3.6
Health care	2.4	3.0	3.4	3.5	3.9	N/A	4.0
Long-term care ( <i>this was earlier included in the health care</i> )						N/A	
Education expenditure	5.2	5.8	6.0	5.8	5.7	N/A	5.5
Other age-related expenditures	0.5	1.0	1.0	1.0	1.2	N/A	1.5
Interest expenditure	3.3	3.4	2.7	3.0	5.0	N/A	14.5
Total revenue	34.7	41.2	42.1	42.0	41.8	N/A	40.0
Of which: property income	0.9	0.7	1.0	1.0	1.0	N/A	1.0
<i>of which: from pensions contributions (or social contributions if appropriate)</i>	6.5	8.3	8.5	8.4	8.2	N/A	7.8
Pension reserve fund assets	35.5	39.4	40.4	27.0	0.0	N/A	-95.0
Of which: consolidated public pension fund assets (assets other than government liabilities)	0.9	0.7	1.0	1.0	1.0	N/A	1.0
<b>Assumptions</b>							
Labour productivity growth	2.9	1.3	2.7	3.0	3.0	N/A	3.0
Real GDP growth	5.2	3.9	4.1	3.2	3.0	N/A	3.0
Participation rate males (aged 20-64)	78.9	81.0	81.5	81.1	81.5	N/A	85.1
Participation rates females (aged 20-64)	52.5	56.0	56.4	56.0	57.7	N/A	67.5
Total participation rates (aged 20-64)	65.5	69.0	69.4	69.0	69.7	N/A	76.6
Unemployment rate	3.3	3.3	4.4	3.5	3.5	N/A	3.5
Population aged 65+ over total population	11.3	12.2	13.2	16.5	20.8	N/A	28.1

**Table 8: Basic assumptions**

	2005	2006	2007	2008	2009	2010
Short-term interest rate[1] (annual average)	2.2	3.1	3.7	3.6	3.5	3.5
Long-term interest rate (annual average)	3.4	3.8	4.1	4.2	4.0	4.0
USD/€ exchange rate (annual average) (euro area and ERM II countries)	1.25	1.27	1.28	1.28	1.28	1.28
Nominal effective exchange rate	1.5	1.2	1.0	0.0	0.0	0.0
World excluding EU, GDP growth						
EU GDP growth	1.8	2.8	2.4	2.4	2.5	2.5
Growth of relevant foreign markets	5.7	7.7	6.5	6.2	6.2	6.2
World import volumes, excluding EU	7.5	9.1	8.2	7.9	7.8	7.8
Oil prices, (Brent, USD/barrel)	58.0	66.0	68.0	69.0	69.0	70.0

### Annex 3: Compliance with the code of conduct

The table below provides a detailed assessment of whether the programme respects the requirements of Section II of the code of conduct. It is in four parts, covering compliance with (i) the window for the date of submission of the programme; (ii) the model structure (table of contents) in Annex 1 of the code; (iii) the data requirements (model tables) in Annex 2 of the code; and (iv) other information requirements.

Guidelines in the code of conduct	Yes	No	Comments
<b>1. Submission of the programme</b>			
Programme was submitted not earlier than mid-October and not later than 1 December <sup>1</sup> .		X	The update was received on 6 <sup>th</sup> December 2006
<b>2. Model structure</b>			
The model structure for the programmes in Annex 1 of the code of conduct has been followed.	X		
<b>3. Model tables (so-called data requirements)</b>			
The quantitative information is presented following the standardised set of tables (Annex 2 of the code of conduct).	X		
The programme provides all compulsory information in these tables.	X		
The programme provides all optional information in these tables.		X	
The concepts used are in line with the European system of accounts (ESA).	X		
<b>4. Other information requirements</b>			
<i>a. Involvement of parliament</i>			
The programme mentions its status vis-à-vis the national parliament.	X		
The programme indicates whether the Council opinion on the previous programme has been presented to the national parliament.		X	
<i>b. Economic outlook</i>			
Euro area and ERM II Member States uses the “common external assumptions” on the main extra-EU variables.	X		Concerning the oil prices, the update is more conservative than the common external assumptions.
Significant divergences between the national and the Commission services’ economic forecasts are explained <sup>2</sup> .	X		
The possible upside and downside risks to the economic outlook are brought out.	X		
The outlook for sectoral balances and, especially for countries with a high external deficit, the external balance is analysed.	X		
<i>c. Monetary/exchange rate policy</i>			
The convergence programme presents the medium-term monetary policy objectives and their relationship to price and exchange rate stability.	X		
<i>d. Budgetary strategy</i>			
The programme presents budgetary targets for the general government balance in relation to the MTO, and the projected path for the debt ratio.	X		
In case a new government has taken office, the programme shows continuity with respect to the budgetary targets endorsed by the Council.			Not applicable
When applicable, the programme explains the reasons for possible deviations from previous targets and, in case of substantial deviations, whether measures are taken to rectify the situation, and provide information on them.	X		
The budgetary targets are backed by an indication of the broad	X		

<b>Guidelines in the code of conduct</b>	<b>Yes</b>	<b>No</b>	<b>Comments</b>
measures necessary to achieve them and an assessment of their quantitative effects on the general government balance is analysed.			
Information is provided on one-off and other temporary measures.	X		
The state of implementation of the measures (enacted versus planned) presented in the programme is specified.	X		
If for a country that uses the transition period for the classification of second-pillar funded pension schemes, the programme presents information on the impact on the public finances.			Not applicable
<i>e. "Major structural reforms"</i>			
If the MTO is not yet reached or a temporary deviation is planned from the achieved MTO, the programme includes comprehensive information on the economic and budgetary effects of possible 'major structural reforms' over time.			Not applicable
The programme includes a quantitative cost-benefit analysis of the short-term costs and long-term benefits of such reforms.			Not applicable
<i>f. Sensitivity analysis</i>			
The programme includes comprehensive sensitivity analyses and/or develops alternative scenarios showing the effect on the budgetary and debt position of: a) changes in the main economic assumptions b) different interest rate assumptions c) for non-participating Member States, different exchange rate assumptions d) if the common external assumptions are not used, changes in assumptions for the main extra-EU variables.	X		
In case of "major structural reforms", the programme provides an analysis of how changes in the assumptions would affect the effects on the budget and potential growth.			Not applicable
<i>g. Broad economic policy guidelines</i>			
The programme provides information on the consistency with the broad economic policy guidelines of the budgetary objectives and the measures to achieve them.	X		
<i>h. Quality of public finances</i>			
The programme describes measures aimed at improving the quality of public finances on both the revenue and expenditure side (e.g. tax reform, value-for-money initiatives, measures to improve tax collection efficiency and expenditure control).	X		
<i>i. Long-term sustainability</i>			
The programme outlines the country's strategies to ensure the sustainability of public finances, especially in light of the economic and budgetary impact of ageing populations.	X		
Common budgetary projections by the AWG are included in the programme. The programme includes all the necessary additional information. (...) To this end, information included in programmes should focus on new relevant information that is not fully reflected in the latest common EPC projections.		X	
<i>j. Other information (optional)</i>			
The programme includes information on the implementation of existing national budgetary rules (expenditure rules, etc.), as well as on other institutional features of the public finances, in particular budgetary procedures and public finance statistical governance.	X		
Notes: <sup>1</sup> The code of conduct allows for the following exceptions: (i) Ireland should be regarded as complying with the deadline in case of submission on "budget day", i.e. traditionally the first Wednesday of December, (ii) the UK should submit as close as possible to its autumn pre-budget report; and (iii) Austria and Portugal cannot comply with the deadline but will submit no later than 15 December. <sup>2</sup> To the extent possible, bearing in mind the typically short time period between the publication of the Commission services' autumn forecast and the submission of the programme.			
<i>Source:</i> Commission services			

#### **Annex 4: Key economic indicators of past economic performance**

This Annex includes two tables. The first displays key economic indicators that summarise the economic performance of the country. To put the country's performance into perspective, the second table displays the same set of indicators for the euro area.

##### **Cyprus - Key economic**

	Averages	2003	2004	2005
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	1996 – 2005	1996 – 2000	2001 – 2005			
<b>Economic activity</b>						
Real GDP (% change)	3.5	3.8	3.2	1.9	3.9	3.8
Private consumption (% change)	3.9	4.2	3.7	1.6	6.8	4.7
Government consumption (% change)	5.1	6.1	4.2	5.1	-5.1	2.6
Investment (% change)	3.7	2.6	4.9	0.7	10.0	2.6
Exports (% change)	3.5	5.3	1.6	-0.2	4.4	3.1
Imports (% change)	4.2	5.3	3.2	-2.3	11.1	3.4
Contributions to real GDP growth:						
<i>Domestic demand</i>	3.9	3.8	4.0	0.8	7.3	4.0
<i>Net exports</i>	-0.4	0.0	-0.8	1.1	-3.4	-0.2
Output gap (% of potential GDP)	0.0	-0.2	0.2	-0.6	-1.2	-1.3
<b>Prices and costs</b>						
HICP inflation (% change)	N/A	N/A	2.5	4.0	1.9	2.0
Unit labour costs (% change)	2.2	1.6	2.7	8.4	1.1	2.2
Labour productivity (% change)	2.0	2.4	1.6	0.9	2.3	2.2
Real unit labour costs (% change)	0.3	0.2	0.5	4.0	-1.5	1.2
Comparative price levels (EUR25=100)	88.0	86.3	89.8	92.9	89.8	90.6
<b>Labour market</b>						
Employment (% change)	1.4	1.3	1.5	1.1	1.5	1.5
Employment (% of working age population)	68.3	66.6	70.0	70.1	70.3	70.8
Unemployment rate (% of labour force)	4.5	4.6	4.3	4.1	4.7	5.3
NAIRU (% of labour force)	4.4	4.3	4.5	4.4	4.7	4.9
Participation rate (% of working age population)	70.4	71.4	69.4	69.3	68.4	68.3
Working age population (% change)	2.2	1.9	2.5	2.7	3.5	2.5
<b>Competitiveness and external position</b>						
Real effective exchange rate (% change) (1)	0.2	-1.8	2.2	10.3	0.3	0.5
Export performance (% change) (2)	-2.9	-3.6	-2.2	-3.6	-3.1	-2.0
External balance of g & s (% of GDP)	-1.4	-1.3	-1.4	-0.2	-3.2	-3.8
External balance (% of GDP)	-2.9	-2.2	-3.5	-0.9	-5.2	-5.6
FDI inflow (% of GDP)	7.6	7.0	8.5	6.8	7.0	7.0
<b>Public finances</b>						
Total expenditure (% of GDP)	N/A	N/A	42.1	45.1	42.9	43.6
Total revenue (% of GDP)	N/A	N/A	38.2	38.8	38.8	41.2
General government balance (% of GDP)	N/A	N/A	-3.9	-6.3	-4.1	-2.3
General government debt (% of GDP)	61.8	56.5	67.0	69.1	70.3	69.2
Structural budget balance (% of GDP) (3)	N/A	N/A	N/A	-7.9	-4.7	-2.7
<b>Financial indicators (4)</b>						
Short term real interest rate (%) (5)	N/A	N/A	1.5	-1.0	2.2	1.4
Long term real interest rate (%) (5)	N/A	N/A	2.6	-0.2	3.3	2.3
Household debt (% change) (6)	N/A	N/A	N/A	N/A	N/A	N/A
Corporate sector debt (% change) (7)	N/A	N/A	N/A	N/A	N/A	N/A
Household debt (% of GDP) (6)	N/A	N/A	N/A	N/A	N/A	N/A
Corporate sector debt (% of GDP) (7)	N/A	N/A	N/A	N/A	N/A	N/A
<p>(1) Unit labour costs relative to rest of a group of industrialised countries (USD): EU24 (= EU25 excl. LU), BG, RO, TR, CH, NR, US, CA,  (2) Market performance of exports of goods and services on export weighted imports of goods and services of 35 industrial markets.  (3) Cyclically-adjusted budget balance net of one-off and other temporary measures.  (4) Data available up to 2004.  (5) Using GDP deflator.  (6) Households' and non-profit institutions serving households' debt, defined as loans and securities other than shares.  (7) Non-financial corporate sector debt, defined as loans and securities other than shares.  Source: Commission services</p>						

## Euroarea - Key economic indicators

	Averages			2003	2004	2005
	1996 – 2005	1996 – 2000	2001 - 2005			
<b>Economic activity</b>						
Real GDP (% change)	2.1	2.7	1.4	0.8	2.0	1.4
Private consumption (% change)	2.0	2.6	1.4	1.2	1.5	1.3
Government consumption (% change)	1.7	1.7	1.8	1.8	1.2	1.4
Investment (% change)	2.6	4.3	1.0	1.0	2.1	2.7
Exports (% change)	5.8	8.1	3.5	1.1	6.8	4.2
Imports (% change)	5.9	8.4	3.4	3.1	6.7	5.3
Contributions to real GDP growth (percentage points)						
<i>Domestic demand</i>	2.0	2.7	1.3	1.4	1.8	1.7
<i>Net exports</i>	0.1	0.0	0.1	-0.7	0.2	-0.3
Output gap	-0.1	-0.2	0.1	-0.5	-0.3	-0.9
<b>Prices and costs</b>						
HICP inflation (% change)	1.9	1.7	2.2	2.1	2.1	2.2
Unit labour costs (% change)	1.3	0.8	1.7	2.0	0.9	1.0
Labour productivity (% change)	1.2	1.5	0.8	0.8	1.6	0.9
Real unit labour costs (% change)	-0.5	-0.6	-0.5	-0.1	-1.0	-0.8
Comparative price levels (EUR25=100)	73.6	73.9	73.2	73.2	72.9	72.7
<b>Labour market</b>						
Employment (% change)	1.2	1.5	0.9	0.7	0.7	0.8
Employment (in % of working age population)	63.7	62.0	65.4	65.4	65.6	65.8
Unemployment rate (in % of labour force)	9.1	9.8	8.5	8.7	8.9	8.6
NAIRU (in % of labour force)	8.7	9.0	8.5	8.5	8.4	8.3
Participation rate (in % of working age population)	69.9	68.5	71.2	71.4	71.7	71.8
Working age population (% change)	0.3	0.2	0.4	0.5	0.5	0.4
<b>Competitiveness and external position</b>						
Real effective exchange rate (% change) (1)						
Export performance (% change) (2)	:	:	:	:	:	:
External balance of g & s (in % of GDP)	1.9	1.7	2.0	2.1	2.1	1.5
Net borrowing v-à-v RoW (in % of GDP)	:	:	:	:	:	:
FDI inflow (in % of GDP)						
<b>Public finances</b>						
Total expenditure (in % of GDP)	48.1	48.5	47.7	48.2	47.5	47.5
Total revenue (in % of GDP)	45.8	46.4	45.1	45.1	44.7	45.1
General government balance (in % of GDP)	-2.3	-2.1	-2.5	-3.0	-2.8	-2.4
General government debt (in % of GDP)	70.8	72.3	69.3	69.3	69.8	70.8
Structural budget balance (in % of GDP)	:	:	:	-3.2	-2.9	-2.2
<b>Financial indicators (4)</b>						
Short term real interest rate (in %) (5)	1.7	2.7	0.7	0.2	0.2	0.3
Long term real interest rate (in %) (5)	3.1	4.1	2.1	2.0	2.2	1.5
Household debt (% change) (6)						
Corporate sector debt (% change) (7)						
Household debt (in % of GDP) (6)						
Corporate sector debt (in % of GDP) (7)						
<b>Notes:</b>						
(1) Unit labour costs relative to rest of a group of industrialised countries (usd): EUR24 (excl. LU), BG, RO, TR, CH, NR, US, CA, JP, AU, ...						
(2) Market performance of exports of goods and services on export weighted imports of goods and services of 35 industrial markets.						
(3) Cyclically-adjusted budget balance net of one-off and other temporary measures.						
(4) Data available up to 2004.						
(5) Using GDP deflator.						
(6) Households' and non-profit institutions serving households' debt defined as loans and securities other than shares.						
(7) Non-financial corporate sector debt, defined as loans and securities other than shares.						
<i>Source: Commission services</i>						

## Annex 5: Assessment of tax projections

Table 9 in the main text compares the tax projections of the programme with those of the Commission services' autumn 2006 forecast and those obtained by using standard ex-ante elasticities, as estimated by the OECD. It summarises the results for the total tax-to-GDP ratio. The underlying analysis exploits information for the four major tax categories, i.e. indirect taxes, corporate and private income taxes and social contributions (see results in the table below)<sup>16</sup>.

Conceptually, the analysis draws on the definition of a semi-elasticity, which measures the change in a ratio vis-à-vis the relative change in the denominator. The semi-elasticity of the tax-

to-GDP ratio of the  $i$ -th tax  $\frac{T_i}{Y}$  can be written as:

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

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

To the extent that  $\varepsilon_{T_i, B_i}$  is derived from observed or projected data, it will typically reflect (i) the effect of discretionary measures (including one-offs) and (ii) the tax elasticity<sup>17</sup>. By contrast, if  $\varepsilon_{T_i, B_i}$  is the standard *ex-ante* elasticity, as estimated by the OECD, it will be net of discretionary measures.

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

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

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

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

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

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

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

<sup>16</sup>Private and corporate income taxes are generally not provided, neither in the programme nor in the Commission services' autumn 2006 forecast. Only the aggregate, direct income taxes, is given. For the purpose of this exercise the breakdown is obtained using the average shares over the past ten years, i.e. the composition of direct taxes is assumed to stay constant.

<sup>17</sup>The observed or projected elasticity (ex-post elasticity) of the  $i$ -th tax also includes the effect of other factors (OF) such as discretionary measures:  $\frac{\Delta T_i}{T_i} = \varepsilon_{T_i, B_i, ex\,ante} \frac{dB_i}{B_i} + \frac{OF_i}{T_i} = \varepsilon_{T_i, B_i, ex\,post} \frac{dB_i}{B_i}$ .

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

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

where  $\alpha_i \varepsilon_{B_i, Y} \frac{T_i}{Y} \frac{dY}{Y}$  determines the elasticity component and  $\beta_i \varepsilon_{T_i, B_i} \frac{T_i}{Y} \frac{dY}{Y}$  the composition

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

with  $w_i$  the share of the  $i$ -th tax in the overall tax burden.



## Assessment of tax projections by major tax category

	2007			2008			2009	2010
	CP	COM	OECD <sup>1</sup>	CP	COM <sup>2</sup>	OECD <sup>1</sup>	CP	CP
<b>Taxes on production and imports:</b>								
Change in tax-to-GDP ratio	0.1	0.3	0.0	0.3	0.0	0.0	0.2	-0.2
<i>Difference SP/CP – COM</i>	-0.1			0.3			/	/
<i>of which<sup>3</sup>:</i>								
- discretionary & elasticity component	0.1			0.4			/	/
- composition component	-0.2			-0.1			/	/
<i>Difference COM – OECD</i>	/	0.3		/	0.0		/	/
<i>of which<sup>3</sup>:</i>								
- discretionary & elasticity component	/	0.2		/	0.0		/	/
- composition component	/	0.0		/	0.0		/	/
p.m.: Elasticity								
- of taxes to tax base <sup>4</sup>	1.3	1.2	1.0	1.4	1.0	1.0	1.3	0.9
- of tax base <sup>4</sup> to GDP	0.9	1.0	1.0	0.9	1.0	1.0	0.9	0.9
<b>Social contributions:</b>								
Change in tax-to-GDP ratio	0.1	0.1	-0.2	0.0	0.0	-0.2	0.0	0.0
<i>Difference SP/CP – COM</i>	0.0		/	0.0		/	/	/
<i>of which<sup>3</sup>:</i>								
- discretionary & elasticity component	0.1		/	0.0		/	/	/
- composition component	0.0		/	0.0		/	/	/
<i>Difference COM – OECD</i>	/	0.3		/	0.2		/	/
<i>of which<sup>3</sup>:</i>								
- discretionary & elasticity component	/	0.1		/	0.1		/	/
- composition component	/	0.1		/	0.1		/	/
p.m.: Elasticity								
- of taxes to tax base <sup>5</sup>	1.6	1.4	1.0	1.3	1.3	1.0	1.3	1.3
- of tax base <sup>5</sup> to GDP	0.8	0.8	0.7	0.8	0.8	0.7	0.7	0.7
<b>Personal income tax<sup>6</sup>:</b>								
Change in tax-to-GDP ratio	0.2	0.1	0.5	0.0	0.0	0.5	0.1	0.0
<i>Difference SP/CP – COM</i>	0.0		/	0.0		/	/	/
<i>of which<sup>3</sup>:</i>								
- discretionary & elasticity component	0.1		/	0.0		/	/	/
- composition component	0.0		/	0.0		/	/	/
<i>Difference COM – OECD</i>	/	-0.4		/	-0.5		/	/
<i>of which<sup>3</sup>:</i>								
- discretionary & elasticity component	/	-0.9		/	-1.0		/	/
- composition component	/	0.2		/	0.2		/	/
p.m.: Elasticity								
- of taxes to tax base <sup>5</sup>	1.7	1.6	4.5	1.3	1.3	4.5	1.6	1.3
- of tax base <sup>5</sup> to GDP	0.8	0.8	0.7	0.8	0.8	0.7	0.7	0.7
<b>Corporate income tax<sup>6</sup>:</b>								
Change in tax-to-GDP ratio	0.1	0.0	-0.2	0.0	0.0	-0.2	0.0	0.0
<i>Difference SP/CP – COM</i>	0.0		/	0.0		/	/	/
<i>of which<sup>3</sup>:</i>								
- discretionary & elasticity component	0.0		/	0.0		/	/	/
- composition component	0.0		/	0.0		/	/	/
<i>Difference COM – OECD</i>	/	0.3		/	0.2		/	/
<i>of which<sup>3</sup>:</i>								
- discretionary & elasticity component	/	0.1		/	0.1		/	/
- composition component	/	0.1		/	0.1		/	/
p.m.: Elasticity								
-of taxes to tax base <sup>7</sup>	1.1	1.1	1.0	0.9	0.9	1.0	1.0	0.8
-of tax base <sup>7</sup> to GDP	1.2	1.1	0.7	1.2	1.2	0.7	1.2	1.2
<b>Notes:</b>								
<sup>1</sup> Based on OECD ex-ante elasticities								
<sup>2</sup> On a no-policy change basis								
<sup>3</sup> The decomposition is explained in the text above								
<sup>4</sup> Tax base = private consumption expenditure								
<sup>5</sup> Tax base = compensation of employees								
<sup>6</sup> Taxes on income and wealth are split into private and corporate income tax using the average tax share over the past ten years, i.e.								
<sup>7</sup> Tax base = gross operating surplus								
<b>Source:</b>								

*Commission services' autumn 2006 economic forecasts (COM); Commission services' calculations and OECD (N. Girouard and C. André (2005), "Measuring Cyclically-Adjusted Budget Balances for the OECD Countries", OECD Working Paper No. 434)*