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**ECONOMIC ASSESSMENT  
OF THE STABILITY PROGRAMME OF IRELAND  
(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 Ireland’s stability programme was submitted on 6 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 20 February 2007. The main aim of the technical analysis is to assess the realism of the budgetary strategy presented in the programme as well as its compliance with the requirements of the Stability and Growth Pact. However, the analysis also looks at the overall macro-economic performance of the country and highlights relevant policy challenges.

Based on this technical analysis, the European Commission adopted a recommendation for a Council opinion on the programme on 7 February 2007. The ECOFIN Council adopted 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 uses the single currency, such as Ireland, has to submit a stability programme and annual updates thereof. The most recent programme, covering the period 2006-2009, was submitted on 6 December 2006.

Ireland's economic performance over the past ten years covers an initial period of extremely rapid "Celtic Tiger" rates of growth, extending the extraordinary catch-up achievement that began in the late 1980s. Resilience to the economic turbulence following the turn of the decade has been succeeded by more moderate rates of growth, still far ahead of the West European norm but, in contrast to the earlier period, led more by domestic demand and less broadly based than before, with an unsustainable level of residential construction. The economy's openness is particularly evident in flexible factor markets, with substantial inward foreign investment and labour migration. A fast-growing younger workforce, a business-adaptive policy environment and strong social partnership built up since the 1980s have been strengths. Ireland's being a small open economy has circumscribed macroeconomic policy discretion. Euro area interest rates have been far lower than would have appeared optimal for Ireland and have contributed in particular to a very high rate of asset price inflation. HICP inflation in general has been relatively high as real incomes have increased, added to by domestic demand pressures and some deficiencies in product markets and network services; external competitiveness seems to have worsened up to recently and the external deficit has widened. Public finances have remained well within SGP bounds.

There appears to be three principal policy challenges for public finances in the medium term. The first concerns stabilisation. On the domestic side, increased reliance of output and employment growth on an unsustainably high level of residential construction has aggravated inflationary pressures and together with very high residential property prices and significant increases in household indebtedness carries risks of sharp downward adjustment in the wider economy. A challenge for fiscal policy is to help guide the economy towards better balance and to retain room for manoeuvre to be able to respond to the possible materialisation of such risks. The second relates to reducing sustainability risks. Ireland's public finances appear to be at medium risk in the long term, but with the impact of ageing itself significantly above the EU average as the pension system matures. The third challenge is to ensure efficiency across the public finances. Prioritising public investment in infrastructure and other growth-promoting expenditure, taking account of the wider economic context, is key, particularly given the very large sums allocated to the January 2007 National Development Plan (covering the period until 2013). Improved appraisal, management and accountability of major capital projects are likely to become all the more important going forward.

The macroeconomic scenario underlying the updated stability programme envisages that real GDP growth will edge lower from 5.4% in 2006 to an average of a little 4½% over the rest of the programme period. Assessed against currently available information, this

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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.

scenario appears to be based on plausible growth assumptions. The programme's projections for inflation also seem realistic.

The broad range of available indicators, taken together, do suggest that the Irish economy does not seem to be either in clearly "good" or clearly "bad times", but in approximately neutral territory.

For 2006 the general government balance is estimated in the programme as a surplus of 2.3% of GDP, against a budgeted deficit of 0.6% of GDP in the previous update; more recent cash data for central government points towards an even stronger surplus, of around 2½% of GDP. The stronger than expected surplus compared with a year earlier is entirely attributable to the revenue side, reflecting in particular the continuing buoyancy of the property market boosting housing-related taxes, and to a more limited extent higher output growth having a similar effect on mainstream taxes.

Ireland's medium-term budgetary strategy is based on maintaining budgetary sustainability, anchored in respect of the Stability and Growth Pact. Surpluses are projected to be maintained throughout the programme period, but on a declining trend. The same applies to the primary surplus. The halving of the budgeted headline surplus in 2007 is due to a higher planned expenditure ratio, the increase representing mainly higher social transfers; in 2008 and 2009 both revenue and expenditure ratios are projected to decline, but expenditure only slightly. Compared with the projections in the previous update (to 2008), the strong increase in the estimated 2006 balance, achieved through higher than expected revenues, is carried forward in terms of the revenue as well as the headline and primary surplus ratios in the following two years, at a declining rate, with virtually no change in the profile of the projected expenditure ratio.

The structural balance calculated according to the commonly agreed methodology is planned to decline from a surplus of just under 3% of GDP in 2006 to just over 1½% in 2009. As in the previous update of the stability programme, the medium-term objective (MTO) for the budgetary position presented in the programme and in line with the Pact is a balanced position in structural terms, which the programme plans to maintain by a large margin throughout the programme period.

The risks to the budgetary projections in the programme appear broadly balanced. On the one hand, the macroeconomic situation, after a probably stronger than assumed starting position, could evolve less favourably than projected, and, associated with this, specific revenue sources, particularly those most closely linked to the housing market, could also be significantly weaker. On the other hand, other revenues taken together appear to have been projected cautiously, and in recent years expenditures have been contained within or close to planned levels.

In view of this risk assessment, the budgetary stance in the programme seems sufficient to maintain the MTO throughout the programme period. For 2008 and 2009 the fiscal policy stance is in line with the Stability and Growth Pact. In 2007, however, the structural balance declines strongly, carrying the risk that the fiscal policy stance implied by the programme may be pro-cyclical in this year. Assessment based on tax elasticities alone points towards 2006 being *potentially* good times, with the momentum carrying over into 2007. The judgement of the programme being in line with the Pact is thus critically subject to future reassessment of current economic conditions. If 2006 and 2007 were to come to merit the appellation of "good times", the fiscal stance set in the budget for 2007 would appear in relation to the Pact in a less favourable light.

As mentioned above, the long-term budgetary impact of ageing in Ireland is well above the EU average, mainly as a result of a relatively high increase in pension expenditure as a share of GDP over the coming decades, influenced in part by the maturing of the pension system. The initial budgetary position, improved compared with 2005, contributes significantly to easing the projected long-term budgetary impact of ageing populations, but is not sufficient to fully cover the substantial increase in expenditure due to the ageing of the population. Maintaining high primary surpluses over the medium term and implementing measures aimed at curbing the significant increase in age-related expenditures would, as recognised in the programme, contribute to reducing risks to the sustainability of public finances. Overall, Ireland appears to be at medium risk with regard to the sustainability of public finances.

The implementation report of the national reform programme of Ireland, provided in the context of the renewed Lisbon strategy for growth and jobs, was submitted on 18 October 2006. Ireland's national reform programme identifies as key challenges/priorities sustaining and improving its recent good economic performance, based on taking advantage of the opportunities presented by globalisation and the internal market. The Commission's assessment of this programme (adopted as part of its December 2006 Annual Progress Report<sup>2</sup>) showed that Ireland is making very good progress in the implementation of its national reform programme. Furthermore, governance of the Growth and Jobs Strategy has gained political visibility, notably due to the recently concluded social partnership agreement, "Towards 2016". Against the background of progress made, Ireland was encouraged to focus also on the areas of: reform of pension arrangements; emission reduction measures; labour market participation; inward migration; and older and low-skilled workers.

The stability and national reform programmes are to some extent integrated. In particular, both programmes envisage ongoing implementation of ambitious plans to upgrade infrastructure, while the stability programme complements the actions envisaged in the national reform programme with detailed description of measures to improve the institutional features of the public finances.

The overall conclusion is that the medium-term budgetary position is sound and, provided the fiscal stance in 2007 does not prove pro-cyclical, the budgetary strategy provides a good example of fiscal policies conducted in compliance with the Stability and Growth Pact. In any case, it would be prudent on grounds of preserving stability to maintain room for manoeuvre against any reversal of the current growth pattern which has been led by strong housing sector developments. A strong focus in the programme on ensuring efficiency across the public finances is particularly justified given the commitment to maintain a very ambitious level of public investment. Finally, as recognised in the programme, maintaining high primary surpluses over the medium term and implementing measures aimed at curbing the significant increase in age-related expenditures would contribute to reducing risks to the sustainability of public finances.

#### **Comparison of key macroeconomic and budgetary projections**

		2005	2006	2007	2008	2009
Real GDP	SP Dec 2006	5.5	5.4	5.3	4.6	4.1

<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.

(% change)	COM Nov 2006 <i>SP Dec 2005</i>	5.5 4.6	5.3 4.8	5.3 5.0	4.3 4.8	n.a. n.a.
HICP inflation (%)	<b>SP Dec 2006</b> COM Nov 2006 <i>SP Dec 2005</i>	<b>2.2</b> 2.2 2.2	<b>2.7</b> 2.9 2.0	<b>2.6</b> 2.7 2.0	<b>2.0</b> 2.2 1.8	<b>1.7</b> n.a. n.a.
Output gap (% of potential GDP)	<b>SP Dec 2006<sup>1</sup></b> COM Nov 2006 <sup>5</sup> <i>SP Dec 2005<sup>1</sup></i>	<b>-0.4</b> -0.5 -1.3	<b>-1.2</b> -1.4 -1.9	<b>-1.6</b> -1.9 -2.2	<b>-2.2</b> -2.7 -2.1	<b>-2.5</b> n.a. n.a.
General government balance (% of GDP)	<b>SP Dec 2006</b> COM Nov 2006 <i>SP Dec 2005</i>	<b>1.1</b> 1.1 0.3	<b>2.3</b> 1.2 -0.6	<b>1.2</b> 0.9 -0.8	<b>0.9</b> 0.4 -0.8	<b>0.6</b> n.a. n.a.
Primary balance (% of GDP)	<b>SP Dec 2006</b> COM Nov 2006 <i>SP Dec 2005</i>	<b>2.1</b> 2.1 1.5	<b>3.3</b> 2.2 0.6	<b>2.3</b> 1.9 0.4	<b>1.8</b> 1.4 0.5	<b>1.6</b> n.a. n.a.
Cyclically-adjusted balance (% of GDP)	<b>SP Dec 2006<sup>1</sup></b> COM Nov 2006 <i>SP Dec 2005<sup>1</sup></i>	<b>1.3</b> 1.3 0.8	<b>2.8</b> 1.7 0.2	<b>1.8</b> 1.6 0.1	<b>1.8</b> 1.5 0.1	<b>1.6</b> n.a. n.a.
Structural balance <sup>2</sup> (% of GDP)	<b>SP Dec 2006<sup>3</sup></b> COM Nov 2006 <sup>4</sup> <i>SP Dec 2005</i>	<b>1.6</b> 1.6 0.8	<b>2.7</b> 1.7 0.2	<b>1.8</b> 1.6 0.1	<b>1.8</b> 1.5 0.1	<b>1.6</b> n.a. n.a.
Government gross debt (% of GDP)	<b>SP Dec 2006</b> COM Nov 2006 <i>SP Dec 2005</i>	<b>27.4</b> 27.4 28.0	<b>25.1</b> 25.8 28.0	<b>23.0</b> 24.4 28.2	<b>22.4</b> 23.6 28.3	<b>21.9</b> n.a. n.a.

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 of -0.3% of GDP in 2005 (assumed: cf note 4) and 0.1% of GDP in 2006 (indicated in the programme); no information is given in the programme for 2007-09.

<sup>4</sup>One-off and other temporary measures taken from the Commission services' autumn 2006 forecast (-0.3% of GDP in 2005, i.e. surplus-reducing).

<sup>5</sup>Based on estimated potential growth of 6.1%, 6.3%, 5.8% and 5.2% respectively in the period 2005-2008.

Source:

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

## **1. INTRODUCTION**

The 2006 update of the Irish stability programme, covering the period up to 2009, was published and submitted to the Commission on 6 December 2006. On the same date, the programme was presented together with the budget for 2007 to the Irish Parliament<sup>3</sup>. There is no explicit parliamentary examination of the programme, though it may be referred to in general debate on the budget.

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 data prescribed by the new code of conduct, but some optional data are missing<sup>4</sup>. Annex 3 provides a detailed overview of all aspects of compliance with the code of conduct.

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

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

### **2.1. Economic performance**

Over the last two decades Ireland has successfully evolved into a modern open economy. In the mid-1980s, Ireland was perceived as a lagging economy in trouble, with sluggish growth, high unemployment and critically weak public finances. Yet in the 1990s, the Irish economy showed much stronger performance than any other in the EU. The "Celtic Tiger" success story has been reflected in per capita income indices (both GDP and GNI) swiftly catching-up with and then significantly exceeding the EU average (Figure 2). Growth conditions have benefited from a wide array of important (and often interconnected) features, including macroeconomic stability, institutional quality, membership in the EU and euro area, successful industrial policies and an educated and

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<sup>3</sup> The code of conduct explicitly allows Ireland to present its programme to the Commission beyond the 1 December standard deadline, given that the budget (including the updated stability programme) is traditionally presented to Parliament on the first Wednesday of December. The programme is included as part of the published budget documentation, which can be downloaded from [www.budget.gov.ie](http://www.budget.gov.ie).

<sup>4</sup> The programme presents data for slightly under half of the optional data series mentioned in the code. Gaps include: Table 1b (price developments) - deflators for private consumption, public consumption and investment; Table 1c (labour market developments) - labour productivity, hours worked; Table 1d (sectoral balances) - decomposition of net lending/borrowing vis-à-vis the rest of the world, net lending/borrowing of the private sector; Table 3 (expenditure by function); Table 4 (general government debt developments) - decomposition of stock-flow adjustment.

abundant workforce<sup>5</sup>. In this respect, the ability to exploit the opportunities offered by both globalisation, in particular international investment mobility, and by the progress in EU integration was crucial. In the 1990s, with strongly growing FDI inflows, international trade and inward migration, Ireland benefited from its increased openness and the launch of the EU internal market. The economy also scored highly on wage competitiveness and most of the subjective indicators of institutional quality and political stability. The run-up to EMU cemented the policies of opening the economy and facilitated the macro-stabilisation process and structural reforms. As a result, both long-term and short-term pro-growth factors made Ireland ready to join the euro area in the context of a booming economy, with falling interest rates up to the introduction of the euro giving an additional stimulus.

In the second half of the 1990s, economic performance was extraordinarily strong (Table 1). Over the period 1996-2000 real GDP growth averaged 9.7%, markedly higher than recorded for the euro area. Robust employment growth practically wiped out unemployment, which fell from an average 7.8% during 1996-2000 to around 4%, at where it has stabilised since 2001. Aggregate productivity driven by rapid increases in manufacturing output rose to the levels of other industrialised countries. The fiscal position was broadly sound, with the general government balance recording surpluses in most years and the debt ratio falling significantly. The main growth contributions came from net exports but domestic demand (including fixed investment) was also a very important driver. Given high growth dynamics and on some estimates a significantly positive Balassa-Samuelson effect<sup>6</sup>, consumer price inflation remained well above the euro area average.

Since 2000, the Irish economy has somewhat decelerated from double-digit growth rates, but has continued to grow at just around 5% annually, still the fastest in the euro area. Domestic demand has progressively become the engine of the economy. A particular recent feature has been the extraordinary buoyancy of the construction sector which as a result has become important relative to the economy as a whole in terms of output, employment and investment. The ratio to current price GDP of construction output had reached almost 20% of GDP by 2005, the highest in the euro area, while the housing subcomponent accounted for around 14% of GDP<sup>7</sup>. Given buoyant demand conditions and a favourable international environment towards the end of 1990s, wage rates grew rapidly. The major supply-side response to the buoyant conditions, given the openness of the Irish labour market, has been strong inward migration flows, notably from the recently-acceded Member States, benefiting in particular the construction and services sectors. However, a significant positive wage growth differential vis-à-vis other euro

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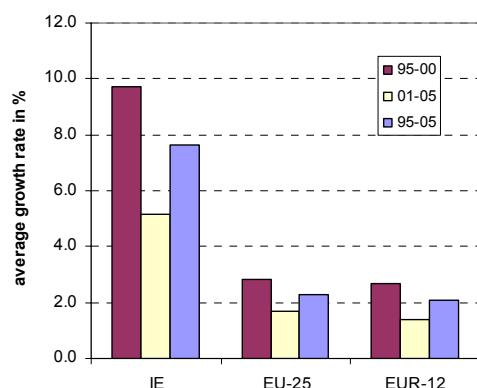
<sup>5</sup> For discussion of factors contributing to the acceleration of the Irish economy in the 1990s, see Čech, Z. and J. MacDonald (2004), "The Celtic Tiger Learns to Purr", ECFIN Country Focus [online], Volume 1, Issue 18, available from: [http://ec.europa.eu/economy\\_finance/publications/country\\_focus/2004/cf18en.pdf](http://ec.europa.eu/economy_finance/publications/country_focus/2004/cf18en.pdf).

<sup>6</sup> The Balassa-Samuelson effect refers to the tendency for fast-growing, internationally integrated economies to have relatively high inflation rates at the whole economy level. This is because, assuming competitive wage-setting between domestic sectors, their high real wage growth, led by the tradeable goods and services sectors on the back of high productivity growth in those sectors, gives rise to relatively high inflation in non-tradeable sectors having generally lower productivity growth.

<sup>7</sup> The increase in the ratio measured at constant prices is less dramatic, given the contribution of rapid increases in residential property prices, but still marked.

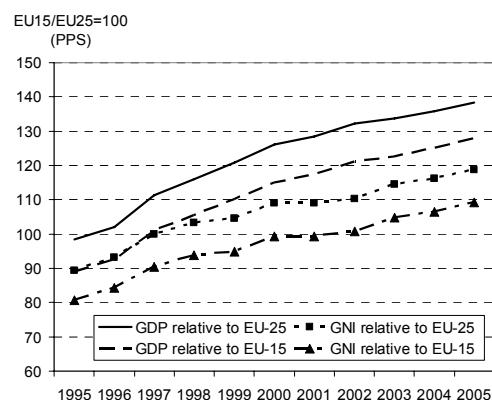
area countries has been maintained<sup>8</sup>. Taken together with slower productivity growth compared with the later 1990s, these developments have been accompanied by some easing back in manufacturing competitiveness and muted exports, while whole-economy competitiveness has clearly deteriorated. In consequence, the vulnerability of the Irish economy has somewhat increased. As regards budgetary developments, the general government balance recorded surpluses in all years from 2000, with the exception of 2002, though with an apparently weaker structural balance compared with the late 1990s; the debt ratio has fallen significantly (to under 30% of GDP in 2005).

**Figure 1: Average GDP growth: Ireland vs. EU25 and euro area**



*Source: Commission services*

**Figure 2: GDP and GNI per head: Ireland vs. EU25 and EU15**



*Source: Commission services*

## 2.2. Anatomy of medium-term growth

Within the framework of a traditional growth-accounting exercise, this section examines the sources of high or low average growth as well as possible differences in average economic growth vis-à-vis the euro area and the EU25. Growth is disaggregated using a Cobb-Douglas production function for real GDP over the 1996-2005 period, in Figure 3 in absolute terms and in Figure 4 for Ireland relative to the euro area. Figure 4 indicates that Ireland's superior performance was above all due to faster growth of TFP, particularly in the first half of the period. Other positive contributors to the relative performance were (in order of importance) a faster increase in working-age population, of equal importance a larger rise in the participation rate and a larger fall in unemployment, and to a very limited degree to relative capital deepening (data for which in the case of Ireland are flattered by the residential construction boom). While these factors helped close the income gap between Ireland and the euro area, average hours worked in Ireland have been in progressive decline, and at a faster rate than in the euro area.

Ireland's remarkable increase in TFP - and more broadly labour productivity - is clearly key to its superior performance, and this is, moreover, focused in the first half of the

<sup>8</sup> See European Commission, Directorate-General for Economic and Financial Affairs (2006), *The EU Economy 2006 Review*.

period: the "Celtic Tiger" era<sup>9</sup>. What is the more remarkable is the extent to which this performance was brought about chiefly by inward investment into selected manufacturing industries, data for which dominate the more traditional indigenous manufacturing and service sectors where performance has lagged in comparison. The resulting contrast between a super-performing, often advanced-technology and typically foreign-owned "modern" economy and the rest - with around average European productivity levels - is therefore stark. The ownership issue is important in qualifying the welfare impact of Ireland's growth achievement, given the significance in Ireland's case of the resulting large net outflow of repatriated profits and thus in depressing gross national income (GNI) relative to GDP: in 2005 GNI was almost 15% lower than GDP, compared with a difference of 10% ten years earlier. Ireland's jump in the EU ranking of average living standards is thus lower when viewed in terms of GNI: though even by this measure Ireland has moved from below to well above the EU average over the 1996-2005 period (Figure 2). The four leading sectors in Irish manufacturing - software, pharmaceuticals, computer and instrument engineering and electrical equipment - are all almost exclusively foreign-owned, and in 2003 accounted for around one-third of gross value-added but only 5% of employment; annual labour productivity growth in these sectors has typically been in double figures. As of 2000, foreign-owned firms as a whole enjoyed productivity levels over four times the EU-15 average, while productivity in Irish-owned firms was very slightly below it. Data for the more recent period nonetheless suggest a significant deceleration in productivity growth as the balance of resources has shifted from manufacturing into residential construction and services, traditionally labour-intensive activities with more limited scope for productivity improvements.

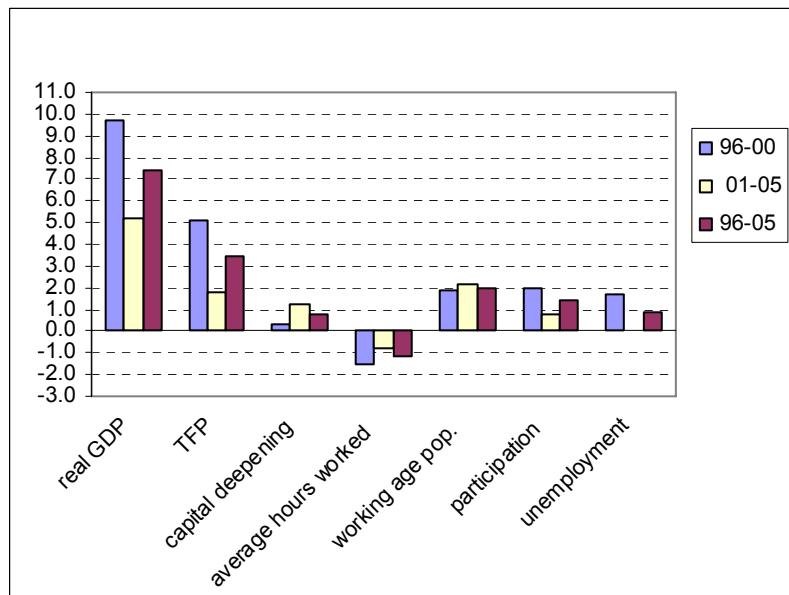
Labour force growth has accelerated notably in recent years, fuelled by natural increase, very large inward migration (swelled more recently from the new Member States<sup>10</sup>) and to a limited extent also by increased participation. Net migration, traditionally heftily negative in Ireland, turned positive from 1996 and thereafter rose progressively to outstrip natural increase (itself high) as from 2000, with the exception of 2003-2004. Of the *total* population increase of 530,000 (almost 15%) over the ten years to 2005, just over half (52%) resulted from net inward migration, suggesting the proportion of the increase in the working-age population attributable to inward migration was even greater. As regards the contribution of capital deepening, what perhaps should primarily be noted is that unlike, say, East Asia in the 1990s, it is not particularly remarkable in either absolute or relative terms: high investment rates and thus capital stock growth (inputs) were not fundamentally responsible for Ireland's better performance. More recently the boom in construction, more especially in housing, has led to increasing concerns about the skewed nature of investment, as such investment does not generally lead to higher tradable output.

<sup>9</sup> GDP-based calculations may overstate the contribution of TFP growth. Given Ireland's large FDI base and comparatively low corporate tax levels, productivity figures derived from GDP may reflect (often patent-related) profits of multinationals boosted by tax-efficiency considerations influencing transfer pricing. Alternative productivity measurements, for instance based on GDP adjusted for net property income outflows (close to GNI), might therefore be considered more appropriate: see for instance Honohan, P. and B. Walsh (2002), "Catching Up with the Leaders: The Irish Hare". *Brookings Papers on Economic Activity*, No. 1, pp. 1-77.

<sup>10</sup> Gross immigration jumped from 50,000 in 2004 to 70,000 in 2005 (years to April) with EU-10 immigrants apparently representing the major bulk of the increase (a similar further EU-10 dominated increase is reported for the year to April 2006), Irish Central Statistical Office (2006), Population and Migration Estimates, April.

The impressive catching-up over the last decade has been subject to a number of analyses<sup>11</sup>. The ‘regional boom hypothesis’<sup>12</sup> compares Ireland to a regional economy having an ability to grow more rapidly than a national one, and with capital and labour inflows able to generate not only ‘intensive’ growth (during which output per unit of input grows through endogenous technical change), but also ‘extensive’ growth (based on the expansion of inputs). In this perspective, given an assumption that capital is in any event relatively internationally mobile, the distinguishing ‘regional’ dimension of the Irish economy is its critically high international mobility of labour, helped initially by its common travel area with the UK and the large Irish diaspora there and elsewhere, and more recently its attractiveness and accessibility for non-Irish migrant labour.

**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:

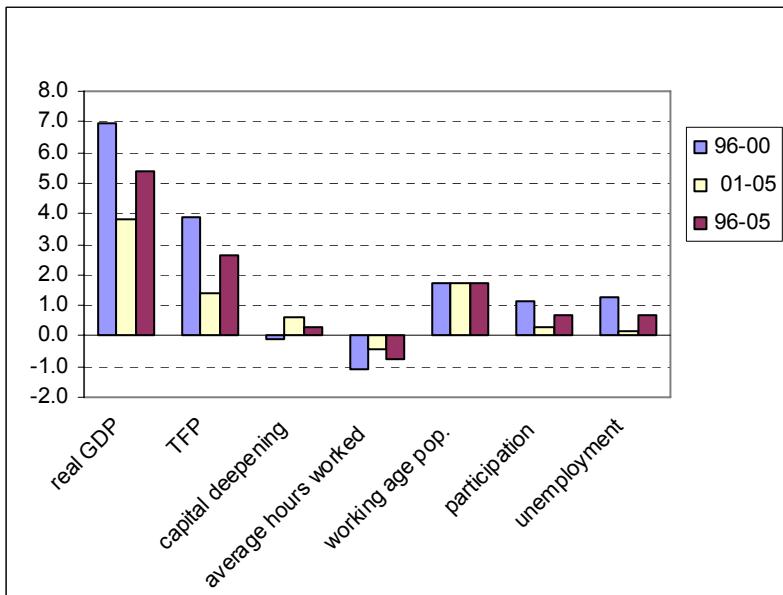
<sup>11</sup> For a useful summary discussion of the Irish “miracle” and further references, see OECD (2006), *Ireland Economic Survey*, Paris, OECD, from which some of the analysis and data in this section are taken.

<sup>12</sup> See Barry, F. (2002), “The Celtic Tiger Era: Delayed Convergence or Regional Boom?” *ESRI Quarterly Economic Commentary*, summer, pp. 36-42. Barry argues in favour of the regional boom interpretation of Irish performance as distinct from that of ‘delayed convergence’ (for the latter, see Honohan, P. and B. Walsh, *op. cit*). Barry’s argument builds largely upon Krugman, P. (1997), “Good News from Ireland: A Geographical Perspective”, in Gray, Alan (ed.), *International perspectives on the Irish Economy*, Dublin, Indecon.

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

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

**Figure 4: Real GDP growth and its components: difference vis-à-vis euro area**



Note: See note of Figure 3

Source: Commission services

Source: Commission services

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

While the dominant feature of Ireland's recent economic performance has been its spectacular growth, at the same time, and perhaps not unexpectedly, this performance did not go hand-in-hand with consistent stability. The recent growth record could be viewed in the perspective of at least three phases. The phenomenal growth of the "Celtic Tiger" period began around 1994, following relative recession in 1991-93, and lasted up to the international boom which ended in 2000. GDP growth in these seven years topped 10% p.a. in three years and averaged 9½% throughout. The pattern of growth was characterised on the expenditure side by strong contributions from non-residential fixed investment and net exports (though the latter had also sustained growth in previous years). The two years 2001-2002 could be viewed as a transition phase following the peak of the international cycle, with annual GDP growth dropping back from around 6% to some 4% in 2003, continued impetus from net exports but marked by a sharp fall-off in non-residential investment; a very large fiscal stimulus in 2001 and 2002 underpinned domestic demand. 2004-05, when annual GDP growth averaged a little under 5%, marked a third phase in that growth was dominated by domestic private demand and by a strongly increasing weight (in volume terms, and even more so in current price terms) in

total output of residential construction; by contrast the contribution of net exports was negative or neutral.

One approach to gauging stability during these years is to look at the variability of growth of output, employment and prices. Standard deviations of annual changes in GDP, employment and the private consumption deflator calibrated over moving five-year periods show generally lower absolute stability in Ireland on this measure compared with the euro area (with the exception of a recent increase in the instability of Irish inflation just as that of the euro area has diminished). This overall result is not, however, surprising given the much higher Irish growth rates: similar analysis but expressed in terms of coefficients of variation (i.e. standardising for the different means) shows a more nuanced picture, with output growth in Ireland more stable than in the euro area, stability of employment growth similar, but again with Ireland's inflation stability in recent years distinctly inferior to that of the euro area. Examination of annual price data suggests that the peak instability was around 1998-2003, with inflation - on the private consumption deflator measure<sup>13</sup> - more stable since 2004.

An alternative approach to assessing growth stability is to examine the output gaps calculated using the production function method (the trend output method gives very similar results over the past twenty years). The calculated output gap shows enormous swings in terms of the size of absolute peaks and troughs, far in excess of gaps calculated for the euro area, moving from a negative trough of 5½% in 1994 to a peak of 6% in 2000, since when the gap again turned negative in 2005; movements between turning points have nevertheless been fairly smooth (Figures 5 and 6). Because of its phenomenal growth performance, its very open nature in both factor and product terms and the major structural changes it has undergone, the Irish economy is recognised to be one of the least susceptible to meaningful output gap analysis, and the useful information content of the gaps as calculated has to be qualified. One interpretation of the more recent period is that the timing of the break in the growth pattern after 2000, for which year demand appears to have been far in excess of potential, was fortuitous in creating a "soft-landing" and avoided serious instability that could otherwise have arisen.

The relationship of this performance with the influences on it of the policy setting needs to take account of the mix of fiscal and monetary conditions and also the influence of the social partnership framework on wage formation. As regards fiscal policy, its limits as an instrument for influencing macroeconomic stability in Ireland are recognised, given the economy's openness and the relatively small government sector. Nevertheless, the fiscal stance still exerts influence. The progressive easing in the fiscal stance from the mid-1990s, as measured by the cyclically-adjusted primary balance, contributed to the height of the cyclical peak at the turn of the decade. The subsequent major relaxation in the fiscal stance in 2001, further confirmed in 2002, was thus clearly ill-advised *ex ante* (and was criticised as such by the ECOFIN Council in February 2001<sup>14</sup>), less obviously malign *ex post* since it tended to counter the sharp brake on growth from the global slowdown. From 2003 and more particularly 2004 the fiscal stance tightened (although partly the result of special tax compliance investigations, a one-off boost of revenues in

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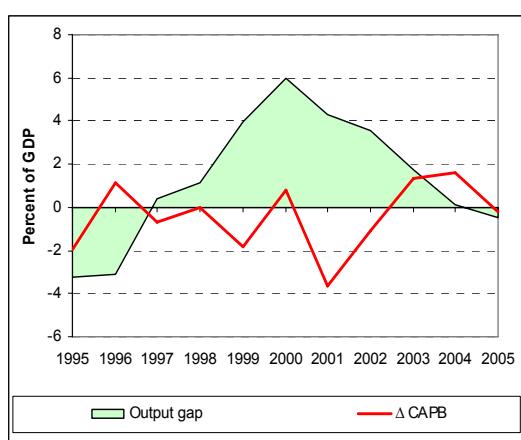
<sup>13</sup> Use of the private consumption deflator (PCD) allows a longer period of comparison with the euro area aggregate than the HICP. Note that Ireland's national CPI measure of inflation is more volatile than that of the PCD because the CPI includes the effects on mortgage payments of changes in interest rates.

<sup>14</sup> Press release on the 2329th Council meeting (ECOFIN), 12 February 2001. See: [http://www.consilium.europa.eu/ueDocs/cms\\_Data/docs/pressData/en/ecofin/Communiqué.doc.html](http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/ecofin/Communiqué.doc.html)

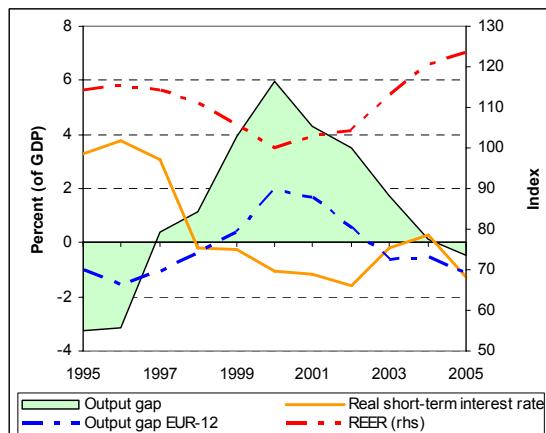
the form of capital gains tax and also to buoyant property-related capital taxes given the booming housing market). In this most recent period the overall cyclical impact of fiscal policy appears counter-cyclical; in more micro terms the judgement may be less favourable in terms of policy having exercised only light countervailing pressure to overheating pressures in the property market, given the considerable tax advantages in housing ownership<sup>15</sup>.

Monetary conditions take in the evolution of the exchange rate and interest rates and periods both preceding and following the introduction of the euro. Ireland has rarely exercised an independent monetary policy and within EMU the influence of Irish economic conditions on euro interest rate decisions is minor. Throughout the 1995-2005 period interest rates have been clearly too low on conventional criteria (such as a Taylor rule approach) and exacerbated during most of the period by nominal exchange rate weakness. In the later period monetary conditions became less accommodative, through both somewhat higher real interest rates and an appreciation of the nominal and real exchange rate (the latter also reflecting worsening unit labour cost performance in Ireland (Figure 6); nevertheless, even during this more recent period, it would be difficult to claim a significantly positive stabilising role for monetary conditions in the specific context of very high property price inflation and hugely negative real mortgage rates.

**Figure 5: Output gap and fiscal stance**



**Figure 6: Output gap and monetary conditions**



Note: ΔCAPB denotes the change in the cyclically-adjusted primary budget balance.

Source: Commission services

Source: Commission services

The existence of social partnership accords embracing wage developments is a specific Irish characteristic that also needs to be taken into account in assessing the influence of policy on growth volatility. A series of tripartite (government, employers and trade unions) agreements from the late 1980s onwards aimed to achieve consensus on wage

<sup>15</sup> According to the OECD, Ireland is the only OECD country that allows households a tax deduction for mortgage interest payments at the same time as not taxing property values, capital gains (on disposal of main residence) or imputed rent: see OECD (2006), *op.cit.*

bargaining, typically facilitated by sweetening reductions in personal income taxation<sup>16</sup>. More recent agreements have been widened in scope in terms of both civil society participation and economic and social policy subject matter but have continued to include centralised wage norms. These accords are viewed positively for their contribution to macro-stabilisation during the early 1990s and the framework has been given credit for contributing to reducing labour disputes. As regards wage bargaining, norms have been fairly consistently exceeded and the impression is of these having become less benign for the economy as this has become more diversified. During the recent more moderate growth period the social accord consensus notably did not lead to a commensurate more rapid reduction in nominal and real wage growth - yearly wage growth peaked in excess of 10% for the whole economy in the early 2000s - and has thus not prevented a significant reduction in external competitiveness. Higher unit cost growth than in Ireland's main trading partners coupled with the strength of the euro have thus raised competitiveness concerns.

To synthesise, Ireland as a small and highly open economy (with extensive linkages with non-euro area countries), has tended to have cycles, not surprisingly, strongly linked to the fortunes of the wider international economy and somewhat more amplified than the euro area. The period as a whole covered extreme growth and major structural transformation and cannot be analysed simply in cyclical terms. Though neither fiscal nor monetary policy has contributed consistently positively to short-term stability, the stability actually experienced is respectable compared with the euro area as a whole. Before and during the early years of EMU, an expansionary macroeconomic policy mix contributed to the overheating of the Irish economy which peaked around the turn of the decade. Given that, the subsequent initial global slowdown was fortuitous for Ireland, but with the more recent recovery in growth dominated by domestic demand and itself carrying the risk of macroeconomic imbalances, particularly from the housing sector and reduced competitiveness. The economy appears exposed to possible negative shocks for some time, though the economy's supply-side flexibility, particularly the international openness of its labour market, will be instrumental in responding to the occurrences of any such shocks.

#### **2.4. Public finances**

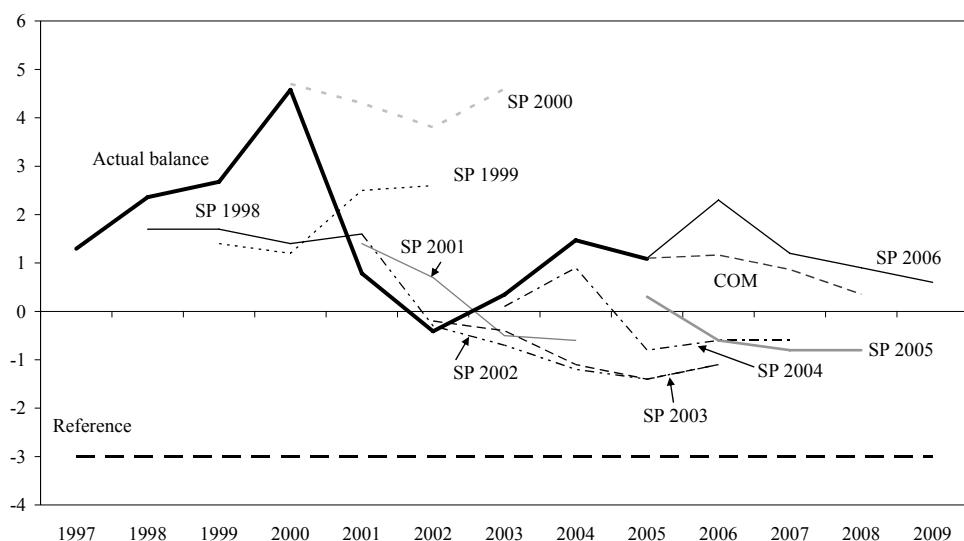
The fiscal position has consolidated over the last decade, with the general government recording surpluses in all years from 1997 onwards (with the exception of a small deficit in 2002). Both revenue and primary expenditure ratios fell swiftly over the period of most rapid economic growth in the late 1990s, as growth of the general government sector under-paced that of the economy as a whole. The revenue ratio troughed in 2002 at 33% of GDP following tax-cutting budgets at the beginning of the decade; the primary expenditure ratio bottomed two years earlier at just under 30% of GDP. Since this period slightly more moderate growth of GDP has combined with policies more clearly expanding current and capital expenditure programmes so as to result in roughly stabilising or slightly increasing revenue and expenditure ratios. The levels of these ratios in 2005 were clearly at the bottom end of the EU-15 scale and on an approximate par with the Baltic States among the EU-10, marking a clear difference of economic structure compared with the rest of the euro area.

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<sup>16</sup> Given the social partnership framework in which tax sweeteners can be traded for (or to encourage) wage moderation, there is to some extent an offset between changes in the fiscal stance and the momentum in the economy from changes in real wages.

Within primary expenditure another remarkable trait is the high absolute ratio to GDP of government fixed investment. This rose from around 2½% in the mid-1990s (similar to the euro area average) to over 4% by the early years of the new decade, a remarkable achievement given the pace of overall economic growth and the erosion of the overall primary expenditure ratio; since 2002 there has been some falling back, despite the existence of successive vintages of multi-annual National Development Plans, and in 2005 marked shortfalls in capital spending relative to plan resulted in a fixed investment ratio of 3.4%. While well ahead of the euro area average (which remained around the same level of the mid-1990s throughout the period), the significant shortfalls point to management difficulties in realising what had become very large absolute levels of capital spending relative to the resources available, and also raised issues of whether, given these very large programmes, expenditure was optimised in terms of appraisal and realisation.

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



**Source:** Commission services' (COM) and stability programmes (SP).

Given the rise in the investment share from the mid-1990s, the compression of the primary current expenditure ratio was even more marked than that of primary expenditure as a whole. Primary current spending fell from over 31% of GDP in 1995 to a trough of under 25% in 2000, since when the ratio has risen steadily in every subsequent year to reach just under 29% in 2005 (but still far lower than the euro area, which averaged just over 40% of GDP). Given high GDP growth, total primary expenditure almost doubled over the period, with two enormous step increases in 1999 and 2001 of about 14% in each year in real terms; even excluding these two years, real expenditure still rose by an average 5¼% per year over the period. Notwithstanding the scale of the real increases in both current and capital expenditure and the difficulties evidenced in implementing ambitious capital programmes, there were clear indications by the end of the period that publicly-financed provision of growth-augmenting expenditure was still at sub-optimal levels, particularly noticeable in fields such as transport infrastructure.

The uneven revenue and expenditure record, including expenditure shortfalls, also points to the relatively slow development of more efficient public finance management systems in Ireland, leaving annual policy-making prone to short-term pressures. Improvements in these areas have been registered in recent years, including the introduction of multi-annual budgeting for capital programmes and improved techniques for their management (see Section 6). However, Ireland lacked extensive medium-term public finance planning, particularly for current expenditure. While the publicly-stated objectives of budgetary policy were thus to ensure compliance with the SGP and contribute to macroeconomic stability, these objectives were not obviously embedded in a strategy or operational framework that facilitated their realisation.

Given the budgetary surpluses, the rapid increase in nominal GDP and the fall in global interest rates, the net debt ratio has been in progressive decline, as has the gross debt ratio, despite the steady accumulation of extra-government assets in the National Pension Reserve Fund (NPRF) established in 2000; the gross debt ratio has declined to under 30% of GDP in 2005 from just over 80% ten years earlier, with the interest burden falling to 1.2% of GDP from 5.3% over the same period. The NPRF, part of general government, exists to build up assets which will part-finance social welfare and public service pensions from 2025 onwards, when the cost of public pensions is expected to rise significantly with the progressive ageing of the population, raising long-term sustainability concerns. By statute the government has committed itself to set aside 1% of GNP each year to part-fund future pension liabilities, having at the outset of the fund set aside the major part of the receipts from the flotation of the incumbent state telecoms operator.

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

Ireland's economic performance over the past ten years covers an initial period of extremely rapid "Celtic Tiger" rates of growth, extending the extraordinary catch-up achievement that began in the late 1980s. A by-and-large successful breasting of the economic turbulence following the turn of the decade has been succeeded more recently by more moderate rates of growth, still far ahead of the West European norm but, in contrast to the earlier period, essentially led by domestic demand and beginning to appear to be based on slightly less secure foundations, notably an unsustainable rate of residential construction. The chief characteristic of Ireland's overall success has been its openness, resulting in close integration with the European, US and global economies. This is particularly evident in flexible factor markets, with substantial inward foreign investment and a labour market internationally open and recently substantial inward migration. A fast-growing and reasonably well-educated younger workforce and a business-adaptive policy environment and strong social partnership built up since the 1980s have also been strengths. The resulting economic structure shows very marked contrasts between the largely FDI-based "modern" sectors producing for global markets and registering stellar growth, on which Ireland's success has been based, and more "traditional" manufacturing and service sectors with more mundane performance. The degree of freedom of macroeconomic policy has been circumscribed by the limitations of Ireland's being a small open economy. Ireland joined the euro area as a founder member but even prior to this had rarely exercised monetary independence; euro area interest rates have been far lower than would have appeared optimal and have contributed in particular to a very high rate of asset price inflation. HICP inflation in general has been relatively high with some easing in 2004 and 2005, since partially reversed: there is evidence of persistent negative relative inflation for goods vis-à-vis the euro area and an

equally persistent positive inflation differential for services as real incomes have increased, exacerbated by domestic demand pressures and some deficiencies in product markets and network services. Measurement of external competitiveness is hampered by the structural contrasts between "modern" and "traditional" sectors but seems to have worsened significantly at least for the latter and the external deficit has widened. Fiscal policy has sometimes lacked consistency in application and earlier in the decade seemed perverse *ex ante*, although the structural balance has remained within SGP bounds. From a supply-side perspective, complementary public expenditure and the public capital stock has fallen behind the scale of the economy given the latter's sustained high rates of growth.

The analysis above suggests the following policy challenges in the medium term:

- *Stabilisation.* On the domestic side, increased reliance of output and employment growth on an unsustainably high level of residential construction has aggravated inflationary pressures and together with very high residential property prices and significant increases in household indebtedness carries risks of sharp downward adjustment in the wider economy. A challenge for fiscal policy is to help guide the economy towards better balance and to retain room for manoeuvre to be able to respond to the possible materialisation of such risks.
- *Sustainability.* The long-term sustainability assessment (see section 5.2) shows that Ireland's public finances appears to be at medium risk in the long term, but with the impact of ageing itself significantly above the EU average as the pension system matures. Reducing such risks is an additional challenge.
- *Efficiency.* Prioritising public investment in infrastructure and other growth-promoting expenditure, taking account of the wider economic context, is a key challenge, particularly given the very large sums allocated to the current National Development Plan and likely to be enhanced in its successor due to take effect from 2007. Improved appraisal, management and accountability of major capital projects are likely to become all the more important going forward.

**Table 1: Key economic indicators**

	Ireland						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)	7.8	10.4	5.2	4.3	4.3	5.5	2.1	2.7	1.4	0.8	2.0	1.4
Contributions to real GDP growth:												
<i>Domestic demand</i>	6.2	8.4	4.1	2.8	4.1	6.7	2.0	2.7	1.3	1.4	1.8	1.6
<i>Net exports</i>	1.6	2.0	1.1	1.5	0.3	-1.2	0.1	0.1	0.1	-0.7	0.2	-0.2
<b>Prices, costs and labour market</b>												
HICP inflation (% change)	3.0	2.7	3.4	4.0	2.3	2.2	1.9	1.7	2.2	2.1	2.1	2.2
Labour productivity (% change)	3.3	4.4	2.3	2.3	1.2	0.9	1.2	1.5	0.8	0.8	1.6	0.9
Real unit labour costs (% change)	-1.4	-2.8	0.0	0.2	3.5	0.6	-0.5	-0.6	-0.5	-0.1	-1.0	-0.8
Employment (% change)	4.3	5.7	2.9	2.0	3.1	4.6	1.2	1.5	0.9	0.7	0.7	0.8
Unemployment rate (% of labour force)	6.1	7.8	4.4	4.7	4.5	4.3	9.1	9.8	8.5	8.7	8.9	8.6
<b>Competitiveness and external position</b>												
Real effective exchange rate (% change) (1)	0.9	-2.5	4.4	8.0	6.9	2.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Export performance (% change) (2)	4.6	8.3	1.0	-2.5	-0.4	-1.6	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
External balance (% of GDP)	-0.1	0.9	-1.2	0.0	-0.8	-3.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Public finances</b>												
General government balance (% of GDP)	1.4	2.2	0.7	0.3	1.5	1.1	-2.3	-2.1	-2.5	-3.1	-2.8	-2.4
General government debt (% of GDP)	43.3	55.4	31.2	31.1	29.7	27.4	70.9	72.5	69.3	69.3	69.8	70.8
Structural budget balance (% of GDP) (3)	n.a.	n.a.	n.a.	-0.3	2.1	1.0	n.a.	n.a.	n.a.	-3.2	-2.9	-2.0
<b>Financial indicators (4)</b>												
Long term real interest rate (%) (5)	1.3	1.9	0.6	1.6	2.2	-0.2	3.1	4.1	2.1	2.0	2.2	1.5
Household debt (% of GDP) (6)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Corporate sector debt (% of GDP) (7)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Notes:

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

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

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

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

(4) Data available up to 2004.

(5) Using GDP deflator.

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

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

Source:  
Commission services

### **3. MACROECONOMIC OUTLOOK**

This section is in seven parts, six of which refer to various dimensions of the macroeconomic scenario, notably: the external assumptions, overall economic growth, the labour market, costs and prices, sectoral balances and potential output growth. 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 programme projections embody the external assumptions of the Commission services' autumn 2006 forecasts, with 2008 levels (the end-year of these forecasts) rolled over to 2009.

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

Real GDP growth in 2006 is estimated in the programme at 5.4% and forecast at almost the same level (5.3%) in 2007 before declining to 4.6% in 2008 and 4.1% in 2009 (Table 2). Both in GDP growth levels and in the composition of growth there is a marked transition between 2006 and 2007 on the one hand and the final two programme years on the other. In the first two years growth comes entirely from domestic demand, and particularly from private consumption and fixed investment; the external contribution is negative. Private consumption is buoyant in both years, responding to full and rising employment, high real disposable income growth and robust confidence, but is forecast to be remarkably so in 2007 when the bulk of Special Savings Investment Accounts (SSIAs, a heavily tax-incentivised and very widely held saving vehicle) matures<sup>17</sup>. Fixed investment, heavily dominated by construction investment and thus by the residential building boom, is forecast to cool only slightly in 2007. From 2008 both these domestic demand components are projected to return to more sustainable growth rates, with total fixed investment growth somewhat subdued in the final two programme years by an assumed normalisation process in construction investment. Government consumption expenditure, estimated to have risen 4½% in 2006, thereafter rises at 3½% per annum. Lower domestic demand growth in 2008 and 2009 is reflected in sharply lower import growth, while export growth is assumed to be fairly stable throughout the programme period (significantly below growth of foreign markets, especially in 2006, partly due to weakened cost competitiveness). In consequence, the external contribution turns positive in 2008 and remains so in 2009.

The pattern of growth over the programme period marks a continuum between the final years of the previous ten-year period (Section 2) and 2006 and 2007, in the emergence of domestic demand as the main growth driver; the extra demand stimulus in 2007 from maturing and partly spent SSIAs is a special feature of the programme period but this demand stimulus should have a much more limited effect on output, given reasonable assumptions about the import intensity of marginal and in some sense windfall household expenditure. In turn the pattern of growth in the years 2008-09 may not represent a new

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<sup>17</sup> A third of such accounts matured already in 2006. They are not renewable.

steady state, given the continuing unwinding of the residential building boom, and growth in the final year might therefore fall short of medium-term potential.

For completeness Tables 2 and 3 show output gaps sourced from stability programmes and Commission services' forecasts calculated using the commonly agreed method. The results, however, are unsatisfactory and do not bear credible comparison with more comprehensive judgements based on a fuller range of macroeconomic data. On the latter basis, there do not seem strong grounds for arguing that the economy as projected in the programme would be significantly distant from its medium-term potential growth path, although potential growth can be expected to slow in the medium term as the housing boom runs its course. The growth pattern projected in the programme would represent achievement of full employment in the context of an internationally open labour market which has already attracted substantial inward migration. Living standards and net wealth accumulation have been rapidly rising, though less so than during the "Celtic Tiger" era. HICP inflation is relatively moderate (though significantly higher than the EU average, and inflation based on the national CPI was very high in 2006 given the influence of mortgage interest costs). As this pattern is projected through the programme period, it does not suggest that the economy is significantly either above or below potential or rapidly moving towards or away from the potential growth path. Similar results were obtained in earlier Commission services' forecasts and previous programme updates, though the depth of the negative output gaps for common years has tended to lessen with successive estimates.

In assessing the economic scenario in the programme, a first consideration is that quarterly national accounts released in December, after the programme, for the third quarter of 2006 indicate that growth momentum appears to be vigorous. Cumulative GDP growth in the first three quarters of 2006 was a broadly-based 6.2%, with a marked year-on-year acceleration in the third quarter (7.7%). This momentum in itself suggests scope for growth in 2006 as a whole and entering 2007 to be stronger than represented in the programme. Looking ahead, the Commission services' autumn forecast serves as one basis of comparison, though is subject to the serious limitation of being on an announced policy basis pre-dating the expansionary December 2006 budget (as well as, like the programme itself, not taking account of more recently released strong data). Despite this, for the 2006-08 period common to both, the projected pattern and rates of real growth are very similar, with the autumn forecast being - as could be expected, ahead of the budget - more reticent regarding the private consumption stimulus and associated import growth in 2007, but foreseeing rather higher government consumption growth. Specifically as regards the composition of growth, the dominant role of the profile for private consumption growth over the period is clearly of major importance and subject to considerable uncertainty in 2007 from the SSIA factor, such that there is an implied sharp drop in the household saving rate<sup>18</sup>; in addition wealth effects from the considerable recent net wealth accumulation, while not clearly evident hitherto for Ireland, may also play a positive role if current asset price levels are largely maintained.

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<sup>18</sup> The government's October 2006 Pre-Budget Outlook annexes a brief discussion of the issue. Based on recent survey evidence, it surmises that "something of the order of one-third would be consumed on 'large' consumer items, many of which are imported". See Department of Finance (2006), Pre-Budget Outlook, available from: <http://www.finance.gov.ie/documents/publications/other/PBO2006.pdf>.

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

	2006		2007		2008		2009
	COM	SP	COM	SP	COM	SP	SP
Real GDP (% change)	5.3	5.4	5.3	5.3	4.3	4.6	4.1
Private consumption (% change)	6.6	6.5	7.0	7.3	4.6	4.8	4.1
Government consumption (% change)	4.2	3.6	4.2	3.7	4.2	3.5	3.4
Gross fixed capital formation (% change)	7.0	6.8	5.4	5.4	3.0	3.8	2.5
Exports of goods and services (% change)	4.7	4.8	5.2	4.9	5.0	4.6	4.5
Imports of goods and services (% change)	5.8	5.9	6.0	6.2	4.7	4.3	3.9
<i>Contributions to real GDP growth:</i>							
- Final domestic demand	5.5	5.4	5.4	5.4	3.7	3.9	3.1
- Change in inventories	0.0	0.2	0.0	0.2	-0.1	0.2	0.1
- Net exports	-0.1	-0.2	0.1	-0.3	0.8	0.6	0.9
Output gap <sup>1</sup>	-1.4	-1.2	-1.9	-1.6	-2.7	-2.2	-2.5
Employment (% change)	4.4	4.4	3.0	3.5	1.5	2.1	1.6
Unemployment rate (%)	4.3	4.4	4.5	4.4	4.8	4.5	4.6
Labour productivity growth (%)	0.9	0.8	2.2	1.7	2.8	2.5	2.5
HICP inflation (%)	2.9	2.7	2.7	2.6	2.2	2.0	1.7
GDP deflator (% change)	2.5	3.4	3.1	2.7	2.5	2.8	2.6
Comp. of employees (per head, % change)	4.8	4.7	4.5	4.5	4.5	4.1	0.0
Real unit labour costs (% change)	1.4	-4.3	-0.8	-3.6	-0.7	-3.5	-6.8
External balance (% of GDP)	-3.2	-3.4	-4.1	-4.3	-4.2	-4.0	-3.5
<i>Note:</i>							
<sup>1</sup> In percent of potential GDP, with potential GDP growth as reported in Table 4 below.							
<i>Source:</i>							
<i>Commission services' autumn 2006 economic forecasts (COM); stability programme (SP)</i>							

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

(% of potential GDP)	2006		2007		2008		
	COM	SP <sup>1</sup>	COM	SP <sup>1</sup>	COM	SP <sup>1</sup>	
December 2006	-	-1.2	-	-1.6	-	-2.2	
Autumn 2006	-1.4	-	-1.9	-	-2.7	-	
Spring 2006	-2.4	-	-2.9	-	-	-	
December 2005	-	-1.9	-	-2.2	-	-2.1	
Autumn 2005	-2.2	-	-2.6	-	-	-	
Spring 2005	-2.0	-	-	-	-	-	
December 2004	-	-2.4	-	-2.1	-	-	
<i>Note:</i>							
<sup>1</sup> Commission services' calculations according to the commonly agreed method based on the information in the programme.							
<i>Source:</i>							
<i>Commission services' forecasts, stability programmes and Commission services</i>							

### 3.3. Potential growth and its determinants

Table 4 presents estimates of potential output consistent with the Commission services' autumn forecast (to 2008) and the programme's macroeconomic scenario (to 2009), both according to the commonly agreed methodology; for the latter these are Commission services calculations, based on the information provided in the programme. Given the closely matching projections the potential output estimates to 2008 differ very little, suggesting initially roughly equal contributions from labour, capital accumulation and

total factor productivity (TFP); towards the later programme years the labour contribution drops considerably though with little change in the two other factors.

However, for reasons explained above in discussing output gap estimates, these potential growth estimates cannot simply be taken at face value. In particular, estimated growth of potential in at least the first half of the programme period appears too high taking account of a wider range of economic indicators. More generally for Ireland, since the commonly agreed methodology does not distinguish between different forms of capital accumulation, the extremely high rates of residential investment in Ireland, of less impact in sustaining potential, also buoy the estimated results. The lower rates of projected actual growth compared with potential as estimated in Table 4 should not therefore be taken as an indication that such projections are for this reason cautious.

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

	2006		2007		2008		2009
	COM	SP <sup>2</sup>	COM	SP <sup>2</sup>	COM	SP <sup>2</sup>	SP <sup>2</sup>
Potential GDP growth (%) <sup>1</sup>	6.3	6.2	5.8	5.8	5.2	5.2	4.5
<i>Contributions:</i>							
- Labour	2.0	2.2	1.7	1.8	1.2	1.4	0.7
- Capital accumulation	2.1	2.1	2.1	2.1	2.0	2.0	1.9
- TFP	2.0	1.9	1.9	1.8	1.9	1.8	1.8
<i>Notes:</i>							
<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 stability programme (SP).							
<i>Source:</i>							
<i>Commission services' autumn 2006 economic forecasts (COM); Commission services' calculations</i>							

### 3.4. Labour market developments

The programme projects some moderation in employment growth from recent very high rates of increase (partly fuelled by high immigration), leading to an increase of around 1½% in 2009 compared with 4½% in 2006. The unemployment rate is projected to edge up marginally during the period but, essentially, full employment is maintained. The projected evolution of the labour market seems consistent with the assumed process of normalisation of the growth pattern becoming rather less dependent on employment-rich construction, such that annual productivity growth rises from the low rate estimated for 2006 (but will remain far below the rates achieved in the late 1990s, given the now much larger importance of services in generating growth). The programme's profiles for employment, unemployment and productivity developments are very close, and for similar reasons, to those in the Commission services' autumn forecast for 2006-08. The unemployment path is broadly consistent with actual output remaining close to potential through the programme period.

### 3.5. Cost and price developments

Programme and Commission services' autumn forecast projections for HICP inflation in 2006-08 are very close, with the former only slightly below the latter. HICP inflation was relatively high in 2006 given energy cost pressures and the programme projects little change on average for 2007, though with moderation during the year as year-on-year effects fade, such that by 2009 inflation in the programme projection is under 2%. Inflation as measured by the national CPI measure was uncomfortably high in 2006 at

4.0%, with the difference compared with the HICP essentially due to the former's inclusion of mortgage interest costs<sup>19</sup>; the difference is expected to widen slightly further in 2007 before being largely eroded from 2008. The programme projects annual increases in the GDP deflator to be higher than HICP inflation in each year; though not explained, this seems most probably attributable to high assumed cost inflation for construction investment. Given common external assumptions, based on terms of trade movements the autumn forecast has a surprisingly different profile for the difference between increases in the GDP deflator and HICP over 2006-07.

Assumed increases underlying the programme in compensation per head would represent a moderation compared with recent years and a more rapid slowing compared with the autumn forecast. The implied real wage growth, given the productivity path and GDP prices, would suggest rising margins and the basis for some recovery in external competitiveness consistent with underpinning of export growth in the later programme years (though realised competitiveness gains will also obviously be dependent on developments in trade competitors).

### **3.6. Sectoral balances**

Only partial sectoral balance data are available in the programme. A significant feature is the assumed sharp widening of external net borrowing in 2007, closely mirroring the change in that year for the programme's projection for general government, and implying also some slight reduction in the large private sector deficit (from a peak of approaching 6% of GDP in 2006). Thereafter the combination of the rates of continued narrowing of both the government surplus and external net lending (as import demand slows in 2008 and 2009) implies a similarly continued contraction of the private sector deficit. This would, however, remain relatively wide and by 2009 still exceed the level in 2005.

### **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*

The programme scenario is very close with respect to the projected pattern and rates of real growth to the Commission services' autumn forecast, even though the latter is on an announced policy basis pre-dating the December 2006 budget. The autumn forecast is more reticent regarding the private consumption stimulus and associated import growth in 2007, but foresees rather higher government consumption growth. The recent data suggests that the growth outturn in 2006 will be stronger than in the programme, with upside momentum also entering 2007. On these bases the programme projections in 2007 and 2008 can be regarded as plausible and, in the light of the discussion above, so also can those for 2009.

Nevertheless, any medium-term economic projections for Ireland in current circumstances are subject to very considerable uncertainties, with the balance of these - after taking account of the short-term upside momentum referred to - tending to the

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<sup>19</sup> The CPI excluding mortgage interest rose 2.6%.

downside within the medium term. Specifically as regards the composition of growth, the dominant role of the profile for private consumption growth over the period is clearly of major importance and subject, particularly in 2007, to consumption, investment or saving decisions regarding maturing SSIAAs which are difficult to predict with confidence; the impact of such decisions on activity may, however, be moderated to the extent that marginal consumption associated with them has a very high import content, as seems reasonable to expect. SSIA-associated risks may thus be assessed as neutral, though subject to a wide margin or variation. On the more clearly negative side, external developments, notably in the US economy to which the Irish economy has high exposure, could be much weaker than assumed. However, probably the major negative risk in terms of possible likelihood and impact is the domestic one of abrupt reversal in either or both elements of the residential property market - very high valuations and very high rates of investment - leading to a broader impact on confidence, activity and employment.

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

The Irish economy is continuing to perform very well. The economy demonstrates achievement of full employment in the context of an internationally open labour market which has attracted substantial inward migration. Living standards and net wealth accumulation have been rising rapidly, though less so than during the "Celtic Tiger" era. Output growth is currently led by high rates of growth of domestic demand that in the medium term are expected to moderate bringing about slower growth of activity. HICP inflation is relatively moderate (though higher than the EU average, and inflation based on the national CPI is very high given the influence of mortgage interest costs). This pattern is expected to be broadly sustainable through the programme period (even if subject to the risks mentioned above). The broad range of available indicators, taken together, do not therefore suggest that the economy is significantly either above or below potential or rapidly moving towards or away from the potential growth path. If the negative risks materialised to a significant degree, and especially in combination and with persistence, this conclusion would be subject to revision, and conditions in 2006 and entering 2007 would then quite possibly suggest a position above potential and conditions characterisable as "good times". However, in the light of current conditions and a modal approach to projecting medium-term developments, the Irish economy does not seem to be either in clearly "good" or clearly "bad times", but in approximately neutral territory<sup>20</sup>.

## 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

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<sup>20</sup> An assessment based *only* on use of output gaps calculated using the common methodology would yield an unambiguous conclusion of economically "bad times": the calculated gap (using the Commision services' autumn forecast) is significantly negative and rapidly deepening, given the long-lagged influence on calculated potential of previously hyper-rapid actual output growth. As set out earlier in this assessment, these results are not convincing given a broader assessment of current conditions.

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

The general government outturn for 2006 estimated in the programme is a surplus of 2.3% of GDP, representing a far stronger outcome than the 0.6% deficit projected in the year-earlier budget and stability programme (Table 5); more recent cash data for central government points towards an even stronger surplus, of around 2½% of GDP. Estimated outturns were progressively revised during the year towards higher surpluses, though as late as November the Commission services' autumn forecast projected a surplus of "only" 1.2% of GDP. In assessing the result, two first important considerations are the following. First, the outturn for 2005 is now recorded to have been itself significantly stronger than was estimated when preparing the previous programme: the upward revision is of 0.8pp to a surplus of 1.1% of GDP, essentially because expenditure in 2005 turned out lower than then expected in both nominal and GDP-ratio terms; the 2006 result thus was against a base which was itself of a wider surplus. Secondly, estimated growth of nominal GDP in 2006 was significantly stronger than projected in the previous stability programme, 9.0% in the latest programme compared with 7.9% respectively, and thus boosting the denominator of GDP ratios (and more recently released GDP data, up to the third quarter, points to nominal GDP growth for the year possibly being around one point higher still<sup>21</sup>). Bearing these factors in consideration, in aggregate terms the stronger than expected result in 2006 is entirely attributable to the revenue side. The increase in the total revenue ratio of over 1½ pp of GDP between 2005 and 2006 was attributable to taxes alone, with the higher ratio reflecting both higher elasticities in relation to the main tax bases and, to only a slightly lesser extent, to a GDP composition effect with growth deriving more richly from final domestic demand than expected in the previous programme. The revenue result reflects in particular the high levels of activity and valuations in the property market buoying housing-related tax receipts (capital gains tax and stamp duties - i.e. levies on capital transfers), and to a more limited extent higher output growth having a similar effect on mainstream taxes.

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

		2005	2006	2007	2008	2009
General government balance (% of GDP)	<b>SP Dec 2006</b>	<b>1.1</b>	<b>2.3</b>	<b>1.2</b>	<b>0.9</b>	<b>0.6</b>
	SP Dec 2005	0.3	-0.6	-0.8	-0.8	-
	<i>SP Dec 2004</i>	-0.8	-0.6	-0.6	-	0.0
	COM Nov 2006	1.1	1.2	0.9	0.4	n.a.
General government expenditure (% of GDP)	<b>SP Dec 2006</b>	<b>34.1</b>	<b>34.6</b>	<b>35.4</b>	<b>35.1</b>	<b>35.0</b>
	SP Dec 2005	34.9	35.1	35.4	35.0	-
	<i>SP Dec 2004</i>	35.0	34.5	33.8	-	-
	COM Nov 2006	34.1	35.0	35.0	35.4	n.a.
General government revenues (% of GDP)	<b>SP Dec 2006</b>	<b>35.2</b>	<b>36.8</b>	<b>36.6</b>	<b>36.0</b>	<b>35.5</b>
	SP Dec 2005	35.2	34.5	34.5	34.3	-
	<i>SP Dec 2004</i>	34.2	33.8	33.2	-	-
	COM Nov 2006	35.2	36.1	35.9	35.7	n.a.
Real GDP (% change)	<b>SP Dec 2006</b>	<b>5.5</b>	<b>5.4</b>	<b>5.3</b>	<b>4.6</b>	<b>4.1</b>
	SP Dec 2005	4.6	4.8	5.0	4.8	-
	<i>SP Dec 2004</i>	5.1	5.2	5.4	-	-
	COM Nov 2006	5.5	5.3	5.3	4.3	n.a.

<sup>21</sup> Cumulative nominal GDP in the first three quarters of 2006 was reported as 9.9% up on the same period of 2005.

*Source:*

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

In sectoral terms, the programme implies that the stronger than expected result was almost entirely at central government level, with a modest additional effect from the social security sub-sector. Table 6 presents a more detailed breakdown on a budget basis of the performance in 2006, as estimated in the December 2006 budget, of Exchequer (central government) revenue and expenditure categories together with the Exchequer balance. Total Exchequer tax revenue growth was estimated at over 15% compared with 6% on the year-ago budget, with well over half of the growth windfall attributable to capital gains taxes and stamp duties (in ESA terms, included within current taxes on income and within taxes on production respectively). Other tax revenues also grew ahead of expectations, notably corporation tax, though value-added tax only very modestly so, despite the higher than expected level of nominal GDP<sup>22</sup>.

**Table 6: Budget for 2006 and estimated outturn, Exchequer (CG) account**

	2006 budget projections		Estimated 2006 outturn (from 2007 budget)			
	(€ mio)	proj. change on 2005 <sup>1</sup> (%)	(€ mio)	est. change on 2005 <sup>2</sup> (%)	(€ mio)	diff. from budget (% of GDP)
	1	2	3	4	5=3-1	6
<b>Revenue</b>						
Excise and customs duties, ag. levies	5,735	4.9	5,604	2.5	-131	-0.07
VAT	13,095	8.0	13,455	11.0	360	0.20
Personal income tax	11,810	3.6	12,300	7.9	490	0.28
Capital gains tax	2,035	3.6	3,100	57.8	1,065	0.61
Stamp duties	2,685	2.1	3,700	40.7	1,015	0.58
Capital acquisitions tax	260	4.0	350	40.0	90	0.05
Corporation tax	6,030	10.2	6,680	22.1	650	0.37
<b>Total taxes</b>	<b>41,650</b>	<b>6.0</b>	<b>45,452</b>	<b>15.6</b>	<b>3,802</b>	<b>2.16</b>
Non-tax current revenue	570	-5.3	567	-5.8	-3	0.00
Capital resources	1,819	48.6	1,859	51.9	40	0.02
<b>Total revenue</b>	<b>44,039</b>	<b>7.1</b>	<b>47,878</b>	<b>16.4</b>	<b>3,839</b>	<b>2.19</b>
<b>Expenditure<sup>3</sup></b>						
Current	37,824	11.9	37,128	9.8	-696	-0.40
Capital	9,143	11.7	8,896	8.6	-247	-0.14
<b>Total expenditure</b>	<b>46,967</b>	<b>9.7</b>	<b>46,024</b>	<b>9.6</b>	<b>-943</b>	<b>-0.54</b>
<b>Exchequer balance</b>	<b>-2,927</b>		<b>1,854</b>		<b>4,781</b>	<b>2.72</b>
- of which, current budget balance	4,397		8,891		4,494	2.56
- of which, capital budget balance	-7,324		-7,036		288	0.16
<b>Notes</b>						
<sup>1</sup> Projected change on 2005 outturn estimated in budget for 2006						

<sup>22</sup> The preliminary 2006 outturn for the Exchequer balance, taking account of December data, is a surplus of €2.26 billion, around 3¼% of GDP higher than budgeted a year earlier. Total revenue is estimated at €48.0 billion and total expenditure at €45.8 billion, indicating the main difference compared with the December 2006 budget estimate is lower expenditure. The reported expenditure level is €1.2 billion (0.7% of GDP) below the year-earlier budget projection. The Exchequer account expenditure shortfall, already evident in the budget day estimate and accentuated in the preliminary outturn, appears at odds with the estimated outturn for general government expenditure implied in the programme being slightly higher than projected in the December 2005 budget. Unless there were very large offsetting expenditure differences in other sub-sectors or very large offsetting national accounts adjustments, the Exchequer account results raise the possibility of expenditure shortfalls at general government level having also played a role in the larger than expected 2006 surplus.

<sup>2</sup> Projected change on 2005 outturn as reported in 2006

<sup>3</sup> Net of appropriations-in-aid (receipts retained by Departments)

Source: Budgets for 2006 and 2007, Commission services' calculations

On the expenditure side, though Table 5 records a clearly lower total expenditure ratio than budgeted, this is exclusively the result of the higher than expected level of nominal GDP boosting the denominator (the level of GDP being 1.8% higher than expected). Total nominal general government expenditure was thus virtually in line with the budget. However, at component level, this equivalence resulted from a number of collectively offsetting outturns compared with budget, with a pattern of continued shortfalls in final expenditure, cash transfers and debt interest countered by higher than expected "other" expenditure (as in 2005). Given the lower 2005 base effect, total expenditure growth was a little higher than expected.

## **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*

The main goal of the programme is to maintain economic and budgetary sustainability both in the medium and longer terms. In the medium term, as in the previous update, this is couched in terms of respecting the government's medium-term objective (MTO), which the programme again identifies as "keeping the budget close to balance", though in the current programme the MTO is expected to be maintained by a large margin throughout the programme period. In the longer term context, the authorities place particular emphasis on the need for public finances to be able to meet projected fiscal pressures, including those arising from the ageing of the population.

Following the expected surplus of 2.3% of GDP in 2006, a much lower surplus is planned for 2007 of 1.2%; continuing but progressively declining surpluses are projected in 2008 and 2009, to 0.6% in 2009, with an essentially identical profile for the primary balance (Tables 5 and 7). Compared with the previous update, which projected fairly flat deficits of  $\frac{3}{4}$  pp of GDP for the period 2007-08, the current programme clearly adaptively responds to the stronger than expected economic and budgetary data for 2005 and 2006 and in addition incorporates the expansionary budget for 2007.

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

The halving of the budgeted surplus in 2007 compared with 2006 is due to a higher planned expenditure ratio, with the increase broadly accounted for by a higher ratio of social transfers; the revenue ratio is also budgeted to be slightly lower (for further details on the budget for 2007, see Box 1). In 2008 and 2009 both revenue and expenditure ratios are shown as projected to decline, but expenditure only slightly; there are no significant one-off effects reported in the programme. The significant progressive attrition in the revenue ratio shown for 2008 and 2009 is probably to a large extent

misleading, since it incorporates in a technical way the greater part of progressively larger general medium-term contingency provisions (in the budget, not allocated explicitly to either revenue or expenditures sides of the budget) of respectively 0.4% and 0.8% of GDP<sup>23</sup>; the "underlying" revenue profile is thus stronger by these amounts but still falls over the programme period by around ½-¾ pp of GDP. Given the economic background assumed, the expenditure profile implies continuing significant real annual expenditure increases through the programme period for all main expenditure categories, and notably so for social transfers and fixed investment spending (where by EU standards the latter is particularly high in relation to GDP).

**Table 7: Composition of the budgetary adjustment**

(% of GDP)	2005	2006	2007	2008	2009	Change: 2009-2006
<b>Revenues</b>	35.2	36.8	36.6	36.0	35.5	-1.3
<i>of which:</i>						
- Taxes & social contributions	31.9	33.6	33.5	33.1	32.7	-0.9
- Other (residual)	3.3	3.2	3.1	2.9	2.8	-0.4
<b>Expenditure</b>	34.1	34.6	35.4	35.1	35.0	0.4
<i>of which:</i>						
- Primary expenditure	33.1	33.6	34.3	34.1	34.0	0.4
<i>of which:</i>						
Consumption	15.9	15.8	15.6	15.6	15.6	-0.2
Transfers other than in kind & subsidies	10.2	10.1	10.7	10.6	10.6	0.5
Gross fixed capital formation	3.2	3.6	3.8	3.8	3.8	0.2
Other (residual)	14.3	14.5	14.5	14.4	14.3	-0.2
- Interest expenditure	1.0	1.0	1.1	1.0	1.0	0.0
<b>General government balance (GGB)</b>	<b>1.1</b>	<b>2.3</b>	<b>1.2</b>	<b>0.9</b>	<b>0.6</b>	-1.7
<b>Primary balance</b>	<b>2.1</b>	<b>3.3</b>	<b>2.3</b>	<b>1.8</b>	<b>1.6</b>	-1.7
One-offs <sup>1</sup>	-0.3	0.1	0.0	0.0	0.0	-0.1
<b>GGB excl. one-offs</b>	<b>1.4</b>	<b>2.2</b>	<b>1.2</b>	<b>0.9</b>	<b>0.6</b>	-1.6
<i>Note:</i>						
<sup>1</sup> One-off and other temporary measures (based on information from the December 2005 update for 2005 and the latest update for 2006; no information on one-offs is given in the programme for 2007-09).						
<i>Source:</i>	Stability programme update; Commission services' calculations					

The projected changes in the general government balance are reflected closely in the central government balance, with an additional modest reduction in the small social security sub-sector surplus; the local government sector (small in Ireland) remains close to balance throughout the programme period.

#### **Box 1: The budget for 2007**

The budget for 2007 was presented to Parliament (together with the updated stability programme) on 6 December 2007. Revenue provisions in the budget are enacted in parliamentary financial resolutions and in the annual finance act, where the latter should be adopted by 1 April of the year in question.

<sup>23</sup> The "technical" reduction on the revenue side is 0.3% and 0.6% of GDP in 2008 and 2009 respectively; the remainder (0.1% and 0.2% of GDP respectively) is shown in the form of higher expenditure, mainly on social transfers other than in kind (information provided by the Irish authorities).

The budget for 2007 plans a general government surplus for the year of 1.2% of GDP, as in the stability programme, compared with the estimated outturn of 2.3% of GDP in 2006. The large planned reduction in the surplus, apart from discounting recurrence of some of the exceptionally strong receipts of 2006, reflects a broad range of reductions in taxes and enhancements to social benefits and other welfare spending, moderated by some small revenue increases.

The main measures on the revenue and expenditure side are summarised below. No indexation provisions exist in Ireland for uprating taxes and benefits, and costings given here are all first round direct effects measured against a non-indexed Exchequer base (i.e. central government, non-ESA), taken from the budget documentation. On the revenue side, in addition to the measures summarised, the budget announced a consultation on future "green" changes to vehicle taxation. Health contributions were being raised for higher earners. One revenue measure worthy of note is that mortgage interest relief was being made more generous, particularly for first-time property buyers, although the total budgeted cost is not large. Total Exchequer tax revenues are expected to grow by 8.0% in 2007 (an estimated 15.6% in 2006), close to the projected rise in nominal GDP. Total revenue is budgeted to rise 6.8%, including a 0.3% of GDP boost from the budget's effect in raising final demand.

Post-budget, the planned increase in Exchequer current spending in 2007 is 11½% and for capital expenditure 13%. Weekly social benefits, including old age pensions, are to be increased significantly ahead of inflation and in the case of pensions will meet a commitment to reach a pension level of €200 a week. Some additional measures increased the allowances for supporting those with responsibility of care and to enhance the employment opportunities for the disabled. The medium-term capital expenditure envelope usually presented as part of the budget was on this occasion postponed to the announcement in January 2007 of the new National Development Plan 2007-13.

Taking account of revenue developments, an Exchequer deficit is planned in contrast to the large surplus estimated to have achieved in 2006. The budgeted 2007 Exchequer deficit is, however, much smaller than the deficit for 2006 budgeted a year earlier.

Table: Main measures in the budget for 2007

Revenue measures*	Expenditure measures**
<ul style="list-style-type: none"> <li>○ For personal incomes, more generous tax-exempt thresholds, widening of standard rate tax bands and a reduction in the higher rate (-0.5% of GDP)</li> <li>○ Less onerous VAT regime, with changes oriented towards small businesses and mainly of a one-off cash-flow nature (-0.1% of GDP)</li> <li>○ Increases in excise duty on cigarettes, partially offset by abolition of taxation of home heating oils (0.1% of GDP)</li> </ul>	<ul style="list-style-type: none"> <li>○ Increased social welfare payments (0.4% of GDP)</li> <li>○ Elderly and disabled care (0.2% of GDP)</li> </ul>

\* Estimated impact on general government revenues.

\*\* Estimated impact on general government expenditure.

Sources: Commission services and Irish Department of Finance, *Budget 2007*.

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

As in the previous update, the programme identifies its MTO as "keeping the budget close to balance" (there is no point or range estimate). As in the previous Council opinion, this is construed as an "MTO of a balanced position in structural terms" (i.e. in terms of the cyclically-adjusted position net of one-off and other temporary measures, though as noted above there are no significant one-off measures in prospect). As mentioned above, the Irish authorities expect the MTO to be maintained by a large

margin through the programme period: according to the programme, "The cyclically-adjusted budget balance, with a surplus of 1.8% of GDP in 2007 followed by surpluses of 1.7% in 2008 and 1.5% in 2009, respects the terms of the Stability and Growth Pact, and is consistent with a medium-term objective of keeping the budget close to balance".

Ireland's MTO is significantly more demanding than implied by its debt ratio and average long-term potential growth: though the programme does not explicitly discuss this, it is consistent with an orientation towards the longer-term strategy of positioning the public finances in the light of future strains from rapid population ageing (see below, Section 5). The MTO also satisfies the condition of providing a safety margin in terms of being above the "minimum benchmark" estimated for Ireland of a cyclically-adjusted deficit of 1½% of GDP - the minimum benchmark being 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. Ireland being a euro area country, the MTO also respects the lower bound for euro area and ERM2 countries of a structural deficit of 1% of GDP.

**Table 8: Output gaps and cyclically-adjusted and structural balances**

(% of GDP)	2005		2006		2007		2008		2009	Change: 2009-2006
	COM	SP <sup>1</sup>	SP <sup>1</sup>	SP <sup>1</sup>						
Gen. gov't balance	1.1	1.1	1.2	2.3	0.9	1.2	0.4	0.9	0.6	-1.7
One-offs <sup>2</sup>	-0.3	-0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-0.1
Output gap <sup>3</sup>	-0.5	-0.4	-1.4	-1.2	-1.9	-1.6	-2.7	-2.2	-2.5	-
CAB <sup>4</sup>	1.3	1.3	1.7	2.8	1.6	1.8	1.5	1.8	1.6	-1.2
change in CAB	-0.2	-0.1	0.5	1.5	-0.1	-0.9	-0.2	-0.1	0.1	-
CAPB <sup>4</sup>	2.3	2.3	2.8	3.8	2.7	2.9	2.5	2.8	2.6	-1.2
Structural balance <sup>5</sup>	1.6	1.6	1.7	2.7	1.6	1.8	1.5	1.8	1.6	-1.1
change in struct. bal.	0.9	0.9	0.1	1.1	-0.1	-1.0	-0.2	-0.1	-0.2	-
Struct. prim. balance <sup>5</sup>	2.6	2.6	2.8	3.7	2.7	2.9	2.5	2.8	2.6	-1.1

Notes:

<sup>1</sup>Output gaps and cyclical adjustment according to the stability programme (SP) as recalculated by Commission services on the basis of the information in the programme.

<sup>2</sup>One-off and other temporary measures.

<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*

As can be seen from Table 8, the path envisaged in the update for the structural balance (as recalculated by Commission services on the basis of the information in the programme to the commonly agreed methodology) is a surplus of approaching 3% in 2006 reduced by 1pp of GDP in 2007, with no significant change in 2008 and a further slight fall in 2009, leaving the structural balance in 2009 still in surplus by around 1½% of GDP. Given the reservations expressed above (Section 3) about the calculated potential output series for Ireland, the cyclically-adjusted and structural balances shown in Table 8 need to be interpreted with especial caution. Nevertheless, it is clear that the large reduction in the structural surplus projected for 2007 points to the fiscal stance for the year, following the December 2006 budget, as being significantly expansionary. Thereafter, the planned fiscal stance is broadly neutral.

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

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

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

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

### **4.3. Risk assessment**

As noted in Section 3.7.1, while the programme's macroeconomic scenario can be regarded as plausible, it is subject to considerable uncertainties. In the immediate and short-term these may be on the upside, with greater economic momentum than taken account of in the programme. For 2007 there are great uncertainties in the response of the household sector to maturing SSIs. Further towards the medium term the balance of risks appears to tend towards the downside. To help in considering the possible consequences of differing macroeconomic developments, the programme itself usefully includes a sensitivity analysis distinguishing the effects on the budget balance from a 1% point change in the rate of growth throughout the period 2007-09 from two alternative sources, a change in interest rates and a change in world growth<sup>24</sup>. The very short-run response on the budget balance in the case of a change in world growth is about half that of the case of a change in interest rates, though by the third year (2009) the results are more comparable, with a cumulative impact of 0.3/0.4 percentage points of GDP (broadly symmetrical between upside and downside growth shocks). In both simulations, compared with central scenario, the budget balance in the case of negative shocks thus remains in small surplus. The programme notes that the reported sensitivities are smaller compared with previous updates, corresponding to structural change in the economy towards less import-intensive services and construction. In this context it is, however, notable that the description of the interest rate simulation appears to emphasise the transmission mechanism of changes in industrial costs, with no mention of changes in mortgage rates affecting household disposable income and expenditure and, through changes in the demand for housing, construction activity, where the recent structural changes could have been expected to increase interest rate sensitivity.

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<sup>24</sup> The analysis in the programme is based on simulations of the HERMES model of the Economic and Social Research Institute (ESRI). The programme stresses that the results are indicative and subject to considerable uncertainty, and are on the technical (and unlikely) assumption of absence of policy response.

For comparison, Commission services' simulations of the cyclically-adjusted balance under the assumptions of (i) a sustained 0.5 percentage point downward deviation from the real GDP growth projections in the programme over the 2006-2009 period; (ii) trend output based on the HP-filter and (iii) no policy response (notably, the expenditure level is as in the central scenario), indicate that, by 2009, the cyclically-adjusted balance would be  $\frac{3}{4}$  percentage point of GDP below that of the central scenario. Hence, in the case of persistently lower real growth, the fiscal room for manoeuvre would be by the same amount lower than in the path targeted in the central scenario.

The programme contains relatively limited information, particularly new information, on budgetary measures affecting the revenue and expenditure profiles up to the programme horizon, though the associated December 2006 budget documentation of course gives fuller details for the changes affecting 2007; details of the multi-annual capital envelopes usually presented with the budget was postponed until release of the new National Development Plan (NDP) in January 2007. As noted earlier, the programme makes no reference to one-off effects during the programme period.

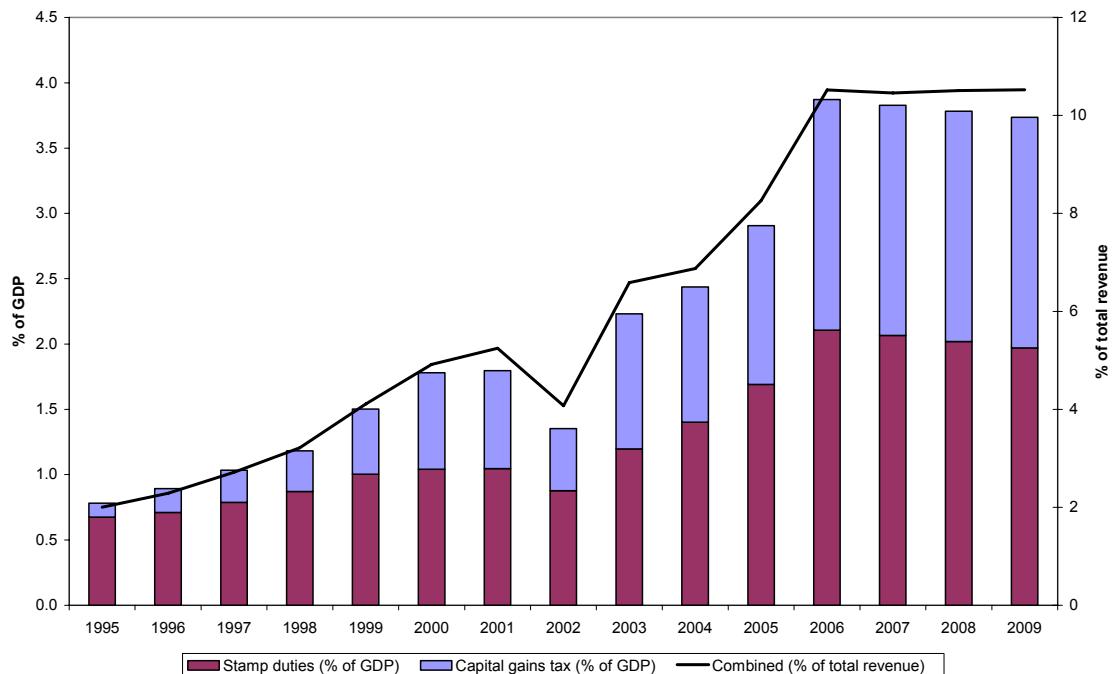
The risks attached to this relatively limited information are probably on the upside, centring on the revenue projections included in the programme. On the spending side, the projections imply considerable real expenditure growth, including of capital projects where in particular (but not only) there is the possibility of shortfalls against planned expenditure. There seems no reason to suppose *ex ante* that current policy intentions cannot be accommodated with the planned expenditure profile, particularly given the scope for efficiency savings (Section 6).

On the revenue side the projected fall in the GDP ratio could at first inspection appear unduly conservative in the absence of future policy changes targeted towards substantially reducing the tax burden. There are essentially two factors here. First, as noted in Section 4.2.2, substantial unallocated contingency provisions have been incorporated in the programme by technically reducing the revenue projections (for taxes on income and wealth) in 2008 and 2009. While such provisions (a conventional feature of medium-term budgetary planning in Ireland) can eventually be used partially or fully, in either increasing expenditure or reducing revenue or a mixture of both, a "hard" interpretation of unchanged policy in the programme would exclude them. This issue is discussed below in the context of the general track record of programme implementation in Ireland. That the revenue projections *before* taking account of this factor might appear conservative in 2008 and 2009 is suggested by examining Table 10 below summarising tax elasticities, and more particularly the results for taxes on income and wealth shown in Annex 5.

The second factor is that the revenue projections, even adjusted to re-include the contingency element, could still appear conservative, at least in 2008 and 2009 where the ratio to GDP would fall by a further 0.3 pp of GDP beyond the planned 0.2 pp in 2007 for which the budget provides details of measures. For 2008 and 2009, however, no major revenue reductions have been announced, and indeed 2008 should see further implementation of a medium-term programme of withdrawing certain tax incentives. Set against this, and taking account of the absence of indexation in the tax system, it would be normal to expect significant fiscal drag in the context of a robustly growing economy. OECD-derived estimates suggest fiscal drag in Ireland could be a little over  $\frac{1}{4}$  pp of GDP per annum. Even were the "announced policy" assumption softened to accommodate a pseudo-indexation assumption for the 2008 and 2009 budgets (in line with conventional practice of tax adjustments in Irish budgets), positive fiscal drag from

real income growth would remain. In the absence of other considerations, the projected reduction in the underlying revenue share during the programme period would not therefore appear a reasonable central assumption but a cautious one.

**Figure 8. Receipts from stamp duties and capital gains tax in relation to total general government revenue and GDP (%)**



*Source:* Irish national accounts and 2007 budget

To be set against such an assessment, however, account needs to be taken of the current important role played by housing-market-related (and financial-market-related) tax receipts and the likelihood that these in relation to GDP will at least normalise (and in the event of a hard landing in the housing market, fall below a normal level). In 2006 receipts of capital gains tax and stamp duties are estimated to have amounted to 10½% of total general government revenue<sup>25</sup>, approaching 4% of GDP. The relative importance of these two tax sources has increased progressively, apart from a dip in 2002, but particularly strongly since 2004, when they still accounted for below 7% of revenues (Figure 8). The programme suggests that an additional reason for the recent buoyancy of these revenue sources is cuts in certain tax rates which have encouraged capital disposals<sup>26</sup>. The figures underlying the programme projections, explicit in the budget details, nevertheless show that the sum of the two taxes is projected virtually to continue flat in terms of total revenue share and GDP ratio at the 2006 level (the peak until then) until the end of the programme period. While this is not necessarily implausible - the housing market and construction activity continue to be strong, and financial asset markets have also risen strongly - there are substantial risks that the revenue projections for these two items in isolation could be factoring in partly speculative peaks in the respective taxable bases from which there will be some normalisation, possibly

<sup>25</sup> Relative to the Exchequer account, the preliminary outturn is 14¼%.

<sup>26</sup> Capital gains tax on corporate disposals was eased in the budget for 2004; stamp duties on house purchases were eased in the budgets for 2005 and 2006, which should have had a contrary effect.

significant, within the programme period. By way of illustration, a return to the average level of receipts from stamp duties and capital gains tax in relation to total revenue and GDP recorded in the 2000-2004 period would represent a reduction of 5% of total expected revenue in the 2007-2009 period, or just under 2% of GDP. Were something like this magnitude of effect to materialise, it could easily dwarf the contingency provisions built in to the revenue projection as a whole and result in a significant overall deficit.

**Table 9: Comparison of budgetary developments and projections**

(% of GDP)	2005	2006		2007		2008		2009
		COM	SP	COM	SP	COM <sup>1</sup>	SP	SP
<b>Revenues</b>	35.2	36.1	36. 8	35.9	36. 6	35.7	36. 0	35.5
<i>of which:</i>								
- Taxes & social contributions	25.7	33.2	33. 6	33.1	33. 5	33.0	33. 1	32.7
- Other (residual)	9.5	2.9	3.2	2.8	3.1	2.7	2.9	2.8
<b>Expenditure</b>	34.1	35.0	34. 6	35.0	35. 4	35.4	35. 1	35.0
<i>of which:</i>								
- Primary expenditure	33.1	33.9	33. 6	34.0	34. 3	34.3	34. 1	34.0
<i>of which:</i>								
Consumption	15.9	16.1	15. 8	16.3	15. 6	16.4	15. 6	15.6
Transfers other than in kind & subsidies	10.2	10.6	10. 1	10.5	10. 7	10.4	10. 6	10.6
Gross fixed capital formation	3.2	3.3	3.6	3.5	3.8	3.7	3.8	3.8
Other (residual)	3.9	3.9	4.1	3.7	4.1	3.8	4.0	3.9
- Interest expenditure	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.0
<b>General government balance (GGB)</b>	1.1	1.2	2.3	0.9	1.2	0.4	0.9	0.6
<b>Primary balance</b>	2.1	2.2	3.3	1.9	2.3	1.4	1.9	1.6
One-offs <sup>2</sup>	-0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0
<b>GGB excl. one-offs</b>	1.4	1.2	2.2	0.9	1.2	0.4	0.9	0.6
<i>Notes:</i>								
<sup>1</sup> On a no-policy change basis.								
<sup>2</sup> One-off and other temporary measures.								
<i>Source:</i>								
<i>Commission services' autumn 2006 economic forecasts (COM); stability programme update (SP); Commission services' calculations</i>								

Ireland's overall recent track record should also be taken into account in assessing these risks. Figure 7 (Section 2.4) showed government balance projections in successive stability programmes compared with latest outturn data. Recent programmes (from 2003 onwards) have generally been "outperformed" at the level of the overall net lending balance, with further analysis indicating that a greater proportion of this has resulted from the revenue side, and rather less from expenditure (through a mixture of shortfalls against planned expenditure and the denominator effect of higher than expected nominal growth). This picture might suggest a prudent bias in preparing the programmes, and would be consistent with the incorporation of budgetary contingency provisions on the revenue side. Looking further back in Figure 7, however, suggests a more nuanced impression overall of programmes having been prepared on the basis of being to a greater or lesser degree adaptive to recent outturns, leading to conservative projections in periods of sustained growth but, equally, a tendency to extrapolate from currently strong

financial circumstances (the clearest example of the latter being the 2000 programme). Recent programmes may thus be less informative in the context of any sharp downward adjustment going forward, for which experience at the beginning of the decade may serve as a cautious example of how quickly revenue projections may need to be revised.

**Table 10: Assessment of tax projections**

	2007			2008			2009
	SP	COM	OECD <sup>3</sup>	SP	COM <sup>1</sup>	OECD <sup>3</sup>	SP
Change in tax-to-GDP ratio (total taxes)	-0.1	-0.1	0.3	-0.4	-0.1	0.3	-0.4
Difference (SP – COM)	0.0	/		-0.3	/	/	/
Of which <sup>2</sup> :							
- discretionary and elasticity component	-0.3	/		-0.2	/	/	/
- composition component	0.3	/		-0.1	/	/	/
Difference (COM - OECD)	/	-0.4		/	-0.4		/
Of which <sup>2</sup> :							
- discretionary and elasticity component	/	-0.8		/	-0.5		/
- composition component	/	0.6		/	0.3		/
p.m.: Elasticity to GDP	1.0	1.0	1.1	0.8	1.0	1.1	0.8

Notes:

<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.

Source:

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

A final specific risk factor to be mentioned is Ireland's reliance, in the context of its high investment levels, on an unusually large number of public-private partnership schemes (PPPs). According to the OECD, the government's target that around 13% of capital spending in the 2006-2010 period should be delivered by PPPs would make Ireland's PPP programme the largest by far in relation to national income among OECD members, with road projects accounting for a major share<sup>27</sup>. There is no obvious way of evaluating such risks (that these may be inadequately transferred to the private sector, with the government intervening in the event of default), though they must be non-negative.

Evaluating these different factors into an overall assessment of budgetary risks during the programme period is challenging. Clearly some operate in different directions and some are independent of others, while others interact and might therefore possibly cumulate. Perhaps the most difficult issue is that a possible hard landing in asset markets, inherently unforecastable, which could cumulatively reinforce downside outcomes in demand and activity, may not be the most likely outturn but could, were it to materialise, be very severe in its budgetary consequences. At the present juncture, the overall balance of budgetary risks seems neutral to somewhat on the upside in the short term, and roughly neutral thereafter, but with a non-negligible risk carrying a very large downside potential.

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

Table 11 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

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<sup>27</sup> See the discussion in the OECD (2006), *op. cit.* Ireland's PPP programme is about proportionately three times that of the United Kingdom, for example.

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 11: Overview of compliance with the Stability and Growth Pact**

	Based on programme <sup>3</sup> (with targets taken at face value)	Assessment (taking into account risks to targets)
• Safety margin against breaching 3% of GDP deficit limit <sup>1</sup>	throughout programme period	throughout programme period
• Achievement of the MTO	throughout programme period	throughout programme period
• Fiscal stance in line with Pact <sup>2</sup> ?	risk that it may not (2007); in line thereafter	risk that it may not (2007); in line thereafter
<u>Notes:</u>		
<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 1½% of GDP for Ireland). These benchmarks represent estimates and as such need to be interpreted with caution.		
<sup>2</sup> According to the Stability and Growth Pact, countries which have already achieved their MTO should avoid pro-cyclical fiscal policies in "good times".		
<sup>3</sup> Targets in structural terms as recalculated by Commission services on the basis of the information in the programme.		
<u>Source:</u> <i>Commission services</i>		

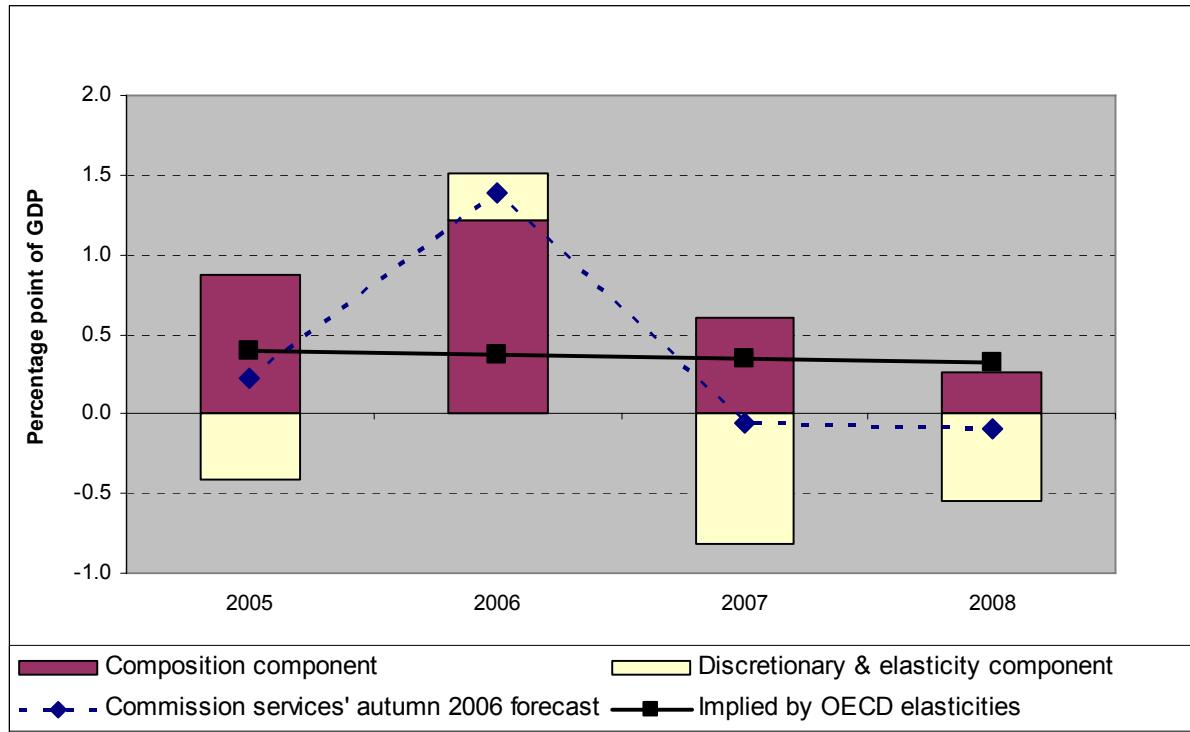
Based on the programme Ireland satisfies the requirements of the Stability of Growth Pact of providing a safety margin against breaching 3% of GDP deficit limit and projecting budgetary balances at or above its MTO throughout the programme period. The Commission services' assessment taking into account of risks to the budgetary targets supports this preliminary assessment (though underlines that downside risks are significant within the programme period). A provisional judgement is that the fiscal stance is also in line with the Stability and Growth Pact throughout the programme period in the sense that it is not clearly pro-cyclical in good economic times. Here, the key issue is whether the expansionary budget for 2007, as measured by the projected significant reduction in the cyclically-adjusted balance in the programme for that year, results in a pro-cyclical stance during "good times". Given the particular fragility of the reported potential output results for Ireland and the assessment of economic conditions made earlier, a starting point is that the 2007 fiscal stance should *not* be interpreted as an indication of *counter-cyclical* policies in *bad* economic times. Assessment based on tax elasticities alone points towards 2006 being potentially good times, with the momentum carrying over into 2007<sup>28</sup>. The judgement of the programme being in line with the Pact is thus critically subject to future reassessment of current economic conditions. Such a reassessment could quite possibly point towards 2006 and 2007 coming to merit the appellation of "good times", in which event the fiscal stance set in the budget for 2007 would appear in relation to the Pact in a less favourable light. There is, therefore, a distinct *risk* of policy being pro-cyclical in good times as regards 2007. Taking account of the situation that Ireland already over-achieves its MTO and has been growing rapidly for some time but exhibits signs of macroeconomic imbalances (notably its housing price and construction booms but also its large external account deficit), it may be appropriate

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<sup>28</sup> However, to the extent that the substantial boost to revenues between 2005 and 2006 can be considered partly linked to an asset price cycle independent of the conventional economic cycle, the conclusion of there being "good times" in the Pact sense is weakened.

for the Irish authorities to exercise a particular degree of caution going forward. This judgement is reinforced when account is also taken of longer-term sustainability considerations (Section 6). It may therefore not be prudent on current prospects to envisage discretionary changes in the fiscal stance being carried forward from 2008 much beyond changes to tax and benefit systems in lieu of indexation, and in particular to avoid taking on significant new expenditure commitments, unless on a funded basis taking account of adjustments in the public finances as a whole.

**Figure 9: 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' 2006 autumn 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>29</sup> The reform of the Stability and Growth Pact has increased the attention given 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 stability programmes targets, compares them with the Commission services' forecasts and assesses the associated risks. A second part looks into the government debt from a longer-term perspective with the aim of assessing the long-term sustainability of public finances.

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

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

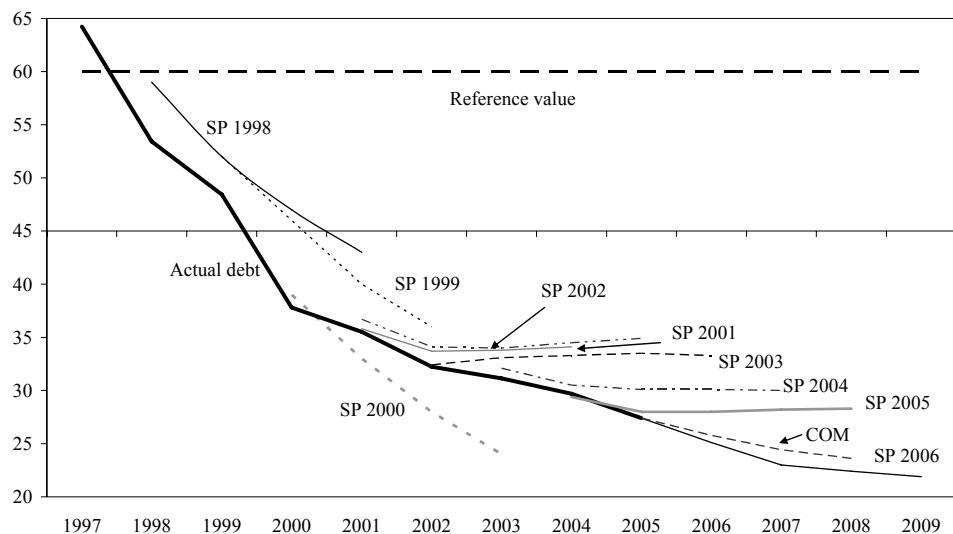
The programme estimates the gross debt-to-GDP ratio would have fallen to around 25% at end-2006 (end-2005: 27½%); when account is taken of the build-up of assets in the National Pensions Reserve Fund (NPRF), the net debt-to-GDP ratio is estimated by the programme to have ended the year at around 15%. The estimated gross debt outturn compares with a ratio of 28% in the previous update. Such an outturn for the debt ratio extends the experience of recent years in that debt projections in previous years' programmes have been regularly undershot, with more rapid debt-ratio reductions than expected (experience over the run of stability programmes is shown in Figure 10; with the only exception to successive undershooting being the 2001/2002 programmes). The result is unsurprising, given the record of both government balances and nominal GDP growth, driving forces in debt dynamics, both having in turn both been regularly stronger than in prior programme projections.

Looking ahead, the projected evolution of the gross debt ratio mirrors the projections of reduced surpluses and slower nominal GDP growth in continuing to decline, but at a slower pace, closing at the end of the programme period at around 22%. The profile in the Commission services' autumn forecast, pre-dating awareness of the exceptional surplus result for 2006, is similar but unsurprisingly at a higher level.

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<sup>29</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", in European Commission, Directorate-General for Economic and Financial Affairs (2005), "Public Finances in EMU 2005", chapter II.2.2 , *European Economy* No. 3.

**Figure 10: Debt projections in successive stability programmes (% of GDP)**



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

The programme does not assess the past evolution or future prospects for the net debt ratio. As indicated above, however, this is significantly lower for Ireland given the existence and investment policies (oriented towards private sector assets) of the intra-general government NPRF, the public pension pre-funding vehicle which by statute is transferred 1% of GNP each year. At end-2005 the NPRF held assets of €15.4 billion (9.6% of GDP), with just 12% of these in government bonds; at the end of the third quarter of 2006 the fund's value had risen to €17.6 billion (approaching 10% of estimated 2006 GDP).<sup>30</sup>

**Table 12: Debt dynamics**

(% of GDP)	average 2000-04	2005	2006		2007		2008		2009	
			COM	SP	COM	SP	COM	SP	SP	SP
<b>Gross debt ratio<sup>1</sup></b>	<b>33.3</b>	<b>27.4</b>	<b>25.8</b>	<b>25.1</b>	<b>24.4</b>	<b>23.0</b>	<b>23.6</b>	<b>22.4</b>	<b>21.9</b>	
Change in the ratio	-3.7	-2.3	-1.6	-2.3	-1.4	-2.1	-0.8	-0.6	-0.5	
<i>Contributions<sup>2</sup>:</i>										
Primary balance	-2.7	-2.1	-2.2	-3.3	-1.9	-2.3	-1.4	-1.9	-1.6	
"Snow-ball" effect	-2.2	-1.5	-1.0	-1.3	-1.0	-0.8	-0.5	-0.6	-0.4	
<i>Of which:</i>										
Interest expenditure	1.4	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.0	
Growth effect	-2.1	-1.5	-1.3	-1.4	-1.3	-1.2	-1.0	-1.0	-0.9	
Inflation effect	-1.5	-1.0	-0.7	-0.9	-0.8	-0.7	-0.6	-0.6	-0.6	
Stock-flow adjustment	1.2	1.3	1.6	2.3	1.5	1.0	1.1	1.9	1.5	
<i>Of which:</i>										
Cash/accruals diff.	0.2	-0.4								
Acc. financial assets	0.9	1.7								
<i>Privatisation</i>	-0.5	0.0								
Val. effect & residual	0.1	0.0								

<sup>30</sup> National Pensions Reserve Fund Commission (NPRFC), *Annual Report and Financial Statements 2005* and NPRFC press release.

Notes:

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

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

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

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

Source:

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

### 5.1.2. Assessment

Risks to the surplus projections and macroeconomic prospects have been discussed above and carry over *pro tanto* to their role in debt dynamics during the programme period (thus there should be a denominator effect in tending to produce lower debt ratios than those projected in the programme from the likelihood of a higher nominal GDP outturn for 2006 and this effect carrying through into 2007). Risks associated with public-private partnerships (PPPs) were also referred to above. Outside these factors, there seems no reason to take particular separate issue with the general profile for the gross debt ratio projected in the programme. Financial risks associated with the composition and currency denomination of the debt are *de minimis*: Ireland enjoys the highest international credit ratings, while virtually all debt is denominated or swapped into euro; by far the greater proportion is foreign-owned (contrasting with the position at the introduction of the euro), with virtually all net debt issuance absorbed overseas at benchmark rates; in 2005 the duration of the national debt increased from 5.63 to 5.83 years<sup>31</sup>.

As stated above, there is little information on net debt in the programme. Given the recent performance of financial asset markets, there seems reason to suppose that gross assets and thus net debt might have ended the year in a stronger position than assumed in the programme, though the extent to which this carries forward is evidently unpredictable.

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

The issue of long-term sustainability is a multi-faceted one. It involves avoiding imposing an excessive burden on future generations and ensuring the country's capacity to appropriately adjust budgetary policy in the medium and long run.<sup>32</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

<sup>31</sup> National Treasury Management Agency, *Report and Accounts 2005*. The national debt is the principal component of general government debt though excludes, for example, local government debt.

<sup>32</sup> For a detailed analysis of long-term sustainability issues, see European Commission, Directorate-General for Economic and Financial Affairs (2006) “The Long Term Sustainability of Public Finances - A report by the Commission services”, *European Economy* No. 4 (hereinafter Sustainability Report).

populations, should be covered by the discounted value of future government revenue. If current policies ensure that the intertemporal budget constraint is fulfilled, current policies are sustainable.

The approach adopted by the Commission services and the Ageing Working Group of the Economic Policy Committee (EPC) is to project the debt, and to calculate the associated sustainability indicators (see Box 3), on the basis of two different scenarios. The first scenario assumes that the structural primary balance will remain unchanged from 2006 through 2009, the final year of the stability programme; it is called the “2006 scenario”. Debt projections in this scenario start in 2007. The second scenario assumes that the macroeconomic and budgetary plans until 2009 provided in the stability programme will be fully respected. This is the “programme scenario”. Debt and primary balance projections in this scenario start in 2010. Both projections assume the absence of stock-flow adjustments. In addition to this quantitative analysis, other relevant factors are taken into account which allows to better qualify the assessment with regard to where the main risks are likely to stem from and to reach an overall assessment.

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

Table 13 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>33</sup>. Non age-related primary expenditure and revenue is assumed to remain constant as a share of GDP.

**Table 13: Long-term age-related expenditure: main projections**

(% of GDP)	2004	2010	2020	2030	2040	2050	changes
<b>Total age-related spending</b>	15.5	15.4	17.1	18.8	20.7	23.3	7.8
Pensions	4.7	5.2	6.5	7.9	9.3	11.1	6.4
Healthcare	5.3	5.5	5.9	6.4	6.9	7.3	2.0
Long-term care	0.6	0.6	0.6	0.7	0.9	1.2	0.6
Education	4.1	3.5	3.4	3.2	3.0	3.1	-1.0
Unemployment benefits	0.7	0.6	0.6	0.6	0.6	0.6	-0.2

*Source: Economic Policy Committee and Commission services.*

The projected increase in age-related spending in Ireland is above the EU average, rising by 7.8 p.p. of GDP between 2004 and 2050. This is particularly due to pension expenditure, projected to increase more than on average in the EU, by 6.4 p.p. of GDP. The increase in health-care expenditure is projected to be 2.0 p.p. of GDP, also above the EU average. For long-term care, the projected increase of 0.6 p.p. of GDP up to 2050 is slightly below the EU average.

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

**Table 14: Sustainability indicators and the required primary balance**

<sup>33</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, Directorate-General for Economic and Financial Affairs (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).

	2006 scenario			Programme scenario		
	S1	S2	RPB	S1	S2	RPB
Value of which:	-1.2	2.4	5.7	0.0	3.6	5.7
Initial budgetary position	-3.7	-3.6	-	-2.6	-2.5	-
Debt requirement in 2050	-1.0	-	-	-0.9	-	-
Future changes in budgetary position	3.5	6.0	-	3.5	6.0	-

*Source: Commission services.*

### Box 3 – Sustainability indicators\*

- The **sustainability gap S1** shows the permanent budgetary adjustment (often presented as an increase in the tax burden\*\*) required to reach a debt ratio in 2050 of 60% of GDP.
- The **sustainability gap S2**, shows the permanent budgetary adjustment that guarantees the respect of the intertemporal budget constraint of the government. In order to estimate S2, the revenue and expenditure ratios (age-related and non age-related) after 2050 are assumed to remain constant at the 2050 level.
- The sustainability indicators can be decomposed into the\*\*\*: (i) **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 shows the sustainability indicators for the two scenarios. In the “2006 scenario”, the sustainability gap (S2) which satisfies the intertemporal budget constraint would be 2.4% of GDP. Compared with the results of the Commission's Sustainability Report, the sustainability gaps are lower in the present assessment, by almost ½% of GDP. This is mainly due to a higher structural primary balance in 2006 (3.7% of GDP) compared to the structural primary balance in 2005 estimated in spring 2006 (3.1% of GDP) that was used in the Sustainability Report.

The initial budgetary position contributes significantly to offset part of the impact of the increase in age-related expenditure up to 2050. The budgetary plans in the programme imply a weakening of the structural balance between 2006 and 2009, with similar developments for the structural primary balance. The estimated reduction in the structural primary balance over the programme period has a negative impact on the

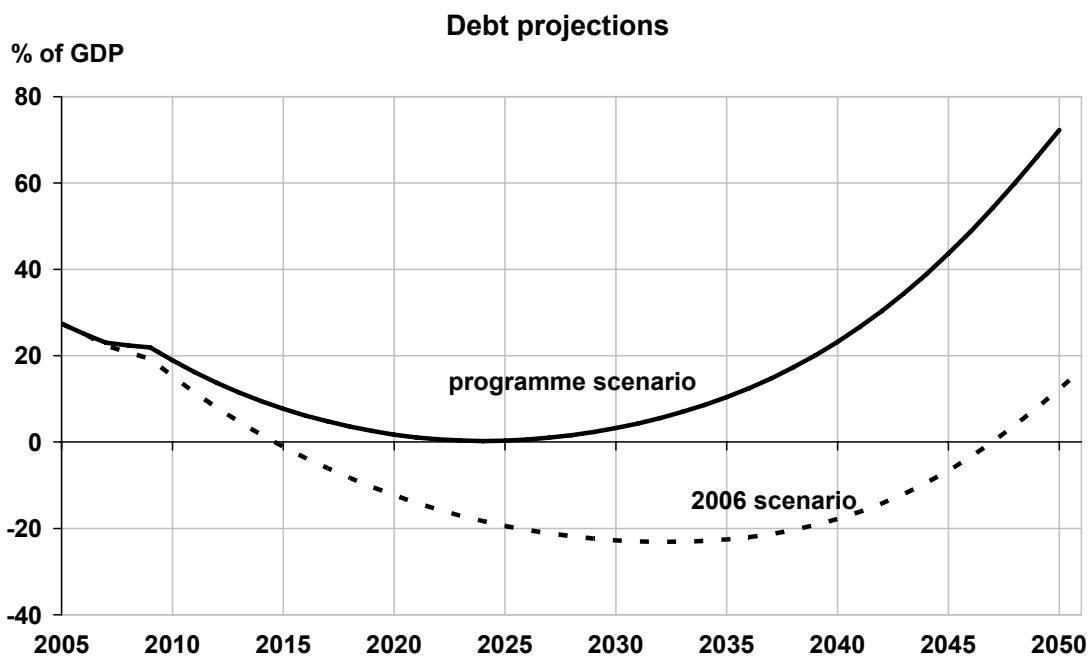
sustainability gaps, which increase by about 1½% of GDP, and shows the importance of maintaining a strong structural budgetary position to contain risks to the sustainability of public finances. According to both sustainability gaps, the long-term budgetary impact of ageing is high.

The required primary balance (RPB) is 5.7% of GDP, higher than the structural primary balance of about 2½% of GDP in the last year of the programme period.

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 11.

The gross debt ratio is currently well below the 60% of GDP reference value, estimated in the programme at just below 30% of GDP in 2006. The gross debt-to-GDP ratio is projected to remain below 60% of GDP reference value in the ‘2006’ scenario until the 2040s, being on an increasing path from the mid-2030s onwards. In the ‘programme’ scenario, the debt/GDP ratio would be on an upward path sooner, reflecting the weaker budgetary position at the end of the programme period in 2009, and it would rise beyond the reference value towards 2050.<sup>34</sup>

**Figure 11: Long-term projections for the government debt ratio**



Note: The government debt ratio is usually compiled in gross terms: that is, assets are not netted out from government liabilities. Therefore, gross debt can never be negative. In this chart, the negative values for the debt ratio should be understood as accumulation of financial assets. This issue has no implications on the conclusions drawn from the sustainability assessment.

Source: Commission services

<sup>34</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.

### 5.2.2. Additional factors

To reach an overall assessment of the sustainability of public finances, other relevant issues allowing a fuller assessment should also be considered.

First, a wide range of initiatives are being undertaken in Ireland to take into account long-term spending pressures in the field of pension policy while ensuring future pension adequacy. In October 2005 the Pensions Board launched the *National Pensions Review*, covering overall pension arrangements.<sup>35</sup> The Review raised a number of issues, among others the significant predicted increase in the annual costs of social welfare and public service pensions and the concerns that supplementary pension coverage was insufficient. Against that background, and in the context of the planned social partnership agreement, the Government committed itself to the early publication of a pensions policy green paper and the development of a framework for "*comprehensively addressing the pensions agenda over the longer-term*".<sup>36</sup>

Second, to pre-fund part of the financing of future government spending pressures, assets are being accumulated in the National Pension Reserve Fund (NPRF), which reached almost 10% of GDP in 2006 (see above, Section 5.1.1). The government is obliged by statute to pay into the NPRF a sum equivalent to 1% of GNP into the Fund each year until 2055, with drawdown prohibited prior to 2025. According to the programme update, NPRF assets are expected to reach 26% of GDP in 2030 and decline to just below 22% of GDP in 2050.<sup>37</sup>

### 5.2.3. Assessment

The long-term budgetary impact of ageing in Ireland is well above the EU average, mainly as a result of a relatively high increase in pension expenditure over the coming decades, influenced in part by the maturing of the pension system.

The initial budgetary position, stronger in 2006 compared with a year earlier, contributes significantly to ease the projected long-term budgetary impact of ageing populations, but is not sufficient to cover fully the substantial increase in expenditure due to the ageing of the population. Maintaining high primary surpluses over the medium term and implementing measures aimed at curbing the significant increase in age-related expenditures would, as recognised in the programme, contribute to reducing risks to the sustainability of public finances.

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

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<sup>35</sup> See Pensions Board (2005), "The National Pensions Review", October, available from: <http://www.pensionsboard.ie>. The Pensions Board is a statutory body set up to monitor and supervise operation of the 1990 Pensions Act. The Board also advises the Minister for Social and Family Affairs on pension matters generally.

<sup>36</sup> See Government of Ireland, Prime Minister's Department (2006), "Towards 2016 - Ten-Year Framework Social Partnership Agreement 2006-2015". Available from: <http://www.taoiseach.gov.ie/index.asp?locID=181&docID=2755>.

<sup>37</sup> For further analysis of the NPRF and its impact on long-term sustainability, see European Commission, Directorate-General for Economic and Financial Affairs (2006), "Public Finances in EMU 2006", *European Economy*, No. 3, pp. 234-5.

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

Chapters 5 and 7 of stability programme give an overview of recent and in-progress measures to improve the quality of the public finances on both revenue and expenditure sides, with the latter chapter focusing more particularly on institutional reforms. As regards overall quality aspects, a strong focus is on moves to strengthen the alignment of the public finances with their role in complementing the supply-side strengths of the economy at large, thus, for example, reinforcing employment and enterprise incentives of the tax system and making up the acknowledged infrastructure backlogs through maintaining a high rate of government capital expenditure. Other features focused upon are the progress in the phased removal of tax reliefs considered to have outlived their usefulness (already announced in the budget for 2006), and extra expenditure allocations in the budget for 2007 government priority areas of health, education and social welfare.

The information provided on institutional public finance reform includes much that has been announced previously, but includes a useful and encouraging assessment of progress in implementation, even if many reforms are still relatively recent and are still in the progress of being more finely honed. The following elements seems particularly worthy of mention: more extensive intra-year planning (profiling) and intra-government reporting by departments of annual expenditure; a general "value for money" framework under several initiatives envisaged by the government to contribute towards more efficient public resource allocation, management and public accountability, including revised guidelines for capital expenditure appraisal and central expenditure evaluation by the Department of Finance; reform of the budgetary and estimates process, including the introduction from October 2006 of a "pre-budget outlook" published by the same Department; general modernisation of the public service, including more open recruitment of senior positions and further decentralisation away from Dublin towards cheaper and less congested locations.

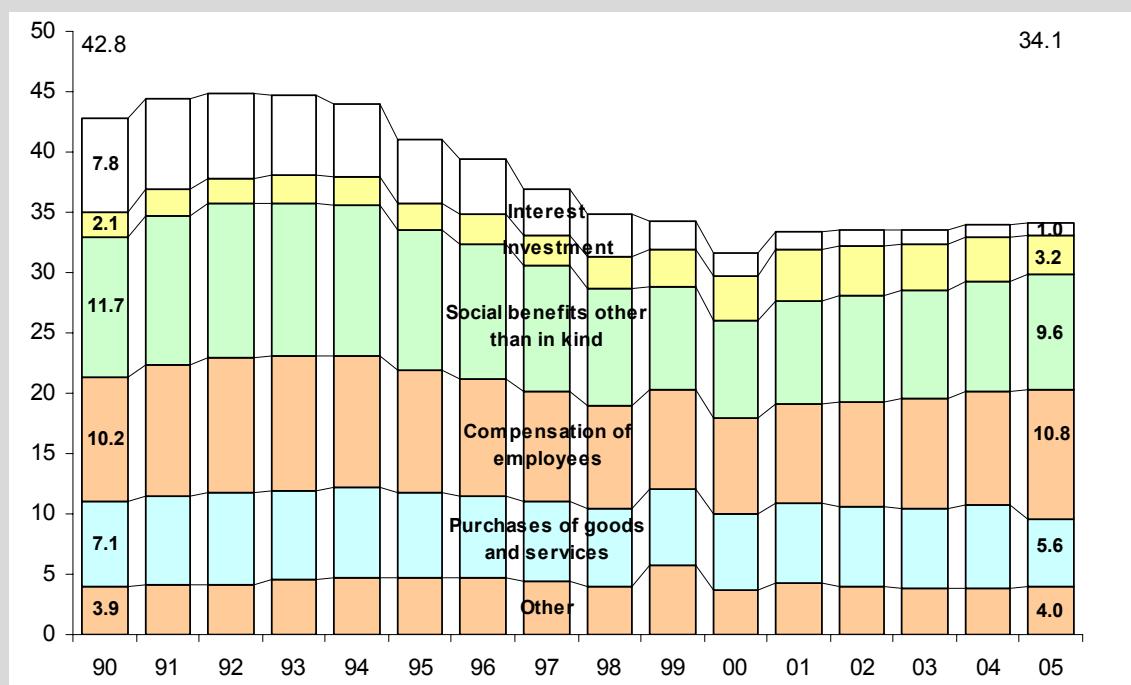
All these initiatives seem creditable and potentially to bring important improvements to both the government sector and economy at large. The programme notes, for example, that expenditure in recent budget years is being controlled within plan and that the implementation of public sector modernisation is subject to a process of verification as an element of public sector pay arrangements (see Section 7).

The different initiatives to increase efficiency in appraising and managing public expenditure is particularly important, given the assessment that this is a key challenge for Ireland (Section 2.5). The focus on the need for such efficiency, including the careful prioritisation of investment and other growth-promoting expenditure, takes into account both the very high level of public investment spending in Ireland and the comparatively rapid planned increases in current expenditure categories. Implementation of the new National development Plan will therefore be important in carrying this process forward. On the current expenditure side it is still unclear to what degree multi-annual expenditure planning, which exists at least in the form of budget estimates covering the period three years ahead (coincident with the stability programme period), is binding or effective in anchoring the budgetary process, and information on measures beyond the budget year is thin. There is a possible role here for developing the part played by the new pre-budget outlook, which in its initial version is rather lightweight.

#### Box 4: The level and composition of government expenditure in Ireland since 1990

General government expenditure in Ireland was around 34% of GDP in 2005, down by around 9 percentage points of GDP since the early 1990s. According to the economic classification of expenditures (see below), discussed in more detail for data up to 2002 in the Commission services' technical assessment of the previous update, the main expenditure-reducing factor during the period was a clear fall in interest expenditure, which, given the extent to which the debt ratio has already been reduced and the present low level of global interest rates, cannot be expected to continue to any significant further degree (rather, the build up of gross financial assets will impact on the revenue side of the public accounts). The reduction in interest rates has created room for an increased ratio of investment expenditure over the period as a whole, though in 2005 the ratio fell with shortfalls in planned expenditure. Other notable features of the 2005 data are an increased share of spending on employee compensation as public sector employees gained large catch-up wage awards, and a reduced ratio of current procurement expenditure.

**Figure 12: The evolution of public expenditure (economic classification) (% of GDP)**

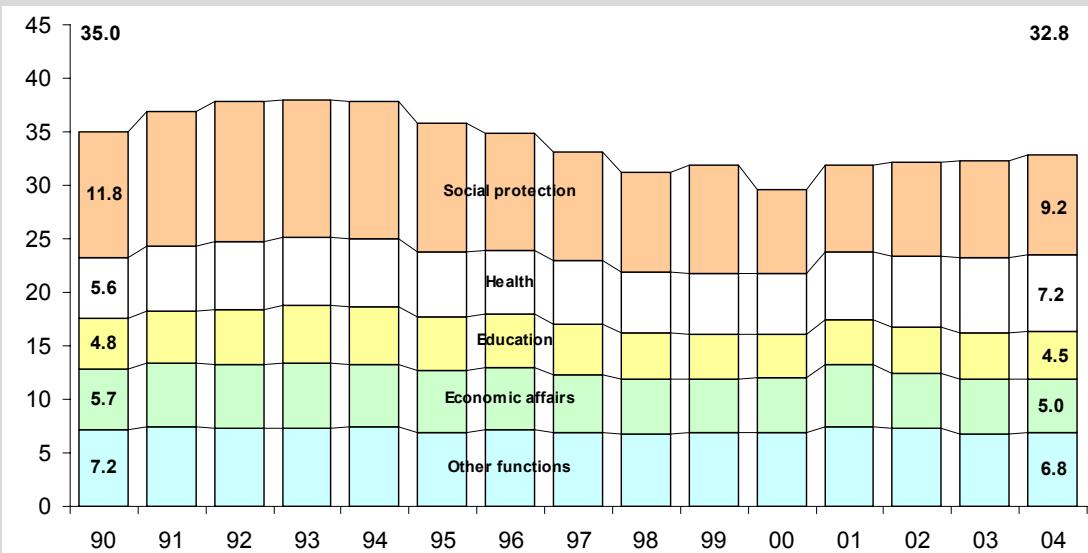


Note: "Other" includes subsidies and other current and capital transfers.

Source: Commission services

Primary expenditure in Ireland classified by function for years up to 2004 is shown in Figure 13. The main features in terms of evolution of different categories during the period are the changes in the ratios of spending on health and social protection. Social protection expenditure relative to GDP fell by around a third during the 1990s through around 8% in 2000 as unemployment fell in response to rapid economic growth; since then there has been a slight increase as benefits, including on public pensions, have increased significantly in real terms. Health expenditure is perhaps remarkable as, unlike most Member States, having *not* increased significantly until after the turn of the decade, though there have subsequently been more significant real increases as demand, provision and public sector pay levels have risen. The latest programme does not include details of more recent outturns nor of how the functional distribution of expenditure might be expected to evolve during the programme period.

**Figure 13: The evolution of primary public expenditure (functional classification) (% of GDP)**



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

Source: Commission services

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

Submission of the updated programme follows that of Ireland's first implementation report on its progress in pursuing its National Reform Programme (NRP) as part of the renewed Lisbon strategy (for which report Box 5 gives a summary of the Commission's assessment). The stability programme does not, however, give detailed explicit consideration to its relationship to the NRP, in terms of showing that measures embodied in the NRP are fully taken account of in the programme or that public finance measures in the programme are consistent with the NRP. The stability programme does not therefore contain either a qualitative assessment of the overall impact of the National Reform Programme within the medium term fiscal strategy or systematic information on the direct budgetary costs (or savings) associated with the main reforms envisaged in the NRP. This absence of detail should *not*, however, be interpreted as evidence for any inconsistency, and there is much in the programme to confirm that reform measures described in each programme as being mutually in line.

In particular the following can be highlighted from information provided in the stability programme. First, the stability programme emphasises the government's commitment to an employment-friendly economic environment by maintaining a low overall tax burden and focusing resources on lower income groups, and links this explicitly with the Lisbon strategy; the 2007 budget measures are consistent with this approach. Secondly, the measures to embody better strategic management of public expenditure (Section 6) are in the direction of redirecting resources towards more growth-enhancing categories, and as the programme points out are consistent with (Guideline 3 of) the 2005-08 Broad Economic Policy Guidelines (BEPGs). Thirdly, the high rate of public capital formation and the efforts to prioritise such expenditure are a particular case of the same orientation towards facilitating growth. Finally, it should be noted that Ireland's social partnership

process closely underlies its NRP, and the latest agreement in that process, reached in mid-2006 (*Towards 2016*<sup>38</sup>), is the basis for much of Ireland's first implementation report. In that context, the stability programme embodies the staggered 27-month public sector pay agreement and an associated verification process for public sector management modernisation which were reached as part of the social partnership process. More generally, in Ireland's case its implementation report and its latest social partnership agreement should be seen as associated, and the report cross-references extensively to the agreement. In this respect it is noteworthy that the agreement is explicit in its commitment to the objectives of public finance sustainability and, within this framework, improving the growth-enhancing efficiency of public expenditure including through maintaining a significant level of infrastructure spending.

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

The implementation report of the National Reform Programme of Ireland, provided in the context of the renewed Lisbon strategy for growth and jobs, was submitted on 18 October 2006. Ireland's 2005-2008 National Reform Programme (NRP) identified as the overall key challenge to sustain and improve its recent good economic performance, based on taking advantage of the opportunities presented by globalisation and the internal market. The Commission's assessment of this report, which was adopted on 12 December 2006 as part of its Annual Progress Report, can be summarised as follows.

Ireland is making very good progress in the implementation of its National Reform Programme. Furthermore, governance of the Growth and Jobs Strategy has gained political visibility, notably due to the recently concluded social partnership agreement, "Towards 2016".

Among the strengths of the Irish National Reform Programme and its implementation are: the recently adopted Science, Technology and Innovation Strategy 2007-2013 and the substantial increase of public investment in R&D; recognition of the need to prioritise public investment in infrastructure and other growth-promoting expenditure; measures to address early school leaving and enhance skills, such as the welcome commitment to develop by 2007 a long-term national skills strategy.

It will be important for Ireland over the period of the National Reform Programme to focus on: speeding up progress in formulating concrete measures to reform pension arrangements; further emission reduction measures; accelerating progress in increasing labour market participation, including by establishing a comprehensive childcare infrastructure, further developing a cohesive policy towards inward migration and placing a particular emphasis on support to older and low-skilled workers. An intermediate target for R&D investment should be set for 2010 and developments in the housing market, which may affect medium-term growth prospects, should be carefully monitored.

Table 15 provides an overview of whether the strategy and policy measures in the programme are consistent with the broad economic policy guidelines in the area of public finances, which are included in the integrated guidelines for the period 2005-2008. The assessment of guideline 1 corresponds to the evaluation in Section 4.4 above, whereas that of the pace of debt reduction in guideline 2 is not relevant for Ireland. Information on the different elements covered by the remaining guidelines in the table can be found in Sections 5.2 and 6.

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<sup>38</sup> Government of Ireland, Prime Minister's Department (2006), *op. cit.*

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

**Table 15: 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 healthcare 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			
<u>Notes:</u>				
<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.				
<u>Source:</u> <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 ±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
		Level	rate of change				
<b>1. Real GDP</b>	B1*g	155,723	5.5	5.4	5.3	4.6	4.1
<b>2. Nominal GDP</b>	B1*g	161,163	9.2	9.0	8.1	7.6	6.8
<b>Components of real GDP</b>							
<b>3. Private consumption expenditure</b>	P.3	73,282	6.6	6.5	7.3	4.8	4.1
<b>4. Government consumption expenditure</b>	P.3	21,751	4.6	3.6	3.7	3.5	3.4
<b>5. Gross fixed capital formation</b>	P.51	40,869	12.8	6.8	5.4	3.8	2.5
<b>6. Changes in inventories and net acquisition of valuables (% of GDP)</b>	P.52 + P.53	166	0.1	0.2	0.2	0.2	0.2
<b>7. Exports of goods and services</b>	P.6	128,861	3.9	4.8	4.9	4.6	4.5
<b>8. Imports of goods and services</b>	P.7	108,710	6.5	5.9	6.2	4.3	3.9
<b>Contributions to real GDP growth*</b>							
<b>9. Final domestic demand</b>		-	6.8	5.4	5.4	3.9	3.1
<b>10. Changes in inventories and net acquisition of valuables</b>	P.52 + P.53	-	-0.1	0.2	0.2	0.2	0.1
<b>11. External balance of goods and services</b>	B.11	-	-1.3	-0.2	-0.3	0.6	0.9

*Notes (IE):*

\* Figures subject to rounding

**Table 1b. Price developments**

	ESA Code	2005	2005	2006	2007	2008	2009
		Level	rate of change				
<b>1. GDP deflator</b>			3.5	3.4	2.7	2.8	2.6
2. Private consumption deflator							
<b>3. HICP<sup>1</sup></b>			2.2	2.7	2.6	2.0	1.7
4. Public consumption deflator			2.5	4.0	4.1	2.4	2.0
5. Investment deflator							
<b>6. Export price deflator (goods and services)</b>			1.6	2.7	2.0	2.2	2.3
<b>7. Import price deflator (goods and services)</b>			1.7	2.8	2.1	1.8	1.8

<sup>1</sup> Optional for stability programmes.

**Table 1c. Labour market developments**

	ESA Code	2005	2005	2006	2007	2008	2009
		Level	rate of change				
<b>1. Employment, persons<sup>1</sup></b>		1,952,000	4.7	4.4	3.5	2.1	1.6
2. Employment, hours worked <sup>2</sup>							
<b>3. Unemployment rate (%)<sup>3</sup></b>		89,000	4.3	4.4	4.4	4.5	4.6
<b>4. Labour productivity, persons<sup>4</sup></b>			0.8	0.8	1.7	2.5	2.5
5. Labour productivity, hours worked <sup>5</sup>							
<b>6. Compensation of employees</b>	D.1						

<sup>1</sup> Occupied population, domestic concept national accounts definition.

<sup>2</sup> National accounts definition.

<sup>3</sup> Harmonised definition, Eurostat; levels.

<sup>4</sup> Real GDP per person employed.

<sup>5</sup> Real GDP per hour worked.

**Table 1d. Sectoral balances**

% of GDP	ESA Code	2005	2006	2007	2008	2009
<b>1. Net lending/borrowing vis-à-vis rest of the world</b>	B.9	-2.6	-3.4	-4.3	-4.0	-3.5
<i>of which:</i>						
- Balance on goods and services						
- Balance of primary incomes and transfers						
- Capital account						
<b>2. Net lending/borrowing of the private sector</b>	B.9					
<b>3. Net lending/borrowing of general government</b>	EDP B.9	1.1	2.3	1.2	0.9	0.6
<b>4. Statistical discrepancy</b>		0.0				

**Table 2. General government budgetary prospects**

	ESA code	2005	2005	2006	2007	2008	2009
		Level	% of GDP				
<b>Net lending (EDP B.9) by sub-sector</b>							
<b>1. General government</b>	S.13	1,745	1.1	2.3	1.2	0.9	0.6
<b>2. Central government</b>	S.1311	966	0.6	2	1	0.7	0.5
<b>3. State government</b>	S.1312	-	-	-	-	-	-
<b>4. Local government</b>	S.1313	185	0.1	-0.1	-0.1	-0.1	-0.1
<b>5. Social security funds</b>	S.1314	594	0.4	0.4	0.3	0.3	0.2
<b>General government (S13)</b>							
<b>6. Total revenue</b>	TR	56,737	35.2	36.8	36.6	36	35.5
<b>7. Total expenditure</b>	TE <sup>1</sup>	54,992	34.1	34.6	35.4	35.1	35.0
<b>8. Net lending/borrowing</b>	EDP B.9	1,745	1.1	2.3	1.2	0.9	0.6
<b>9. Interest expenditure (incl. FISIM)</b>	EDP D.41 incl. FISIM	1,657	1.0	1.0	1.1	1.0	1.0
<b>p.m.: 9a. FISIM *</b>		-19	0.0	0.0	0.0	0.0	0.0
<b>10. Primary balance</b>	<sup>2</sup>	3,402	2.1	3.3	2.3	1.8	1.6
<b>Selected components of revenue</b>							
<b>11. Total taxes (11=11a+11b+11c)</b>		41,485	25.7	27.3	27.2	26.8	26.5
<b>11a. Taxes on production and imports</b>	D.2	21,492	13.3	14	14.1	14	13.9
<b>11b. Current taxes on income, wealth, etc</b>	D.5	19,743	12.3	13.1	12.9	12.6	12.4
<b>11c. Capital taxes</b>	D.91	250	0.2	0.2	0.2	0.2	0.2
<b>12. Social contributions</b>	D.61	9,969	6.2	6.3	6.3	6.3	6.2
<b>13. Property income</b>	D.4	1,724	1.1	1	1	1	0.9
<b>14. Other (14=15-(11+12+13))</b>		3,559	2.2	2.1	2.1	1.9	1.9
<b>15=6. Total revenue</b>	TR	56,737	35.2	36.8	36.6	36	35.5
<b>p.m.: Tax burden (D.2+D.5+D.61+D.91-D.995)<sup>3</sup> **</b>		51,890	32.2	33.9	33.7	33.3	33
<b>Selected components of expenditure</b>							
<b>16. Collective consumption</b>	P.32	8,693	5.4	5.4	5.3	5.3	5.3
<b>17. Total social transfers</b>	D.62+D.63	32,256	20.0	19.9	20.4	20.4	20.4
17a. Social transfers in kind ***	P.31=D.63	16,863	10.5	10.4	10.3	10.3	10.3
17b. Social transfers other than in kind	D.62	15,393	9.6	9.5	10.1	10.0	10.0
<b>18.=9. Interest expenditure (incl. FISIM)</b>	EDP D.41 incl. FISIM	1,657	1.0	1.0	1.1	1.0	1.0
<b>19. Subsidies</b>	D.3	925	0.6	0.6	0.6	0.6	0.6
<b>20. Gross fixed capital formation</b>	P.51	5,186	3.2	3.6	3.8	3.8	3.8
<b>21. Other (21=22-(16+17+18+19+20))</b>		6,275	3.9	4.1	4.1	4	3.9
<b>22=7. Total expenditure</b>	TE <sup>1</sup>	54,992	34.1	34.6	35.4	35.1	35.0
<b>p.m.: Compensation of employees</b>	D.1						

<sup>1</sup> Adjusted for the net flow of swap-related flows, so that TR-TE=EDP B.9.

<sup>2</sup>The primary balance is calculated as (EDP B.9, item 8) plus (EDP D.41 + FISIM recorded as intermediate consumption, item 9).

<sup>3</sup>Including those collected by the EU and including an adjustment for uncollected taxes and social contributions (D.995), if appropriate

*Notes (IE):*

\* Financial Intermediation Services Indirectly Measured (FISIM) measures the value added by financial institutions.

\*\* Total taxes plus Social Contributions plus taxes paid directly to EU.

\*\*\* Equal to ESA95 category Individual Consumption (P31) rather than ESA95 category Social Transfers in Kind (D63).

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

% of GDP	COFOG Code	2004	2009
1. General public services	1		
2. Defence	2		
3. Public order and safety	3		
4. Economic affairs	4		
5. Environmental protection	5		
6. Housing and community amenities	6		
7. Health	7		
8. Recreation, culture and religion	8		
9. Education	9		
10. Social protection	10		
11. Total expenditure (=item 7=26 in Table 2)	TE <sup>1</sup>		35.0

<sup>1</sup>Adjusted for the net flow of swap-related flows, so that TR-TE=EDP B.9.

**Table 4. General government debt developments**

% of GDP	2005	2006	2007	2008	2009
<b>1. Gross debt<sup>1</sup></b>	27.4	25.1	23.0	22.4	21.9
<b>2. Change in gross debt ratio</b>	-2.3	-2.3	-2.1	-0.6	-0.5
<b>3. Primary balance<sup>2</sup></b>	2.1	3.3	2.3	1.8	1.6
<b>4. Interest expenditure (incl. FISIM)<sup>3</sup></b>	1.0	1.0	1.1	1.0	1.0
<b>5. Stock-flow adjustment</b>	1.3	2.2	1	1.8	1.5
<i>of which:</i>					
- Differences between cash and accruals <sup>4</sup>					
- Net accumulation of financial assets <sup>5</sup>					
<i>of which:</i>					
- privatisation proceeds					
- Valuation effects and other <sup>6</sup>					
Nominal GDP	-2.5	-2.3	-1.9	-1.6	-1.4
Net receipts of Social Security Funds	1.2	1.5	1.4	1.4	1.3
Other factors influencing the debt ratio:					
Privatisation receipts	-	-0.1	-	-	-
Increase in local authorities debt	0.1	0.1	0.1	0.1	0.1
<b>p.m.: implicit interest rate on debt<sup>7</sup></b>	3.8	4.0	4.6	4.5	4.7
<b>Other relevant variables</b>					
<b>6. Liquid financial assets<sup>8</sup></b>					
<b>7. Net financial debt (7=1-6)</b>					

<sup>1</sup>As defined in Regulation 3605/93 (not an ESA concept).

<sup>2</sup>Cf. Item 10 in Table 2.

<sup>3</sup>Cf. Item 9 in Table 2.

<sup>4</sup>The differences concerning interest expenditure, other expenditure and revenue could be distinguished when relevant.

<sup>5</sup>Liquid assets, assets on third countries, government controlled enterprises and the difference between quoted and non-quoted assets could be distinguished when relevant.

<sup>6</sup>Changes due to exchange rate movements, and operation in secondary market could be distinguished when relevant.

<sup>7</sup>Proxyed by interest expenditure (incl. FISIM recorded as consumption) divided by the debt level of the previous year.

<sup>8</sup>AF1, AF2, AF3 (consolidated at market value), AF5 (if quoted in stock exchange; including mutual fund shares).

**Table 5. Cyclical developments**

% of GDP	ESA Code	2005	2006	2007	2008	2009
<b>1. Real GDP growth (%)</b>		5.5	5.4	5.3	4.6	4.1
<b>2. Net lending of general government</b>	EDP B.9	1.1	2.3	1.2	0.9	0.6
<b>3. Interest expenditure (incl. FISIM recorded as consumption)</b>	EDPD.41 incl. FISIM	1.0	1.0	1.1	1.0	1.0
<b>4. Potential GDP growth (%)</b>		6.1	6.2	5.7	5.1	4.5
contributions:						
- labour		1.9	2.1	1.8	1.3	0.7
- capital		2.1	2.1	2.1	2.1	2.1
- total factor productivity		2.1	1.9	1.8	1.8	1.8
<b>5. Output gap (% of potential output)</b>		-0.4	-1.1	-1.5	-2.0	-2.4
<b>6. Cyclical budgetary component</b>		-0.1	-0.4	-0.6	-0.8	-0.9
<b>7. Cyclically-adjusted balance (2-6)</b>		1.2	2.7	1.8	1.7	1.5
Change in CABB			1.5	-0.9	-0.1	-0.2
<b>8. Cyclically-adjusted primary balance (7-3)</b>		2.2	3.7	2.9	2.7	2.5
Change in CAPB			1.5	-0.8	-0.2	-0.2

*Note (IE):*

Figures may not be equal to totals due to rounding.

**Table 6. Divergence from previous update**

	ESA Code	2005	2006	2007	2008	2009
<b>Real GDP growth (%)</b>						
<b>Previous update</b>		4.6	4.8	5.0	4.8	n.a.
<b>Current update</b>		5.5	5.4	5.3	4.6	4.1
<b>Difference</b>		0.9	0.6	0.3	-0.2	n.a.
<b>General government net lending (% of GDP)</b>	EDP B.9					
<b>Previous update</b>		0.3	-0.6	-0.8	-0.8	n.a.
<b>Current update</b>		1.1	2.3	1.2	0.9	0.6
<b>Difference</b>		0.8	2.9	2.0	1.6	n.a.
<b>General government gross debt (% of GDP)</b>						
<b>Previous update</b>		28.0	28.0	28.2	28.3	n.a.
<b>Current update</b>		27.4	25.1	23.0	22.4	21.9
<b>Difference</b>		-0.6	-2.9	-5.2	-5.9	n.a.

**Table 7. Long-term sustainability of public finances \***

% of GDP	2000	2005	2010	2020	2030	2050
Total expenditure						
Of which: age-related expenditures	15.2	15.4	17.1	18.8	23.3	
Pension expenditure	4.6	5.2	6.5	7.9	11.1	
Social security pension	3.4	3.8	4.5	5.5	8.4	
Old-age and early pensions	2.3	2.5	3.3	4.2	7.1	
Other pensions (disability, survivors)	1.1	1.2	1.3	1.3	1.3	
Occupational pensions (if in general government)	1.2	1.4	2.0	2.4	2.7	
Health care	5.3	5.5	5.9	6.4	7.3	
Long-term care ( <i>this was earlier included in health care</i> )	0.6	0.6	0.6	0.7	1.2	
Education expenditure	4.0	3.5	3.4	3.2	3.1	
Other age-related expenditures **	0.7	0.6	0.6	0.6	0.6	
Interest expenditure						
Total revenue						
Of which: property income						
<i>of which:</i> from pensions contributions (or social contributions if appropriate)						
Pension reserve fund assets	8.0	11.1	18.1	26.0	21.9	
Of which: consolidated public pension fund assets (assets other than government liabilities)						
<b>Assumptions</b>						
Labour productivity growth (y-o-y %)		3.3	3.8	2.2	1.7	1.7
Real GDP growth (y-on-y %)		5.7	5.2	3.0	2.1	1.6
Participation rate males aged 20-64 (%)	86.2	87.3	88.4	88.1	88.3	
Participation rates females aged 20-64 (%)	64.5	68.5	73.3	75.3	75.6	
Total participation rates aged 20-64 (%)	75.4	77.9	80.9	81.7	82.0	
Unemployment rate aged 20-64 (%)	3.6	3.1	3.1	3.1	3.1	
Population aged 65+ over total population (%)	11.2	11.8	14.8	18.4	26.2	
Real interest rate (%)	-	3.0	3.0	3.0	3.0	3.0

*Notes (IE):*

\* Please refer to Annex 3 for the definition of pensions used in these projections. The methodology adopted when projecting forward the assets of the National Pensions Reserve Fund is also described in this Annex. Details of the underlying assumptions and the methodologies covering the remaining projection categories are set out, respectively, in the 2005 and 2006 publications of the EU Economic Policy Committee and the European Commission.

\*\* Unemployment benefit

**Table 8. Basic assumptions**

	2005	2006	2007	2008	2009
<b>Short-term interest rate<sup>1</sup> (annual average)</b>					
<b>Long-term interest rate (annual average)</b>					
<i>for countries in euro area or ERM II:</i>					
USD/€ exchange rate (annual average)		1.25	1.27	1.27	1.27
Nominal effective exchange rate		0.5	0.4	0.1	0.1
<i>for countries not in euro area or ERM II:</i>					
exchange rate vis-à-vis the € (annual average)	-	-	-	-	-
<b>World excluding EU, GDP growth</b>		5.7	5.2	5.2	5.2
<b>EU GDP growth</b>		2.8	2.4	2.4	2.4
<b>Growth of relevant foreign markets</b>		9.9	6.4	6.1	6.1
<b>World import volumes, excluding EU</b>		9.1	8.3	7.9	7.9
<b>Oil prices (Brent, USD/barrel)</b>		65.6	66.3	68.0	68.0

<sup>1</sup>If necessary, purely technical assumptions.

**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
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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		
<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		A series for GNP (a non-ESA95 concept) is added to Table 1a
<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		
Significant divergences between the national and the Commission services’ economic forecasts are explained <sup>2</sup> .		X	Assumes external environment of Commission services’ autumn 2006 forecast
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.			Not applicable
<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.			Not applicable
The budgetary targets are backed by an indication of the broad measures necessary to achieve them and an assessment of their quantitative effects on the general government balance is analysed.		X	Reduction in revenues/surpluses in 2008/09 not fully articulated
Information is provided on one-off and other temporary measures.	X		Information is solely backward-looking; there is no forward-looking information (or, however, any indication that such

<b>Guidelines in the code of conduct</b>	<b>Yes</b>	<b>No</b>	<b>Comments</b>
			one-off measures are significant)
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:	X		
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.			
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		
<u>Notes:</u>			
<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.			
<u>Source:</u> <i>Commission services</i>			



## 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.

### Ireland - Key economic indicators

	Averages			2003	2004	2005
	1996 – 2005	1996 – 2000	2001 – 2005			
<b>Economic activity</b>						
Real GDP (% change)	7.8	10.4	5.2	4.3	4.3	5.5
Private consumption (% change)	5.0	6.1	3.8	2.5	3.1	6.2
Government consumption (% change)	8.6	9.8	7.4	5.1	3.8	5.9
Investment (% change)	10.2	14.6	5.8	5.8	7.4	12.7
Exports (% change)	11.3	17.8	4.9	0.5	7.3	3.9
Imports (% change)	11.4	18.2	4.6	-1.2	8.7	6.5
Contributions to real GDP growth:						
<i>Domestic demand</i>	6.2	8.4	4.1	2.8	4.1	6.7
<i>Net exports</i>	1.6	2.0	1.1	1.5	0.3	-1.2
Output gap (% of potential GDP)	1.8	1.7	1.8	1.7	0.1	-0.5
<b>Prices and costs</b>						
HICP inflation (% change)	3.0	2.7	3.4	4.0	2.3	2.2
Unit labour costs (% change)	2.3	0.9	3.6	2.7	5.4	4.1
Labour productivity (% change)	3.3	4.4	2.3	2.3	1.2	0.9
Real unit labour costs (% change)	-1.4	-2.8	0.0	0.2	3.5	0.6
Comparative price levels (EUR25=100)	109.9	102.5	117.3	119.5	117.8	120.4
<b>Labour market</b>						
Employment (% change)	4.3	5.7	2.9	2.0	3.1	4.6
Employment (% of working age population)	64.5	61.6	67.4	66.8	67.5	69.0
Unemployment rate (% of labour force)	6.1	7.8	4.4	4.7	4.5	4.3
NAIRU (% of labour force)	6.2	8.1	4.2	4.1	3.9	3.9
Participation rate (% of working age population)	68.6	66.7	70.5	70.1	70.7	72.1
Working age population (% change)	2.0	1.9	2.1	1.9	2.0	2.4
<b>Competitiveness and external position</b>						
Real effective exchange rate (% change) (1)	0.9	-2.5	4.4	8.0	6.9	2.5
Export performance (% change) (2)	4.6	8.3	1.0	-2.5	-0.4	-1.6
External balance of g & s (% of GDP)	14.1	13.0	15.3	16.0	14.9	12.7
External balance (% of GDP)	-0.1	0.9	-1.2	0.0	-0.8	-3.0
FDI inflow (% of GDP)	n.a.	n.a.	5.2	14.5	-5.8	-15.6
<b>Public finances</b>						
Total expenditure (% of GDP)	34.5	35.4	33.7	33.5	34.0	34.1
Total revenue (% of GDP)	36.0	37.6	34.4	33.9	35.5	35.2
General government balance (% of GDP)	1.4	2.2	0.7	0.3	1.5	1.1
General government debt (% of GDP)	43.3	55.4	31.2	31.1	29.7	27.4
Structural budget balance (% of GDP) (3)	n.a.	n.a.	n.a.	-0.3	2.1	1.0
<b>Financial indicators (4)</b>						
Short term real interest rate (%) (5)	0.1	1.1	-0.8	-0.2	0.3	-1.3
Long term real interest rate (%) (5)	1.3	1.9	0.6	1.6	2.2	-0.2
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.

#### Notes:

(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

### Euro area - 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	1.7	1.8	1.2	1.4
Investment (% change)	2.6	4.3	1.0	1.0	2.2	2.5
Exports (% change)	5.8	8.1	3.5	1.1	6.8	4.3
Imports (% change)	5.9	8.4	3.4	3.1	6.7	5.3
Contributions to real GDP growth:						
<i>Domestic demand</i>	2.0	2.7	1.3	1.4	1.8	1.6
<i>Net exports</i>	0.1	0.1	0.1	-0.7	0.2	-0.2
Output gap (% of potential GDP)	-0.1	-0.1	0.0	-0.6	-0.5	-1.1
<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)	n.a.	n.a.	102.1	103.0	102.7	102.3
<b>Labour market</b>						
Employment (% change)	1.2	1.5	0.9	0.7	0.7	0.8
Employment (% of working age population)	63.7	62.0	65.4	65.4	65.6	65.8
Unemployment rate (% of labour force)	9.1	9.8	8.5	8.7	8.9	8.6
NAIRU (% of labour force)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Participation rate (% 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	0.5
<b>Competitiveness and external position</b>						
Real effective exchange rate (% change) (1)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Export performance (% change) (2)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
External balance of g & s (% of GDP)	1.9	1.7	2.0	2.1	2.1	1.5
External balance (% of GDP)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
FDI inflow (% of GDP)	2.4	2.5	2.2	1.9	1.1	
<b>Public finances</b>						
Total expenditure (% of GDP)	48.2	48.7	47.7	48.2	47.6	47.6
Total revenue (% of GDP)	45.8	46.5	45.1	45.1	44.8	45.1
General government balance (% of GDP)	-2.3	-2.1	-2.5	-3.1	-2.8	-2.4
General government debt (% of GDP)	70.9	72.5	69.3	69.3	69.8	70.8
Structural budget balance (% of GDP) (3)	n.a.	n.a.	n.a.	-3.2	-2.9	-2.0
<b>Financial indicators (4)</b>						
Short term real interest rate (%) (5)	1.7	2.7	0.7	0.2	0.2	0.3
Long term real interest rate (%) (5)	3.1	4.1	2.1	2.0	2.2	1.5
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.

Notes:

- (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*

## **ANNEX 5: ASSESSMENT OF TAX PROJECTIONS**

Ireland's overall recent track record should also be taken into account in assessing these risks. Figure 7 (Section 2.4) showed government balance projections in successive stability programmes compared with latest outturn data. Recent programmes (from 2003 onwards) have generally been "outperformed" at the level of the overall net lending balance, with further analysis indicating that a greater proportion of this has resulted from the revenue side, and rather less from expenditure (through a mixture of shortfalls against planned expenditure and the denominator effect of higher than expected nominal growth). This picture might suggest a prudent bias in preparing the programmes, and would be consistent with the incorporation of budgetary contingency provisions on the revenue side. Looking further back in Figure 7, however, suggests a more nuanced impression overall of programmes having been prepared on the basis of being to a greater or lesser degree adaptive to recent outturns, leading to conservative projections in periods of sustained growth but, equally, a tendency to extrapolate from currently strong financial circumstances (the clearest example of the latter being the 2000 programme). Recent programmes may thus be less informative in the context of any sharp downward adjustment going forward, for which experience at the beginning of the decade may serve as a cautious example of how quickly revenue projections may need to be revised.

Table 10 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>39</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>40</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:

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

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

<sup>39</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>40</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:  $\frac{\Delta T_i}{T_i} = \varepsilon_{T_i, B_i, ex ante} \frac{dB_i}{B_i} + \frac{OF_i}{T_i} = \varepsilon_{T_i, B_i, ex post} \frac{dB_i}{B_i}$ .

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

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
	SP	COM	OECD <sup>1</sup>	SP	COM <sup>2</sup>	OECD <sup>1</sup>	SP
<b>Taxes on production and imports:</b>							
Change in tax-to-GDP ratio	0.1	0.1	0.0	-0.1	0.0	0.0	-0.1
Difference SP – COM		0.1			-0.1		
of which <sup>3</sup> :							
- discretionary & elasticity component		-0.1			0.0		
- composition component		0.2			-0.1		
Difference COM – OECD			0.1			0.0	
of which <sup>3</sup> :							
- discretionary & elasticity component			-0.1			0.0	
- composition component			0.1			0.0	
p.m.: Elasticity							
- of taxes to tax base <sup>4</sup>	0.9	0.9	1.0	1.0	1.0	1.0	1.0
- of tax base <sup>4</sup> to GDP	1.2	1.1	1.0	0.9	1.0	1.0	0.9
<b>Social contributions:</b>							
Change in tax-to-GDP ratio	0.0	0.0	-0.1	0.0	-0.1	-0.1	-0.1
Difference SP – COM		0.0			0.1		
of which <sup>3</sup> :							
- discretionary & elasticity component		0.0			0.1		
- composition component		0.1			0.0		
Difference COM – OECD			0.0			0.0	
of which <sup>3</sup> :							
- discretionary & elasticity component			-0.1			-0.1	
- composition component			0.2			0.1	
p.m.: Elasticity							
- of taxes to tax base <sup>5</sup>	1.0	1.0	1.3	1.1	1.0	1.3	0.9
- of tax base <sup>5</sup> to GDP	1.0	0.9	0.7	0.9	0.9	0.7	0.9
<b>Personal income tax<sup>6</sup>:</b>							
Change in tax-to-GDP ratio	-0.2	-0.1	0.3	-0.2	0.0	0.3	-0.2
Difference SP – COM		-0.1			-0.2		
of which <sup>3</sup> :							
- discretionary & elasticity component		-0.2			-0.2		
- composition component		0.1			0.0		
Difference COM – OECD			-0.4			-0.3	
of which <sup>3</sup> :							
- discretionary & elasticity component			-0.6			-0.4	
- composition component			0.4			0.2	
p.m.: Elasticity							
- of taxes to tax base <sup>5</sup>	0.8	1.0	2.1	0.8	1.1	2.1	0.9
- of tax base <sup>5</sup> to GDP	1.0	0.9	0.7	0.9	0.9	0.7	0.9

<b>Corporate income tax<sup>6</sup>:</b>	0.1	0.0	0.1	-0.1	0.0	0.1	-0.1
Change in tax-to-GDP ratio							
<i>Difference SP – COM</i>	0.0			-0.1			
<i>of which<sup>3</sup>:</i>							
- <i>discretionary &amp; elasticity component</i>	0.0			-0.1			
- <i>composition component</i>	0.0			0.0			
<i>Difference COM – OECD</i>		0.0			0.0		
<i>of which<sup>3</sup>:</i>							
- <i>discretionary &amp; elasticity component</i>		-0.1			-0.1		
- <i>composition component</i>		0.2			0.1		
p.m.: Elasticity							
- of taxes to tax base <sup>7</sup>	0.8	0.9	1.3	0.6	0.9	1.3	0.7
- of tax base <sup>7</sup> to GDP	1.0	1.0	0.7	1.1	1.1	0.7	1.1
<b>Notes:</b>							
<sup>1</sup> Based on OECD ex-ante elasticity relative to GDP.							
<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. the share is assumed to be constant over the programme period.							
<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)							