

# FORECASTING THE PUBLIC FINANCES AND THE MACROECONOMIC CONTEXT FOR BUDGET 2003

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## 1.1 Introduction

The annual budgetary process in Ireland continues to be a dominant focal point for domestic macroeconomic policymaking. The scale and openness of the Irish economy along with full participation in European *Economic and Monetary Union* (EMU) means that fiscal policy can have but a partial role in the determination of the nation's macroeconomic environment. Sound fiscal policies, however, remain a central plank for sustainable economic advancement. This places emphasis on the need to set budgetary stance appropriate for both the economy's conjunctural and future needs.

As ever, Budget 2003 will be a difficult one to frame as substantial uncertainty persists about the robustness of the international economic recovery with which Irish fortunes are entwined. This uncertainty creates substantial difficulty in making the economic growth forecasts necessary to underpin the budgetary projections. The impact of unforeseen inflationary or deflationary impacts can also be very substantial for the public finance outturns. The potential of rapid euro appreciation imparting a disinflationary impulse to the economy could lead to significant deterioration in the public finance position.

In contrast to more recent years, public expectations may be tempered somewhat by the knowledge of the rapid deterioration in the public finances over the last year. This may provide an opportunity in Budget 2003 to both strengthen the public finance position while addressing some of the deficiencies in the conceptual basis of budgetary accounting, especially in respect to its neglect of accruals and its non-consolidated basis (McCarthy, 2002).

In recent years forecasting public finance outturns has become particularly fraught. Revenues have undershot, and expenditures overshot, forecast positions considerably resulting in a reversal from substantial budgetary surpluses to the prospect of significant deficits. The rapid growth rates experienced throughout the late 1990s “Celtic Tiger” phase were a substantial source of forecast error. The benign state of the public finances in that phase facilitated substantial changes to the budget process and this has added potential sources of forecast error during the on-going transition period. Significant recent changes include, among others, the introduction of a system of tax credits, individualisation, harmonisation of corporation tax rates and a move to a calendar tax year.

The aim of this paper is to outline the macroeconomic context in which Irish budgetary policy must be set and to determine the appropriate fiscal stance for Budget 2003. Section 1.2 outlines both the short- and medium-term macroeconomic outlook for the Irish economy taking account of the critical international context. Section 1.3 examines the state of the public finances, giving consideration to the difficulties in estimating revenue and expenditure patterns in Ireland in recent years. Section 1.4 considers the appropriate fiscal stance for Ireland. The final section draws conclusions and recommendations for framing the upcoming Budget.

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## 1.2 Macroeconomic Context

While the macroeconomic context for setting Irish budgets in recent years has been exceptionally favourable, the slowdown in economic activity below potential growth rates from the middle of 2001 and into the first half of 2002 has restricted the options for Budget 2003. The aim of each budget is to position fiscal policy to play a role in delivering a sustainable, non-inflationary environment to promote economic growth prospects. The medium-term objective is to ensure that the public finances do not slip into an unsustainable position while still allowing for the infrastructural investment required to boost the economy’s productive capacity. A key short-term objective is to ensure that the public finances do not approach the deficit limits imposed under the EU *Stability and Growth Pact* (SGP).

The medium-term outlook continues to remain broadly favourable for Ireland but there are significant threats to the competitiveness of the Irish economy, particularly from sustained cost pressure rises and continued euro appreciation. The short-term outlook for the economy appears quite uncertain given the turmoil on the international front this year. We begin by looking at the short-term prospects and then moving to our medium-term outlook.

### 1.2.1 SHORT-TERM ECONOMIC OUTLOOK

The international economic outlook remains very uncertain. Last year was one of below-potential growth, and despite some signs early in 2002 of a tentative recovery, events over the Summer months regarding corporate accounting practices and the threat of renewed military action has dampened both consumer and business confidence.

Although there have been some signs of a recovery in the US economy, this rebound is by no means certain. Growth during the rest of 2002 is unlikely to match the inventory-led expansion during the first half

and is unlikely to reach its potential rate again this year. Thus, we are forecasting an annual average GDP growth of 2.4 per cent for 2002, and on the assumption that the recovery continues throughout 2003, GDP growth of 3.2 per cent is projected for the year as a whole.

Consumer expenditure has been one of the main factors contributing to growth in the US. This is likely to continue although recent equity market declines and labour market worries are likely to lower this contribution. The tentative recovery in the manufacturing sector is continuing, although the rate of expansion has slowed. On the whole, however, prospects for the sector are improving. Conditions in the US labour market may have begun to stabilise. As labour market activity tends to lag the rest of the economy, it will be some time before the US returns to full employment, even if other sectors recover into next year. As a result, we are forecasting average unemployment of 5.6 per cent in 2002, declining marginally to 5.4 per cent in 2003.

US monetary conditions remain very loose following a succession of cuts by the Federal Reserve bringing rates to a 40-year low of 1.75 per cent. The direction of interest rates in the future is much more uncertain given concerns about the pace of economic recovery, equity market weakness and a weakening of the dollar on foreign exchange markets. Although rates usually rise as the economy is expanding, the recent slide in stock prices may damage the economy through a reduction in both business and consumer confidence and expenditures. It seems likely that the Federal Reserve will hold rates constant for the rest of this year, with some increase early in 2003, though there remains pressure for more immediate cuts to boost recovery prospects.

Following GDP growth of 3.4 per cent in 2000, economic activity moderated in the euro area in 2001 to 1.4 per cent. Significant slowing of domestic demand and exports has shown that the euro area economy is not impervious to outside developments. Following weak economic activity in 2001, including a quarter of negative growth at the end of the year, GDP growth in 2002 is faltering and is likely to be at 1.1 per cent. On the basis of the anticipated recovery in the world economic environment, we are forecasting a recovery in euro area economic growth to 2.4 per cent in 2003.

While the Harmonised Index of Consumer Prices (HICP) inflation rate has fallen towards the European Central Bank's (ECB) target rate of 2 per cent, price pressures remain a concern. The outlook for inflation will be strongly influenced by oil price developments and exchange rate movements. The strengthening of the euro will help lower import prices. It is forecast that the HICP inflation rate will fluctuate relatively close to 2 per cent for the remainder of the year so as to give an average equal to 2.1 per cent for 2002 and 1.8 per cent in 2003.

The euro area unemployment rate is forecast unlikely to improve as the year progresses. Although a return to stronger economic growth is expected in 2003, the unemployment rate is forecast to be 8.2 per cent in 2002 and 8.0 per cent in 2003.

The UK economy grew by 1.9 per cent in 2001, down from 3.1 per cent in 2000, but still ahead of both the United States and the euro area. However, this was driven by a strong performance in the first half of the year, and GDP growth has been slowing since then. Economic growth in

the UK continues to be driven by strong performances in the consumer and services sectors. The industrial sector remains very weak, thus emphasising the two-speed nature of the UK economy. As a result, we are forecasting UK GDP growth this year to 1.7 per cent, before strengthening next year to average 2.8 per cent for 2003 as a whole.

As with the international economy Irish economic growth made a tentative recovery over the first half of 2002 from the sharp slowdown experienced in the latter half of 2001. The economy is estimated to have grown by 5.9 per cent and 5.0 per cent in real GDP and real GNP terms respectively in 2001. The recovery remains weak and uncertainty about the global economy will serve to dampen domestic activity.

Indeed the domestic economy faces pressures on a number of fronts. There is the poor external environment as well as an appreciating currency and rapidly rising wage costs. The sustained and substantial appreciation of the euro against other currencies on a trade-weighted basis will inhibit the competitiveness of an export-oriented economy, like Ireland, that has significant non-euro area trade. An appreciating currency, however, may also encourage a less aggressive interest rate response by the authorities to persistent above-target inflation rates in the euro area.

Inflation prospects will be improved somewhat over the next year by the continuing appreciation of the euro. However, persistence in the high rate of increase in domestic costs, facilitated by strong disposable income growth, will mean that Ireland continues to have the highest inflation rate within the EU. Our forecast is for inflation in consumer prices to average 4.7 per cent in 2002 and 3.7 per cent in 2003.

Our forecast for output growth in 2002 is 3.7 per cent in real GDP and 2.7 per cent in real GNP terms. The prospects for 2003 are projected to be at close to trend at 4.5 per cent for real GDP and 3.9 per cent for real GNP. While the unemployment rate is expected to rise further to average 4.5 per cent in 2002 and 4.6 per cent in 2003, wage growth is not abating significantly and is still likely to be above 6 per cent in 2003.

**Table 1.1: National and International Context 2002-2003**

Country	GNP		Consumer Prices		Hourly Earnings		Unemployment Rate		Current Account Balance % of GNP	
	2002	2003	Percentage Change		2002	2003	%		2002	2003
			2002	2003			2002	2003		
UK	1.7	2.8	1.7	2.6	4.3	5.1	5.4	5.6	-2.2	-2.3
Germany	0.8	2.3	1.5	1.4	3.2	3.8	8.5	8.3	1.3	1.1
France	1.6	2.4	1.8	1.2	3.6	3.8	9.3	9.0	2.2	2.1
Italy	1.0	2.4	2.3	1.9	3.5	4.0	9.3	9.1	0.6	0.5
Euro-area	1.1	2.5	2.1	1.8	3.7	4.2	8.2	8.0	0.4	0.2
USA	2.4	3.2	1.6	2.3	3.6	4.2	5.6	5.4	-4.4	-4.5
Japan	0.2	1.0	-1.2	-1.0	0.9	0.3	5.9	6.1	2.5	2.6
OECD	1.4	2.4	1.7	1.9	3.5	3.9	6.8	6.7	-0.9	-0.5
Ireland	2.7	3.9	4.7	3.7	8.4	6.5	4.5	4.6	-0.5	-1.7

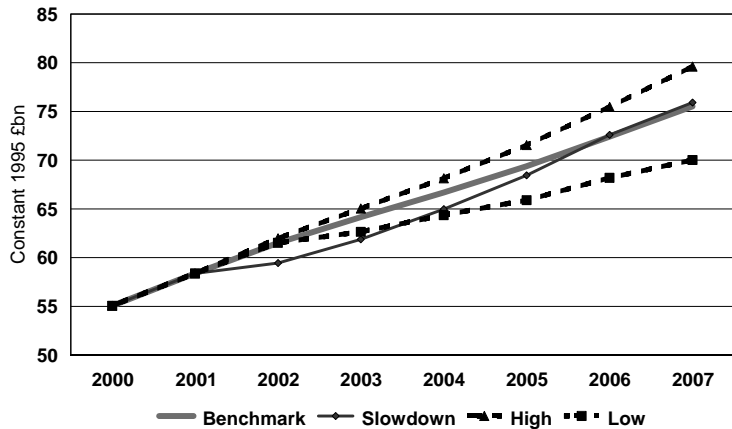
## 1.2.2 MEDIUM-TERM ECONOMIC OUTLOOK

The ESRI *Medium-Term Review* (MTR) for the Irish economy 2001-2007 (Duffy *et al.*, 2001), pointed to a slower rate of economic growth in Ireland in the future, as a result of the significant domestic resource constraints along with an uncertain external economic environment. The MTR analysis suggests that the Irish economy has the capacity to continue growing more rapidly than its EU neighbours, albeit at a slower pace than previously. Potential output, which averaged over 7 per cent between 1995 and 2000, is likely to fall to about 5 per cent for the period to 2005, before slowing further to around 4 per cent a year between 2005 and 2010.

The MTR produced an alternative *Slowdown scenario* whereby the US economy undergoes a more severe downturn than under the *Benchmark forecast*, with economic growth only recovering to its potential during 2003. This scenario entails a major reduction in foreign direct investment into Ireland, as well as a significant decline in world trade, creating an atmosphere of considerable uncertainty. The projected growth path of GNP under the different scenarios is demonstrated in Figure 1.1.

In addition to the Benchmark and Slowdown scenarios described above two further scenarios are also considered in the MTR for illustrative purposes. The High Growth scenario involves an expansion of the economy's growth potential by one percentage point per annum through additional immigration. The Low Growth scenario involves excessive growth in labour costs combined with insufficient investment in infrastructure. This would result in a significant loss of competitiveness, and the economy would grow at about one percentage point below its medium-term potential.

**Figure 1.1: Alternative Forecasts for GNP**



Source: *Medium-Term Review* (2001).

This MTR analysis suggested that the Irish economy is quite robust. Prudent domestic policy actions should be sufficient to prevent the economy following either of the “high” or “low” growth scenarios. It is the case that both the short- and medium-term prospects for the Irish economy contain significant degrees of uncertainty for the likely state of the public finances. Broadly speaking, however, there is a strong likelihood of a serious short-term deterioration in the budgetary position, while the medium-term prospects remain broadly favourable provided that prudent control of the public finances is maintained.

### 1.3 State of the Public Finances

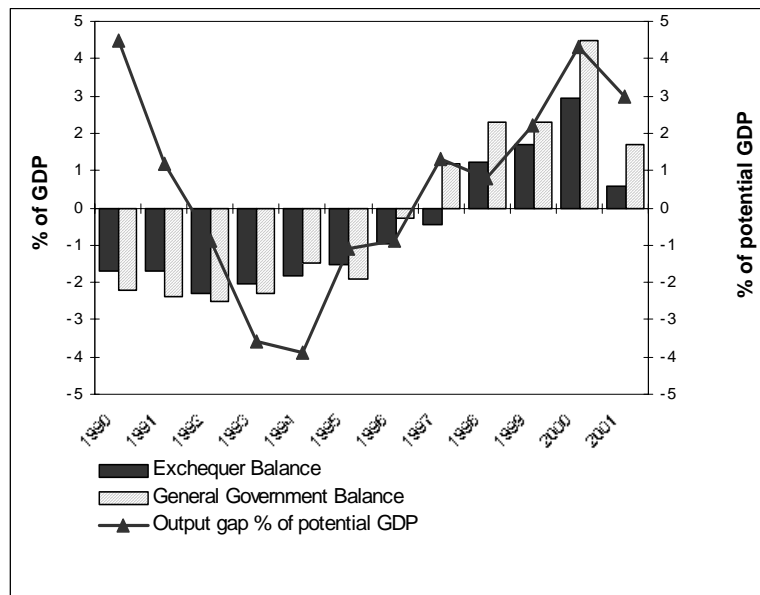
The reversal from previous years to having weaker than budgeted for fiscal outcomes in 2001 looks certain to be replicated this year. The prospect of substantial undershooting of revenues and potential overshooting of expenditure in 2002 makes it difficult to gauge the underlying state of the public finances in framing Budget 2003.

Figure 1.2 shows the evolution of the exchequer and general government balances from 1990 to 2003 and the output gap, measured as a percentage of potential GDP, for the same period. The first half of the 1990s saw a systematic improvement in the public finances as the economy moved into the “Celtic Tiger” growth phase. Towards the latter half of the 1990s, the government finances finally moved into surplus. The end of the decade saw record surpluses in the exchequer balances and general government balance, the latter peaking at 4.5 per cent of GDP in 2000. However, in 2001 there was a substantial turnaround for public finances and our forecasts for 2002 and 2003 indicate a further deterioration in the fiscal balances.

The output gap for Ireland is also shown in Figure 1.2. The gap, which is the difference between potential and actual output expressed here as a percentage of potential output, is a measure of the cycle of Irish fiscal policy (Kearney *et al.*, 2000). The gap was below zero between 1992 and 1996 indicating that the economy was growing below trend before the beginning of the boom year’s mid-way through 1996. The economy grew above trend for five consecutive years before output finally fell below potential growth at the end of last year and it is forecast that the economy will continue to grow below trend for the next two years.

While Figure 1.2 indicates that the fortunes of the Irish public finances depend upon the economic cycle, abstracting from these cyclical effects it has been consistently found that discretionary fiscal policy tends to be pro-cyclical, a feature previously noted by Lane (1998) and Bradley *et al.* (1997).

**Figure 1.2: Exchequer and General Government Balances and the Output Gap 1990- 2001**

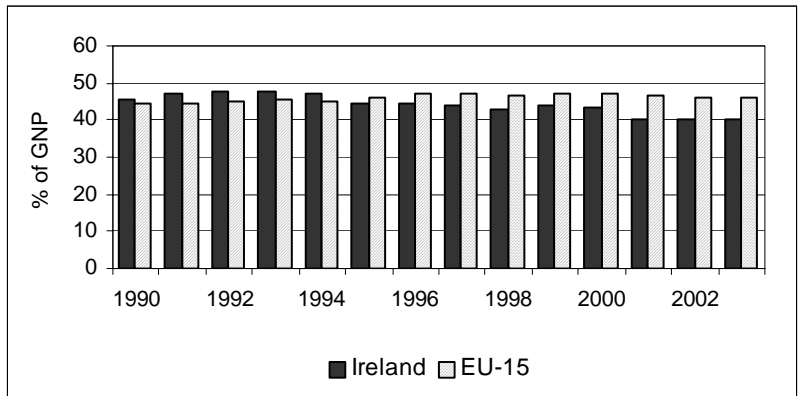


Sources: Department of Finance (2001) and IMF (2002).

The public finance position is often analysed with a comparative level of public service provision between Ireland and the EU. The ratio of total revenue and total expenditure to GDP in Ireland is much lower than the average for other EU member states. This would imply that the level of public service provision is correspondingly lower. However, this analysis can be misleading because using GDP as a measure of Ireland’s taxable capacity can be distorting. This is due to the fact that the ratio of GDP to GNP is considerably higher in Ireland than in other EU countries.

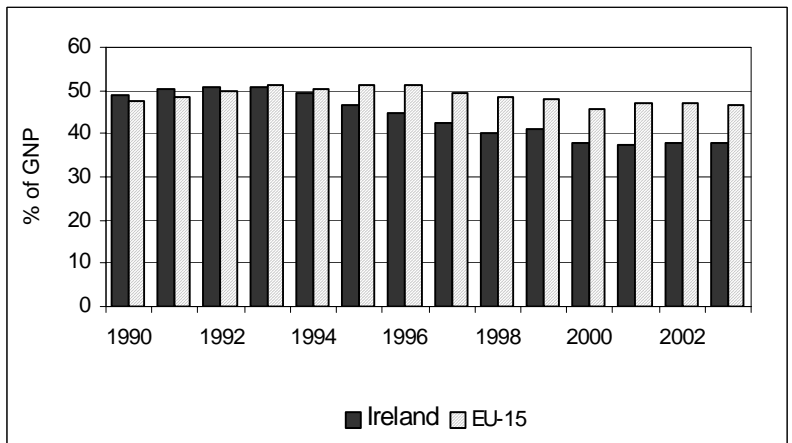
Since most of the revenue obtained from the difference in GDP and GNP comes from corporate taxes, Ireland’s taxable capacity cannot be as strong as other EU countries without placing a significantly bigger taxation burden on GNP. Hence, in judging Ireland’s capacity to fund public service provision through tax revenue, the appropriate comparison is to use revenue/expenditure-to-GNP ratios. Figures 1.3a and 1.3b shows total revenue and total expenditure for Ireland and the EU as a percentage of GNP using the Eurostat measurement basis.

**Figure 1.3a: Total Revenue in Ireland and the EU**



Source: European Commission (2001).

**Figure 1.3b: Total Expenditure in Ireland and the EU**

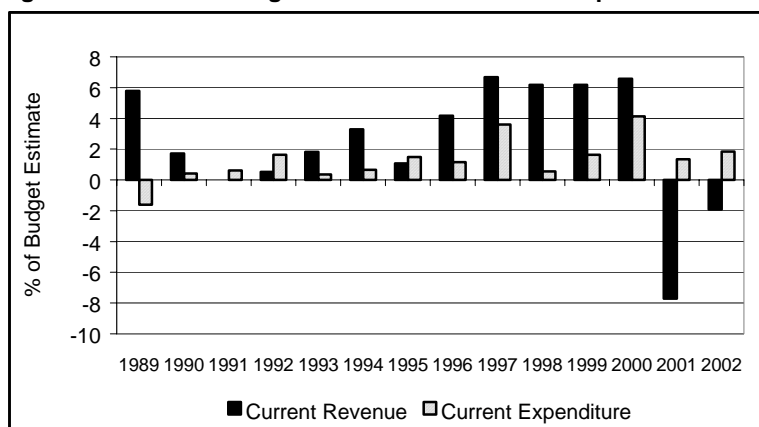


Source: European Commission (2001).

Figure 1.4 illustrates the extent to which government budgetary targets have been missed. Between 1992 and 2000 both revenue and expenditure overshot budget estimates. What is evident from Figure 1.4 is that the overshoot in revenue was particularly strong, reaching 6.7 per cent in 1997 and averaging 6.4 per cent between 1997 and 2000. On the expenditure side the overshoot has not been as dramatic but it did reach over 4 per cent in 2000, equivalent to over €800 million. Between 1997 and 2000 the annual average overshoot in expenditure was 2.5 per cent.

The extent to which the public finances have deteriorated has received much attention and the reason behind the decline is illustrated in Figure 1.4. Having overshot budgetary estimates by 6.6 per cent in 2000 government revenue was 7.7 per cent under target in 2001. In the same year government expenditure continued to exceed government targets by 1.3 per cent.

**Figure 1.4: Overshooting in Current Revenue and Expenditure**



(Overtun less Budget estimate expressed as a percentage of Budget estimate.)

Economic forecasting, be it of growth or government finances, is a difficult exercise. The problems in forecasting the public finances has been recognised by the public sector and a group was established to examine the tax forecasting methodologies used by the Department of Finance (1998). The analysis of this group found that one of the main causes of the under-forecast of tax revenue was the under-forecast of growth in the economy.

The group found that using aggregated tax elasticities, which examine the relationship between the growth in tax revenue and nominal changes in the level of output, and adopting a more aggregated approach to forecasting improved the consistency of their tax forecasts. Based on post-Budget changes, the group used an estimate of 1.1 for the Irish tax/GDP elasticity.<sup>1</sup> Thus an increase in GDP of 1 per cent leads to an increase in

<sup>1</sup> The elasticity between tax and GDP is an average calculated over an extended period. Factors such as the scale of the budgetary measures and the composition between domestic



tax revenue of 1.1 per cent, assuming constant tax rates and shares for the different tax heads. Adopting this methodology allows us to decompose the error in forecasting tax revenue into two elements, namely, the error in forecasting GDP and a residual. Essentially a revised tax forecast, which incorporates the actual growth rate, can be derived by multiplying the nominal GDP outturn data by the elasticity of 1.1 and applying this figure to the tax outturn for the previous year.

**Figure 1.5: Decomposition of Aggregate Tax Forecasts**

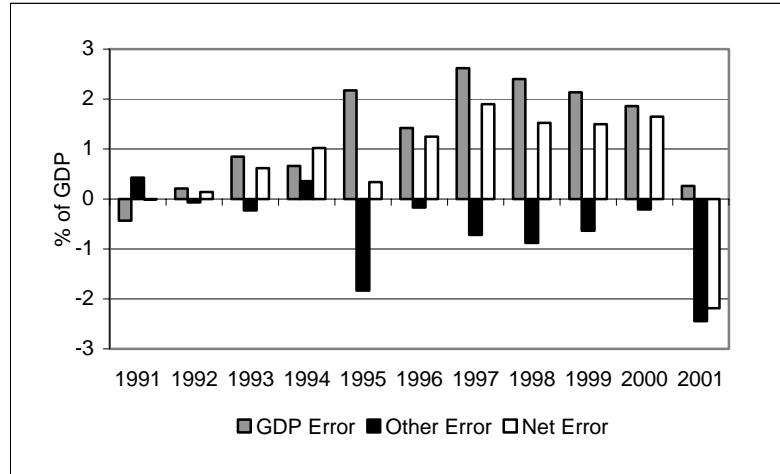
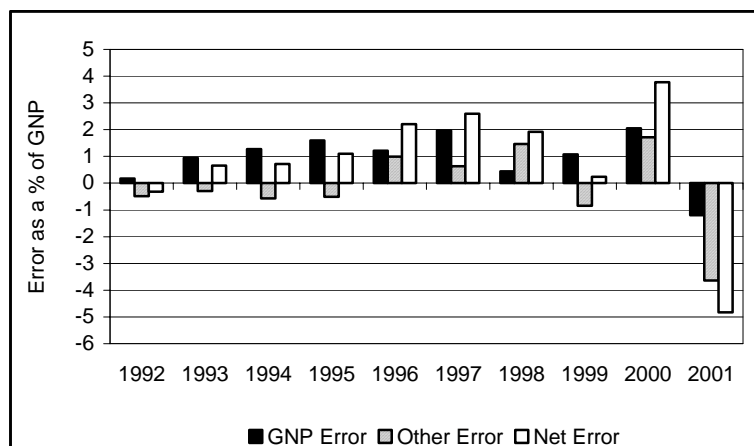


Figure 1.5 above illustrates the extent to which the error in forecasting tax revenue is attributable to errors in forecasting GDP growth and other errors. From 1991 to 2000 the GDP forecasting errors have constituted the largest component of the error in forecasting tax revenue. From 1991 GDP growth has been under-forecast, leading to a larger than expected increase in tax revenue. Between 1995 and 2000 the other component in forecasting tax revenue has been over-forecast. The net result of the errors in these two forecasts being in opposite directions during 1995 to 2000 has helped to restrain the overall error in forecasting tax revenue. In 2001 the magnitudes of the two errors changed dramatically and the over-forecast of the unexplained component dominates the GDP element indicating that the under-forecast of GDP was not the main cause of the error in forecasting tax revenue in that year.

**Figure 1.6: Analysis of Net Lending Forecasts**

and external growth factors will alter the relationship between tax and GDP in any individual year.



Fitz Gerald (2001) puts forward an alternative method for examining the impact of errors in macroeconomic forecasts on public finances forecasts. This analysis suggests that over-forecasting GNP by 1 per-cent will increase the Exchequer Borrowing Requirement (EBR) by 0.5 percentage points of GNP. Figure 1.6 illustrates the extent to which errors in forecasting GNP have contributed to errors in forecasting the borrowing requirement. The fact that GNP was consistently under-forecast between 1992 and 2000 decreased borrowing as a percentage of GNP. In the first part of the last decade and in 1999 the errors in the two forecasts were in opposite directions which served to reduce the forecast of total borrowing. In 2001 there is a change in the magnitude of the errors and GNP forecasting errors contribute less to the error in borrowing.

Emmerson and Frayne (2002) provide details of the performance of HM Treasury in forecasting UK public sector net borrowing (PSNB). The average error in forecasting the UK PSNB was 1.2 per cent of GDP, over the period 1985-86 to 1997-98, using one year ahead forecasts. The average error is reduced to 1.0 per cent of GDP if actual outturn GDP figures are used. Applying a similar methodology to Ireland over the period 1991 to 2001 yields an average error of 1.7 per cent of GNP in forecasting net borrowing, which is reduced to 1.1 per cent when outturn GNP data are used. This relationship deteriorates significantly in 2000 and 2001. The average error in forecasting net borrowing in Ireland was 3.8 per cent in 2000 and -4.8 per cent in 2001. If growth in the economy had been correctly forecast the average error in the forecasts for net borrowing would only have been reduced to 1.7 per cent in 2000 and 3.6 per cent in 2002.

### PUBLIC FINANCE POSITION FOR BUDGET 2003

Given the sharp declines in government balances last year, public expenditure growth has continued to dramatically outpace tax revenue growth throughout 2002. The consequence for the public finances of overshooting expenditure growth is exacerbated by shortfalls in tax revenue. Overall tax revenue is likely to grow below the budgetary target of 8.6 per cent with the shortfall being most pronounced in income tax

receipts. The discrepancy with the budgetary target for income tax receipts is only partly due to government payments to Special Saving Investment Accounts (SSIA). These SSIA payments are deducted net of income tax receipts and are estimated to cost the Exchequer in excess of €500 million annually from 2003 onwards. The cost to the Exchequer this year will be less because significant proportions of the SSIA accounts were only opened in April.

Our public finance estimates for 2002 set out in Table 1.2 are based on the assumption of diminished growth of both capital and current expenditure in the second half of the year. It is estimated that the general government balance in 2002 will be €50 million or 0.4 per cent of GDP. There are a number of once-off payments into the Exchequer from the broader government sector in 2002 that boost the Exchequer balance.. These include a transfer from the Social Insurance Fund of €35 million, the use of funds from the Capital Services Redemption Account equal to €500 million and receipts from the privatisation of ACC Bank of €153 million. Furthermore, it is estimated that the contribution from the Central Bank arising from the euro changeover will be in the region of €10 million. The contribution to the EU Budget is estimated to be around €80 million less than anticipated in 2002. The combination of factors means that the Exchequer deficit is likely to be around €500 million in 2002.

The deterioration in the public finances will only become apparent in the exchequer balance next year when these funds are unavailable to meet tax and expenditure commitments.<sup>2</sup> These transfers between government funds highlight the need to focus on the broader general government balance to allow the real impact of expenditure and revenue trends on the public finances to become apparent (McCarthy, 2002).

Looking forward to 2003 the general government balance is forecast to be in deficit by €783 million. This will entail a modest dis-improvement in the public finance position. However, this forecast is based on a recovery in tax revenue growth accompanied by further cuts in the growth of current and capital expenditure. Tax revenue growth is forecast to equal 7.5 per cent in 2003 benefiting from the expected return of the economy to near trend GDP growth. Current expenditure growth is forecast to be 9.8 per cent in 2003. Similarly, capital expenditure growth is forecast to equal 11.3 per cent.

In summary, the critical feature of our public finance projections involves bringing public expenditure in line with taxation revenue over the latter half of 2002 and throughout 2003. A major consideration for the public finances emanates from the *Report of the Public Service Benchmarking Body*. Our forecasts, as outlined in Table 1.2 do not explicitly factor in the likely costs that full implementation of this Report would involve for the public finances. This cost would constitute just over €1.1 billion on the public sector pay bill if implemented in full from 2003 onwards. If we make the assumption that the proposal is implemented in full from 2003 onwards, the public finance position as we have set out would, in the

<sup>2</sup> The forecast deterioration in the public finance balances is outlined in the Stability Programme Update accompanying Budget 2002 (Department of Finance, 2001).

absence of countervailing measures, deteriorate further. The net impact on the public finances would be of the order of €700 million in 2003. The impact on the public finances may be even more significant than this when account is taken of the knock-on impact from pressures for indexation of public sector pensions and social welfare payments to the higher rates of public sector pay.

**TABLE 1.2: Public Finances**

	<b>2001</b>	<b>% Change</b>	<b>2002</b>	<b>% Change</b>	<b>2003</b>
Current Revenue	28,738	9.7	31,539	2.8	32,416
Current Expenditure	24,012	11.4	26,740	9.8	29,350
<b>Current Surplus</b>	<b>4,726</b>	<b>1.5</b>	<b>4,799</b>	<b>-36.1</b>	<b>3,066</b>
Capital Receipts	1,944	-25.9	1,441	-9.8	1,300
Capital Expenditure	6,020	12.0	6,745	11.3	7,505
<b>Capital Borrowing</b>	<b>4,076</b>	<b>30.1</b>	<b>5,304</b>	<b>17.0</b>	<b>6,205</b>
<b>Exchequer Balance</b>	<b>650</b>		<b>-504</b>		<b>-3,139</b>
as % of GNP	0.7		-0.5		-2.8
<b>General Government Balance</b>	<b>1,776</b>		<b>-550</b>		<b>-783</b>
as % of GDP	1.5		-0.4		-0.6
<b>Gross Debt as % of GDP</b>	<b>36.4</b>		<b>33.8</b>		<b>33.5</b>

#### 1.4 Appropriate Fiscal Stance

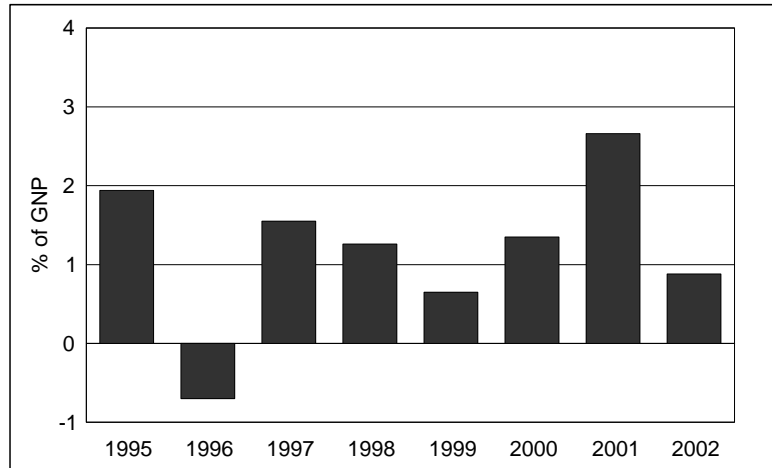
Fiscal stance is a measure of the discretionary changes in budgetary policy, though there is no universal acceptance on its measurement. We consider the ESRI *HERMES* model estimates to be the most reliable for Ireland, given the detailed indexation rules upon which they are based (Kearney *et al.*, 2000). Other measures rely on broad budget balance aggregates that do not capture the underlying structure of the budget. The gaps and elasticities measures rely on average elasticity relationships applied to aggregate data and approximate calculations of trend or potential output are used. The rapid growth in economic activity and the high mobility of the factors of production mean that there is considerable uncertainty on what is the sustainable, potential growth rate in Ireland. This makes the gaps and elasticities measures less reliable for assessing fiscal stance in a period of considerable changes as during the “Celtic Tiger” phase.

Figure 1.7 shows a measure of the short-term fiscal stance computed by simulating the ESRI *HERMES* macroeconomic model (Duffy *et al.*, 2001). The indexed budget is computed assuming no change in average tax and expenditure rates from the previous year, and applying the actual growth rate to the revenue and cyclical expenditure base. The use of average tax and expenditure rates ensures full indexation of the tax and welfare system. The non-cyclical expenditure base grows at trend growth rate.

The concept underlying this indexed budget is that, in the absence of any policy changes, revenues and cyclical expenditure items will grow in line with actual output growth while non-cyclical expenditure items will grow in line with trend output growth. The difference between the

indexed and actual borrowing requirement is an indicator of discretionary change in policy.

**Figure 1.7: Fiscal Stance (+ve expansionary)**



Using this measure, the last six budgets 1997-2002 have all been expansionary in their impact. The impact of unexpected inflation changes can alter the fiscal stance position quite dramatically. The problem can have a more severe effect on the budgetary position when inflation is significantly lower than forecast. In this case the indexation to the forecast inflation could impart a significant fiscal impulse, leading to an unintended expansionary budget with a deteriorating budgetary balance.

The possibility of a real shock to the economy affecting the public finances has been considered in Fitz Gerald (2001). This analysis suggested that for a shock that reduced GNP by one percentage point the borrowing requirement would be increased by 0.5 percentage points of GNP. However, a deflationary (or inflationary) shock that is not expected at the time of a budget could also cause a significant change in the outturn on the public finances.

For some time we have expressed concern that the euro – dollar exchange rate was not sustainable at its existing level. While the timing of such a change was extremely uncertain, the likelihood of such a change in the medium-term was predicted. Over the last six months there has been a significant change in the rate. However, many macro-economists would suggest that a substantial further change will be required to bring the US economy back into long-term equilibrium.

Once again the timing of any further change in the exchange rate is very uncertain. When it happens it could involve a major change of 10 or even 20 per cent in the bilateral rate. Given the uncertainty about the timing and magnitude of such a change it is impossible to build it into the budgetary arithmetic for the coming year. As a result, if such a change were to occur once the budgetary arithmetic has been set in stone, the resulting changes in the macro-economic aggregates could significantly affect the budgetary outturn.

The weakening of the euro through 1998 and 1999 resulted in less inflation in those years than might have been expected (Duffy, Fitz Gerald and Smyth, 2000). However, the effects came through in higher inflation

in 2000. Because this rise had not been anticipated in drawing up the budget for that year, the higher inflation contributed to an unexpectedly large government surplus.

The effect of a change in the bilateral euro – dollar rate in the future would be to impart a deflationary shock to the euro area. The result would be a significant and unexpected fall in the rate of inflation. From Ireland's point of view the implications of such a change are doubly difficult to predict. First, the behaviour of sterling relative to the euro is very important in determining Irish inflation in consumer prices. Second, the speed at which changes in the sterling – euro rate are passed through into Irish inflation is also uncertain. Duffy, Fitz Gerald and Smyth (2000) suggest that the speed of pass through of exchange rate shocks was changed by the advent of the euro.

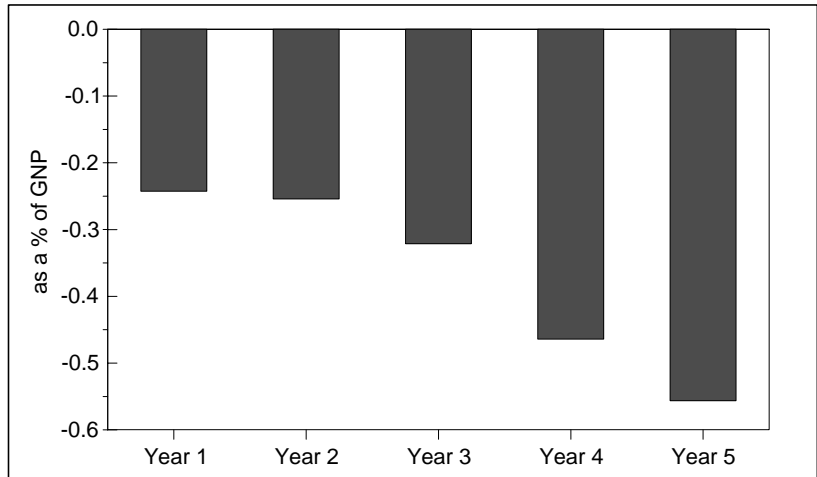
Here we have assumed that the euro rises by 10 per cent against all other currencies. In terms of the timing we consider two possibilities – very rapid pass through of the deflationary shock to Irish prices and very slow pass through. We have used the ESRI *HERMES* model of the Irish economy to simulate such a shock. We have also assumed that welfare rates and public sector pay rates are fixed in advance so that they do not change in the face of an unexpected fall in inflation.

We do not take account of the effect of the shock on the wider euro area economy. We have also assumed that changes in prices in the UK and the euro area cancel out in the short term. The loss of competitiveness by the euro area would be likely to lead to a significant short-term fall in output below the level it would have achieved without the shock. This would affect the public sector borrowing of all euro area members. It would also impart an additional negative output shock to the Irish economy over and above direct Irish loss of competitiveness: while Irish competitiveness *vis-à-vis* our European partners would be unchanged, demand in these countries would fall. This latter effect is not taken into account here.

If there were a very rapid pass through of the deflationary shock, then the 10 per cent appreciation of the euro would add 0.5 percentage points onto the government borrowing requirement, measured as a percentage of GNP, see Figure 1.8. If the pass through were quite slow the effect of shock in the first year would be halved – 0.25 percentage points. The case of a slow pass through is illustrated in Figure 1.7. In the case of a 20 per cent appreciation these effects could be doubled.

In planning for the future it is important that the Irish government, and other EU governments, take the possibility of such a deflationary shock into account when preparing their budgets for 2003. If they want to avoid breaching the EU Stability and Growth Pact deficit limit (3 per cent of GDP) they need to leave enough headroom to deal with such surprises. While this should not pose major problems for the Irish government it could be problematic for France, Germany and Portugal.

**Figure 1.8: Effect of a Deflationary Shock on the Borrowing Requirement**



## 1.5 Conclusions

**B**udget 2003 may be the first budget in nearly a decade when there will be diminished public expectation of reductions in taxation and substantial increases in public expenditure. The slowdown in the domestic economy over the last year and the uncertainties with regard to the international outlook reinforce the traditional call for a prudent approach to fiscal policy setting for Budget 2003.

The difficulties in forecasting government revenues arising from factors other than economic growth uncertainty appear to have increased in recent years. Coinciding with a spate of both significant tax changes and substantial budgetary system alterations, such as the moves to tax credits; to individualisation of allowances; and to a calendar tax year; it has been difficult to decipher the underlying relationship between economic activity and tax revenue. From a forecasting perspective, a budget that consolidates these moves without adding further innovations would be a sensible approach at this juncture, allowing analysts to determine more clearly the revenue consequences of any future tax changes.<sup>3</sup>

As we have argued in previous years, the appropriate response for fiscal policy would be a broadly neutral stance given that monetary conditions remain quite loose. A neutral stance in terms of distribution would involve indexing of the tax and expenditure items to ensure that there is no change in real terms when price and wage changes have been accounted for. We would estimate that full indexation would cost around € billion in Budget 2003.

It is imperative that expenditure growth and tax revenue growth are brought into line in 2003. In light of the recent large divergence between expenditure and revenue growth, greater focus on the General Government Balance (GGB) measure is required. The use of funds from the broader government sector, which constitute once off payments rather than continuous revenue flows, only has the superficial effect of flattering the exchequer balance. Moreover, the use of such funds can delay the

<sup>3</sup> This could be characterised as a “*don’t just do something, stand there*” approach to uncertainty.

inevitable decision to bring government expenditure and tax revenue growth into line with each other.

The contemporary pressures on the public finances should not detract from the ambitious programme for national development. Too often in the past, the stop-go nature of budgetary arithmetic has postponed necessary public investment. While the medium-term prospects for the economy remain good, there is a necessity to continue improving the economy's supply capacity (Cronin and McCoy, 2000). This will involve difficult choices between allocating scarce resources between current and capital expenditure. The adoption of fixed expenditure rules that allow borrowing only for clearly defined investment purposes may be the best way to proceed but this will necessarily require making hard choices in other areas in respect of reduced expenditure or increased taxation, see Emmerson and Frayne (2002) and Power (2002).

Our recommendation for Budget 2003, given the uncertainties for economic growth and tax buoyancy effects, is for a minimalist approach involving indexation of tax bands and welfare payments to prices and wages in an attempt to deliver a neutral budgetary stance.

## *REFERENCES*



- BRADLEY, J., J. FITZ GERALD, P. HONOHAN and I. KEARNEY, 1997. "Interpreting the Recent Irish Growth Experience", in D. Duffy, J. Fitz Gerald, I. Kearney and F. Shortall (eds.), *Medium Term Review: 1997-2003*, No. 6, Dublin: The Economic and Social Research Institute.
- CRONIN, D. and D. McCOY, 2000. "Fiscal Sustainability When Time is on Your Side", Central Bank of Ireland Technical Paper 4/RT/2000.
- DEPARTMENT OF FINANCE, 1998. Report of the Tax Methodology Review Group, November, available online at <http://www.irlgov.ie/finance>.
- DEPARTMENT OF FINANCE, 2001. *Ireland – Stability Programme December 2001 Update*, available online at <http://www.irlgov.ie/finance>.
- DUFFY, D., J. FITZ GERALD, J. HORE, I. KEARNEY, C. MacCOILLE, 2001. *Medium-Term Review: 2001-2007*, No. 8, Dublin: The Economic and Social Research Institute.
- DUFFY, D., J. HORE, C. MacCOILLE, D. McCOY, 2001. "Budget 2002: Macroeconomic Context and Fiscal Stance", in T. Callan and D. McCoy (eds.), *Budget Perspectives*, October, Dublin: The Economic and Social Research Institute.
- EMMERSON, C. and C. FRAYNE, 2002. "The UK Government's Approach To Setting Fiscal Policy" in T. Callan, D. Madden and D. McCoy (eds.), *Budget Perspectives 2003*, October, Dublin: The Economic and Social Research Institute.
- EUROPEAN COMMISSION, 2001. "2001 Broad Economic Policy Guidelines", *European Economy*, No. 72.
- FITZ GERALD, J., D. DUFFY and D. SMYTH, 2000. "Managing an Economy Under EMU: The Case of Ireland," ESRI Working Paper No. 127, Dublin: The Economic and Social Research Institute.
- FITZ GERALD, J., 2001. "Fiscal Policy in a Monetary Union", in *Quarterly Economic Commentary*, March, Dublin: The Economic and Social Research Institute.
- IMF, 2002. *Ireland: Staff Report for the 2002 Article IV Consultation*, August, Washington: International Monetary Fund.
- KEARNEY, I., D. McCOY, D. DUFFY, M. McMAHON and D. SMYTH, 2000. "Assessing the Stance of Irish Fiscal Policy", in A. Barrett (ed.), *Budget Perspectives*, September, Dublin: The Economic and Social Research Institute.
- LANE, P.R., 1998. "On the Cyclicity of Irish Fiscal Policy", *The Economic and Social Review*, Vol. 29, No. 1, pp 1-16.
- McCARTHY, C., 2002. "Generally Unacceptable Accounting Principles: The Irish Public Finance Accounts", in *Quarterly Economic Commentary*, Summer, Dublin: The Economic and Social Research Institute.
- McCOY, D., A. BERGIN, D. DUFFY, J. EAKINS, J. HORE, C. MacCOILLE, 2002. *Quarterly Economic Commentary*, Summer, Dublin: The Economic and Social Research Institute.
- POWER, J., 2002. "Fiscal Management in a Changed Environment", in *Quarterly Economic Commentary*, Summer, Dublin: The Economic and Social Research Institute.