Irish Fiscal Advisory Council

# Fiscal Assessment Report

April 2013

Report 13/01

ISBN 978-0-9570535-4-0

This report can be downloaded at **www.fiscalcouncil.ie**

## Contents

## Boxes



## Appendices

# FOREWORD

The Irish Fiscal Advisory Council was established as part of a wider agenda of reform of Ireland's budgetary architecture as envisaged in the *Programme for Government 2011*. The Council was initially set up on an administrative basis in July 2011, and was formally established as a statutory body in December 2012 under the *Fiscal Responsibility Act (FRA)*. The Council is a public body funded from the Central Fund. The terms of its funding are set out in the *FRA*.

The mandate of the Irish Fiscal Advisory Council is:

- To assess the official forecasts produced by the Department of Finance;
- To assess whether the fiscal stance of the Government in each Budget and Stability Programme Update is conducive to prudent economic and budgetary management, including with reference to the provisions of the *Stability and Growth Pact*;
- To assess Government compliance with the budgetary rule as set out in the *FRA*.

The Council submits its *Fiscal Assessment Reports* to the Minister for Finance and within 10 days releases them publicly.

The Council is chaired by Professor John McHale, National University of Ireland, Galway. Other Council members are Mr Sebastian Barnes, Organisation for Economic Co-operation & Development; Professor Alan Barrett, Economic & Social Research Institute; Dr Donal Donovan, University of Limerick (formerly International Monetary Fund staff) and Dr Róisín O'Sullivan, Associate Professor, Smith College, Massachusetts.

The Council would like to acknowledge the help of Dwayne Price and Loretta O'Sullivan (Central Bank of Ireland) and Rossa White and Eddie Casey (NTMA).

Finally, the Council would like to thank the Council Secretariat—Diarmaid Smyth (Chief Economist and Head of Secretariat), Eimear Leahy and Rachel Joyce—for their extensive contributions to the report.

This report was finalised on 05 April 2013.

More information on the Irish Fiscal Advisory Council can be found at www.fiscalcouncil.ie

## SUMMARY ASSESSMENT

In the September 2012 *Fiscal Assessment Report*, the Council suggested €1.9 billion in additional adjustments compared to Government plans over the period 2014-2015. While assessing the overall fiscal stance as "conducive to prudent economic and budgetary management", recognising the uncertainties surrounding economic growth, the report argued for the additional measures to provide a margin of safety to bring the General Government deficit below 3 percent of GDP by 2015 and to ensure the stabilisation of the debt to GDP ratio.

Post-*Budget 2013* developments have improved the budgetary outlook. Based on the better than expected Exchequer outturn and higher than forecast level of nominal GDP in 2012, it now appears likely that the 2012 General Government deficit will be significantly below 8 percent of GDP, which compares with a Budget-day estimate of 8.2 percent of GDP. This should have some beneficial carryover effects for future years. In addition, the promissory note transaction has reduced the projected 2015 deficit by 0.6 percent of GDP.

Based on technical adjustments made by the Council to *Budget 2013* projections to reflect the recent developments, the General Government deficit to GDP ratio in 2015 now appears likely to be closer to 2 percent of GDP (compared to the official forecast of 2.9 percent). This also assumes the full implementation of the Government's planned €5.1 billion in consolidation measures in 2014-2015. The impact of the developments is estimated to be equivalent to €1.6 billion of additional adjustments over the period 2014-2015.

The suggested margin of safety has therefore been broadly achieved under the Government's current plans and so a case for the €1.9 billion in additional adjustments is not being made in this assessment. Overall, the fiscal stance remains conducive to prudent economic and budgetary management. However, the Council's assessment is that the planned adjustments of €3.1 billion in 2014 and €2.0 billion in 2015 should not be reduced.

*Budget 2013* projections imply compliance with the national Budgetary Rule in 2013, 2014 and 2015. The structural budget balance plays a key part in the domestic and EU fiscal rules. However, this poses serious measurement challenges. These need to be addressed both at EU level and by the development of a more comprehensive domestic analysis.

There are significant uncertainties surrounding these budgetary projections. While there are tentative signs of a stabilisation in domestic demand, the weakening of growth in major trading partners is curbing growth in net exports.

Expenditure pressures in Health and Social Protection in 2012, in part driven by service demand, have also raised concerns about the implementation of planned adjustment measures. However, improved monitoring in Health and a successful implementation of the Croke Park Extension Agreement should help underpin expenditure savings.

A robust return to State creditworthiness – which has continued to show the improvement highlighted in the September 2012 *Fiscal Assessment Report* – would be further reinforced by post-programme precautionary funding arrangements and extensions to the maturities on EFSF/EFSM loans.

# 1. ASSESSMENT OF MACROECONOMIC FORECASTS

## SUMMARY


- Economic growth in the Euro Area and the United Kingdom appears likely to be weaker than anticipated in *Budget 2013*. While recent National Accounts data point to a tentative stabilisation of domestic demand in the latter part of 2012, more recent high frequency data paint a mixed picture. The combined early-year developments suggest downside risk to achieving the Department of Finance's forecast of 1.5 percent real GDP growth in 2013.

- The Council continues its examination of past growth forecast errors in this report by decomposing overall errors into domestic demand and net export components. A pattern of significant over-prediction of domestic demand and under-prediction of net exports emerges. This suggests that forecasters appear to have underestimated the severity of the "balance sheet recession" that followed the bursting of Ireland's property/credit bubble.


## 1.1 INTRODUCTION

This chapter assesses the Government's macroeconomic forecasts. The Council's assessment approach involves a number of steps: (i) official forecasts for 2012 are compared with actual outturns (Section 1.2); recent macroeconomic developments are reviewed (Section 1.3); and the macroeconomic forecasts underpinning *Budget 2013* are examined and compared with the contemporaneous forecasts of other agencies, together with a discussion of the uncertainty surrounding current forecasts (Section 1.4). Box A continues the Council's examination of past forecast errors with a decomposition of recent forecast errors into domestic demand and net export components. As a special feature of this report, a brief summary of forecasting methods used by the Department of Finance, is provided in Section 1.5.

## 1.2 THE OUTTURN FOR 2012 COMPARED TO EARLIER FORECASTS

The first estimates of the 2012 growth outturn were published by the Central Statistics Office (CSO) in March 2013 and showed that real GDP grew by 0.9 percent.[1] The latest revised forecast contained in *Budget 2013* (December 2012) for real GDP growth was also 0.9 percent and so matched the outturn. The official forecast for 2012 real GDP had fluctuated somewhat between

[1] As in other countries quarterly national accounts estimates are published with a substantial lag and are often subject to extensive further revision.

*Budget 2012* and *Budget 2013*. As shown in Table 1.1, the forecast from *Budget 2013* was slightly less than the official forecast of a year earlier (1.3 percent) but marginally higher than that provided in April 2012 (*SPU 2012*). The outturn for nominal GDP in 2012, however, was higher than was estimated by the Department of Finance in *Budget 2013*.

The outturn for real GNP was substantially higher than the forecast in *Budget 2013*. Real GNP is estimated to have grown by 3.4 percent in 2012 as against the most recent Department of Finance forecast of just 1.4 percent. This reflected, in part, the difficulty in estimating net factor income flows.

In Table 1.1 the outturns in the labour market for 2012, relative to previous forecasts, are shown. Employment contracted by 0.6 percent last year and the rate of unemployment averaged 14.7 percent. In December 2011, the Department of Finance had expected employment to fall by 0.2 percent and unemployment to average 14.1 percent. However, employment growth did resume in the second half of the year. Further details of the forecasts and outturns for 2012 are provided in Appendix Tables A1 and A2.

TABLE 1.1: DEPARTMENT OF FINANCE FORECASTS FOR 2012 VERSUS THE OUTTURN

| % change unless otherwise stated | *Budget 2012* | *SPU* 2012 | *Budget 2013* | Outturn |
|---|---|---|---|---|
| | Dec 2011 | Apr 2012 | Dec 2012 | CSO |
| Real GDP | 1.3 | 0.7 | 0.9 | 0.9 |
| Nominal GDP | 2.5 | 1.6 | 2.6 | 2.9 |
| Nominal GDP (€bn) | 159.1 | 158.9 | 163.2 | 163.6 |
| Real GNP | 0.7 | -0.2 | 1.4 | 3.4 |
| Nominal GNP | 1.9 | NA | 3.0 | 5.0 |
| Nominal GNP (€bn) | 128.8 | NA | 130.9 | 133.4 |
| Employment | -0.2 | -0.4 | -0.7 | -0.6 |
| Unemployment Rate | 14.1 | 14.3 | 14.9 | 14.7 |

*Note: The employment growth figure is average annual growth in 2012 compared to 2011 based on QNHS data. The unemployment rate is the annual average in 2012 compared to 2011 based on QNHS data.*

## 1.3 RECENT MACROECONOMIC DEVELOPMENTS

The discussion that follows should be viewed against the background of some deterioration in the world economic outlook in recent months (Table 1.2). The European Commission (EC) estimated in its February 2013 forecasts that Euro Area economic activity contracted by 0.6 percent in 2012.

This was weaker than their previous forecast of a decline of 0.4 percent, issued in November 2012. At that time, the EC was forecasting growth of 0.1 percent for the Euro Area in 2013 but this has now been cut to -0.3 percent. The Office for Budget Responsibility—the official forecasting agency in the UK—now predicts that the UK economy will grow by only 0.6 percent in 2013, a halving of its previous growth forecast.

TABLE 1.2: EXTERNAL ASSUMPTIONS: % GROWTH IN GDP

| 2012 | *SPU 2012* | OECD | EC | *Budget 2013* | EC |
|---|---|---|---|---|---|
| | Apr 2012 | Nov 2012 | Nov 2012 | Dec 2012 | Feb 2013 |
| **USA** | 2.3 | 2.2 | 2.1 | 2.2 | 2.2 |
| **Euro Area** | -0.3 | -0.4 | -0.4 | -0.4 | -0.6 |
| **UK** | 0.8 | -0.1 | -0.3 | -0.4 | 0.0 |
| **Advanced Economies*** | NA | 1.4 | NA | 1.4 | NA |
| **2013** | | | | | |
| **USA** | 2.0 | 2.0 | 2.3 | 2.1 | 1.9 |
| **Euro Area** | 0.9 | -0.1 | 0.1 | 0.2 | -0.3 |
| **UK** | 2.0 | 0.9 | 0.9 | 1.1 | 0.9 |
| **Advanced Economies*** | NA | 1.4 | NA | 1.5 | NA |

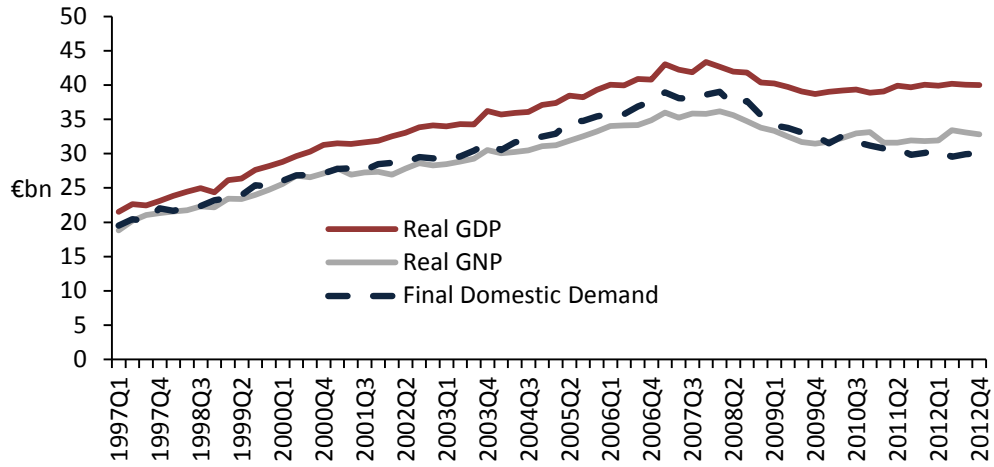
*Note: The external assumptions used in Budget 2013 are based on the IMF World Economic Outlook, October 2012.*
**In Budget 2013, this refers to the G20 which include several major emerging market countries. In OECD forecasts it refers to all OECD countries.*

A further area of concern relates to recent upward pressure on the exchange rate. In the three-month period to February 2013, the nominal Harmonised Competitiveness Indicator appreciated by just over 2 percent compared to the previous three-month period. [2] This partly reflected the appreciation of the euro against sterling. Currency appreciations have a negative impact on net export performance. In Ireland's case, the sterling/euro rate is important in terms of the number and type of the exporters that are most severely affected. As domestic exporters tend to be more exposed to the UK market relative to foreign multinationals, the effect of the currency appreciation is more concentrated in that sector.

[2] The nominal Harmonised Competitiveness Indicator is a trade-weighted exchange rate and is published by the Central Bank of Ireland.

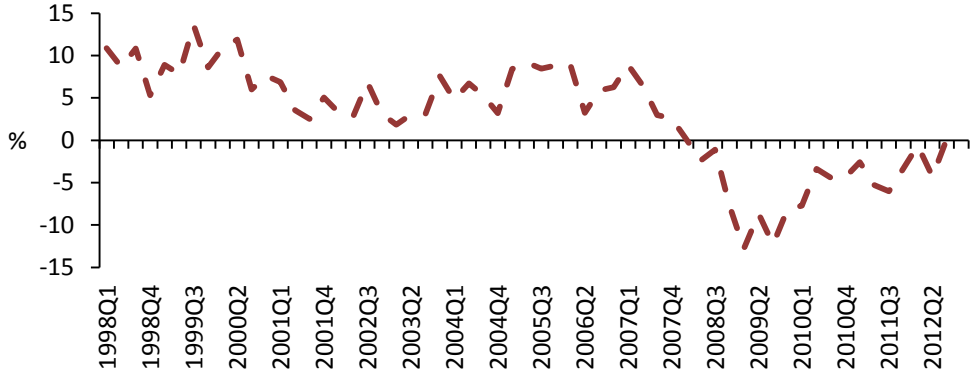
In spite of the weak external conditions, there are signs of a broad pattern of stabilisation in the Irish economy (see Figure 1.1). One encouraging development has been real GDP growth in 2012, albeit at a modest pace, for the second year running. An important contribution was the apparent stabilisation of domestic demand, notwithstanding significant headwinds from budgetary adjustments, weak credit growth and ongoing balance sheet repair (see Figure 1.2). The latest *Quarterly National Household Survey* for Q4 2012 showed an annual increase in employment, albeit of a small amount (+1,200) (see Figure 1.3). The unemployment rate (seasonally adjusted) fell over the course of 2012, from 15 percent in Q1 to 14.2 percent in Q4.

FIGURE 1.1: QUARTERLY MACROECONOMIC PERFORMANCE, 1997Q1-2012Q4



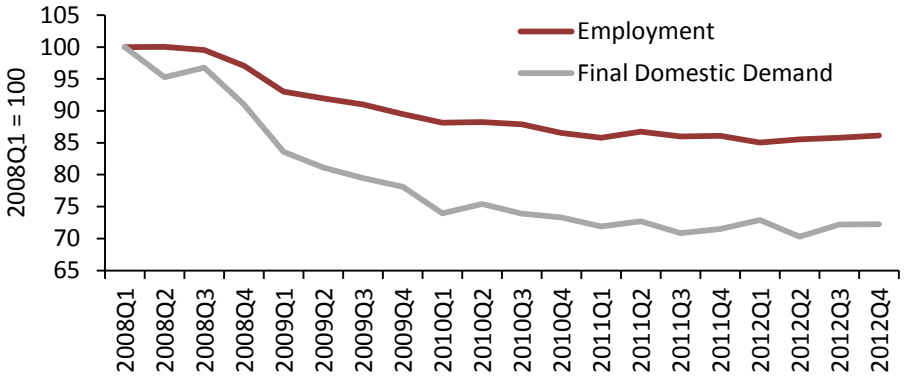

*Source: CSO, QNA.*
*Note: Constant Prices (Chain Linked 2010), Seasonally Adjusted.*

FIGURE 1.2: GROWTH RATE OF FINAL DOMESTIC DEMAND, PERCENTAGE CHANGE FROM SAME QUARTER IN PREVIOUS YEAR




*Source: CSO, QNA.*
*Note: Constant Prices, Non-Seasonally Adjusted.*

FIGURE 1.3: INDICES OF EMPLOYMENT AND FINAL DOMESTIC DEMAND, 2008Q1-2012Q4



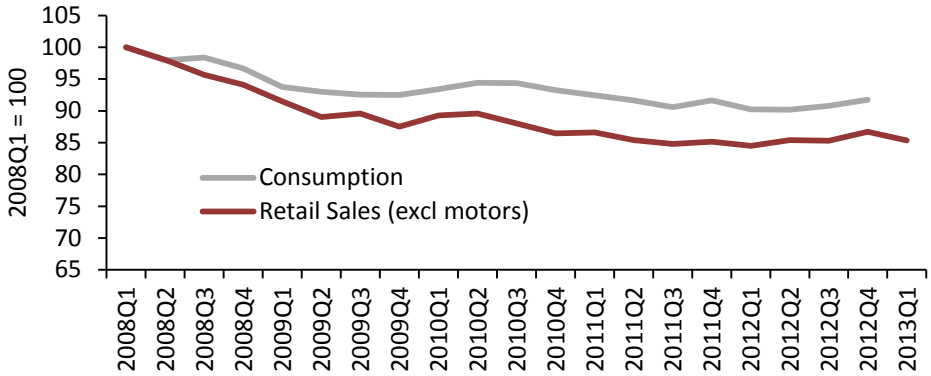

*Source: CSO. Note: Persons 15 and Over in Employment, Quarterly National Household Survey. Total Domestic Demand, Constant Prices, Seasonally Adjusted, Quarterly National Accounts.*

More recent higher frequency indicators paint a mixed picture. The volume of retail sales (excluding motor vehicles) had broadly stabilised towards the end of 2012, although the first months of 2013 have shown renewed weakness (see Figure 1.4). Exchequer returns for the first quarter show income tax receipts are up 1.7 percent and VAT receipts are up 0.2 percent on the same quarter in 2012.[3] However, while income tax is broadly on profile (-0.3 percent), VAT receipts are 2.1 percent behind profile, suggesting continued weakness in consumer spending. The pace of decline in house prices has continued to slow over the past twelve months, with clearer evidence of stabilisation in the Dublin market (see Figure 1.5). One unknown element, however, is the extent to which incentives for first-time buyers in 2012 influenced activity in 2012.[4] Having shown weakness in the latter part of 2012, the seasonally adjusted volume of industrial production rose by 6.7 percent in the three months to February, reflecting mainly positive developments in the multinational sector. Industrial production in February was just slightly above its level in February 2012 (0.1 percent).

[3] On an underlying basis income tax was up 7.9 per cent in the first quarter of 2013. This adjusts primarily for a reclassification of PRSI/income tax receipts affecting the comparison with 2012.

[4] New incentives were also provided for first-time buyers in *Budget 2013* in the form of property-tax relief.

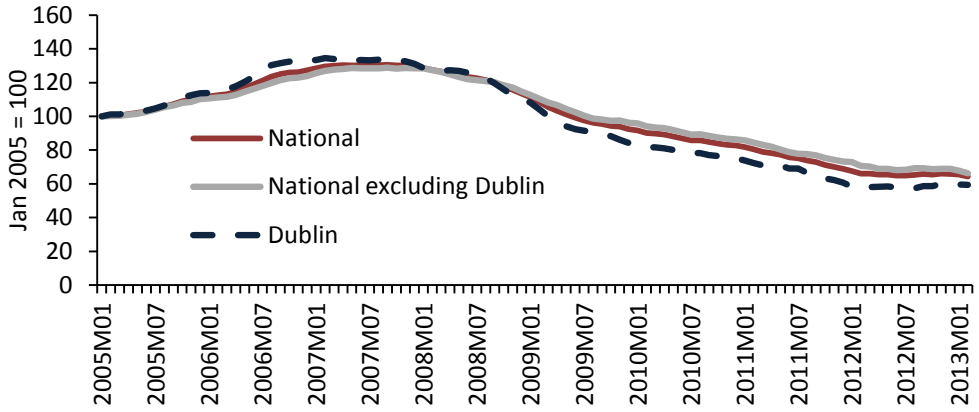
FIGURE 1.4: INDICES OF REAL PRIVATE CONSUMPTION AND VOLUME OF RETAIL SALES




*Source: CSO.*

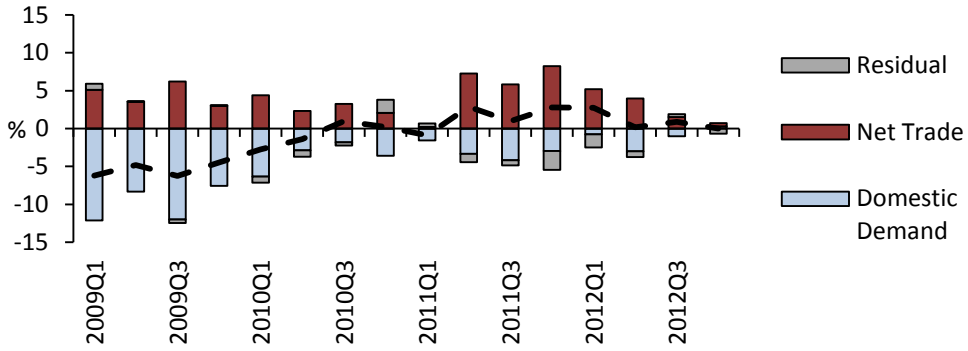
*Note: Volume of Monthly Retail Sales (Excluding Motor Vehicles) data is the seasonally adjusted quarterly average. The quarterly average for 2013Q1 is based on January and February data only. Personal Expenditures on Consumer Goods and Services is in constant prices and is seasonally adjusted.*

FIGURE 1.5: INDICES OF ALL RESIDENTIAL PROPERTY PRICES




*Source: CSO.*

FIGURE 1.6: CONTRIBUTIONS TO REAL GDP GROWTH




*Note: The contributions are weighted by their share of GDP in the corresponding period of the preceding year.*

Figure 1.6 shows the evolving contributions to GDP growth over recent quarters. The performance of real GDP since the beginning of 2011 had generally reflected strong positive contributions to growth from net exports offset by significant negative contributions from domestic demand. Box A describes how export growth had generally exceeded forecasts in recent years while domestic demand had tended to disappoint. The composition of growth has changed in recent quarters. The slower recent growth in net exports reflects, in part, weakness in the Euro Area and United Kingdom economies. The expiration of key patents in the pharmaceutical sector was also a contributing factor, although the performance of service exports has remained strong. The trend towards stabilisation in domestic demand has reduced the drag on growth from this component, leading to broadly stable real GDP over the second half of 2012.

## 1.4 An Assessment of Forecasts Contained in *Budget 2013*

### 1.4.1 *Budget 2013* Forecasts Compared with Other Agencies

The *Budget 2013* forecast for real GDP growth in 2013 is 1.5 percent. Real GNP is projected to grow by 0.9 percent. It is anticipated that growth will be underpinned by net exports, although the balance between net exports and domestic demand is expected to shift due to weakness in the international economy and tentative signs of stabilisation in components of domestic demand. Table 1.3 shows approximately contemporaneous forecasts for other official international and domestic agencies (for more detail, see Appendix Table A3). The *Budget 2013* forecasts for real GDP were the highest of the five agencies, but broadly in line with those of the ESRI and the CBI.[5]

The consensus among agencies is for a further boost in real growth in 2014-2015 (see Table 1.4). While a turnaround in domestic demand is generally foreseen, there is some variation with respect to its component sources as between the Department of Finance and other agencies (Appendix Tables A4 and A5). The anticipated recovery in growth is expected to boost employment somewhat, although all agencies are forecasting that the unemployment rate will average over 13 percent in 2015.

[5] *Budget 2013* forecasts were released prior to the release of the *Quarterly National Accounts* for Q3 2012 in December 2012.

### TABLE 1.3: MACROECONOMIC FORECASTS FOR 2013

| % change unless otherwise stated | Budget 2013 | ESRI | CBI | EC | IMF |
|---|---|---|---|---|---|
| | Dec 2012 | Jan 2013 | Jan 2013 | Feb 2013 | Apr 2013 |
| Real GDP | 1.5 | 1.3 | 1.3 | 1.1 | 1.1 |
| Nominal GDP | 2.8 | 3.0 | 2.4 | 2.4 | 2.3 |
| Nominal GDP (€bn) | 167.7 | 168.1 | 166.9 | 166.9 | 166.7 |
| Real GNP | 0.9 | -2.0 | 0.5 | NA | 0.1 |
| Nominal GNP | 2.3 | -0.7 | 1.6 | NA | NA |
| Nominal GNP (€bn) | 133.9 | 131.1 | 133.0 | NA | NA |
| Employment | 0.2 | 0.0 | 0.3 | 0.1 | 0.1 |
| Unemployment | 14.6 | 14.6 | 14.5 | 14.6 | 14.6 |

*Note: The EC nominal GDP figure is derived.*

### TABLE 1.4: MACROECONOMIC FORECASTS FOR 2014 AND 2015

| % change unless otherwise stated | *Budget 2013* | ESRI | CBI | EC | IMF |
|---|---|---|---|---|---|
| | Dec 2012 | Jan 2013 | Jan 2013 | Feb 2013 | Apr 2013 |
| **2014** | | | | | |
| Real GDP | 2.5 | 2.3 | 2.5 | 2.2 | 2.2 |
| Nominal GDP | 3.8 | 5.2 | 3.5 | 3.6 | 3.7 |
| Nominal GDP (€bn) | 174.1 | 176.7 | 172.7 | 173.0 | 172.8 |
| Real GNP | 1.7 | 1.4 | 1.4 | NA | 1.5 |
| Nominal GNP | 2.9 | 4.0 | 2.3 | NA | NA |
| Nominal GNP (€bn) | 137.8 | 136.4 | 136.1 | NA | NA |
| Employment | 0.9 | 0.4 | 1.2 | 0.9 | 0.9 |
| Unemployment | 14.1 | 14.3 | 13.9 | 14.1 | 14.1 |
| **2015** | | | | | |
| Real GDP | 2.9 | NA | NA | 2.8 | 2.7 |
| Nominal GDP | 4.2 | NA | NA | 4.5 | 4.3 |
| Nominal GDP (€bn) | 181.4 | NA | NA | 180.5 | 180.3 |
| Real GNP | 2.1 | NA | NA | NA | 2.2 |
| Nominal GNP | 3.3 | NA | NA | NA | NA |
| Nominal GNP (€bn) | 142.3 | NA | NA | NA | NA |
| Employment | 1.3 | NA | NA | 2.0 | 1.9 |
| Unemployment | 13.1 | NA | NA | 13.1 | 13.3 |

*Note: EC forecasts for 2014 were published in the European Economic Forecast, February 2013. EC forecasts for 2015 were published in the Economic Adjustment Programme for Ireland, Autumn 2012 Review, January 2013. The EC nominal GDP figure for 2014 is derived.*

### 1.4.2 Uncertainty Surrounding Forecasts

Although there are signs that domestic demand is stabilising, the complex dynamics of household, business, bank and government balance-sheet repair mean that an unusual degree of uncertainty surrounds current projections. This uncertainty is compounded by an increasingly uncertain picture on the prospects for growth in key trading partners.

One indicator of the uncertainty surrounding growth forecasts for Ireland is the large discrepancy in the composition of real GDP growth seen by domestic agencies. Despite the identical real GDP growth forecasts for 2013 from the CBI and ESRI, the compositions of their forecasts differ markedly (see Appendix Table A3). From the low base of domestic investment reached in 2012, the ESRI projects growth of 3.1 percent in 2013; the equivalent forecast from the CBI is just 0.6 percent.[6] For exports, the ESRI anticipates growth of 3.9 percent, just under a percentage point higher than the CBI (3.0 percent). However, the ESRI foresees imports growing significantly by 4.3 percent, 2.4 percentage points higher than the CBI. The forecasts of both agencies are broadly similar for private and public consumption.[7]

Of course, substantial uncertainty surrounds growth projections even in more tranquil macroeconomic times. A useful way to represent this uncertainty is through the use of fan charts.[8] A fan chart for real GDP growth based on past forecast errors between 1996 and 2005 is presented in Figure 1.7. The red line shows the central real GDP growth forecasts published in *Budget 2013* (CSO data is used for 2009 -2012).[9] The immediately surrounding dark blue areas represent the range of outcomes with a probability of 10 percent on either side of this forecast. Each of the successively lighter blue areas represents a further increase of ten percentage points in cumulative probability. The range of possible outcomes widens as the forecast horizon lengthens since the historical forecast errors tend to rise with the forecast horizon.

[6] The Department of Finance's forecast in *Budget 2013* is almost identical to that of the ESRI at 3.2 percent.

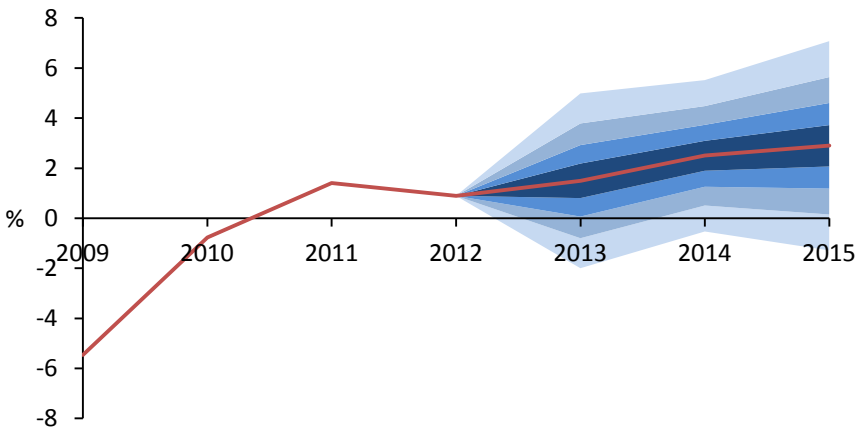
[7] The ESRI sees private and public consumption contracting by 0.5 and 1.5 percent respectively. The equivalent figures for the CBI are 0.4 and 1.6 percent. In *Budget 2013*, the Department of Finance foresaw a contraction of 0.5 percent in private consumption and 2.7 percent in public consumption.

[8] The fan chart shows 80 percent of the distribution around real GDP. The fan chart is based on the Department of Finance's real GDP forecast errors for one-, two- and three-year ahead forecasts between 1996 and 2005. The period after 2005 is omitted because it is thought that the forecast errors that occurred during the crisis were caused by rare and extreme events. The fan chart methodology is discussed in further detail in IFAC (2012b, pp. 71-73).

[9] As discussed in Chapter 2, nominal GDP is the more relevant aggregate for the performance of the public finances.

The fan chart shows estimated probability ranges for possible outcomes**.** For example, based on past forecast errors, there is an estimated 30 percent probability that real GDP growth will be below 1.2 percent in 2015 (relative to the *Budget 2013* forecast of 2.9 percent). With limited margins for meeting deficit limits under current growth projections, these uncertainties highlight a need for prudence in planning the medium term fiscal stance. The uncertainties surrounding the fiscal projections are examined in Chapter 2. The implications for the fiscal stance are examined in Chapter 4.

FIGURE 1.7: FAN CHART FOR REAL GDP GROWTH




*Source: Budget 2013, QNA and IFAC calculations.*

The observations on the emerging stabilisation in the economy suggest that modest growth is achievable this year. However, *Budget 2013* forecasts were undertaken prior to the worsening situation in the Euro Area/UK economies and the recent exchange rate appreciation. Achieving the Department of Finance's forecast of 1.5 percent real GDP growth in 2013 will be challenging in this environment, notwithstanding the tentative signs of stabilisation in domestic demand. The Department of Finance's macroeconomic forecasts will be updated as part of the *SPU* later in April.

Looking ahead to 2014 and 2015, there is a clear downside risk based on the recent pattern of forecast revisions that the upturn in the economy may not materialise at the pace forecast by the Department of Finance and other agencies. The Department of Finance forecasts of real GDP growth of 2.5 percent in 2014 and 2.9 percent in 2015 essentially repeat the two- and three-year ahead forecasts that have been present in most forecasting reports since 2010. As discussed in previous *Fiscal Assessment Reports*, the prolonged nature of the economic downturn has meant that the anticipated return to higher levels of growth has been continually pushed out.

### BOX A: A DECOMPOSITION OF FORECAST ERRORS

The outturns for real GDP (and employment) have often differed from official forecasts in recent years. Such divergences are a regular and normal feature of forecasting. However, Figures A1–A3 seek to shed further light on whether certain tendencies in the sources of GDP forecast errors can be identified, in the case of current, one-, and two-year-ahead Department of Finance forecasts respectively.[10]

Although the errors in forecasting the components have often been quite large, they have tended to offset each other. A clear pattern is apparent—there has been a systematic tendency to overestimate domestic demand. The opposite holds true for net exports. This pattern may be of some surprise. Weak growth in both the UK and the Euro Area has sometimes been suggested as the source of Ireland's sluggish overall performance, contributing to a disappointing export performance relative to forecasts. However, Figures A2 and A3 show that net exports were actually overperforming relative to forecasts in contrast to domestic demand which has underperformed due to factors such as low consumer confidence and the personal debt burden.

The final strand in our look behind the forecasts of the Department of Finance considers employment forecasts. It can be seen from Figure A4 that employment levels between 2008 and 2012 have been consistently overestimated.[11,12] This reflects, to a large extent, the fact that GDP growth has lagged behind expectations.

[10] The years on the horizontal axis refer to the year for which the forecast is published. Forecasts are taken from Budget publications. Current year forecasts for 2012, for example, were published in December 2012. By that stage, a considerable amount of economic data for 2012 was available. Thus, the "forecast" is a combination of estimation and forecasting. The forecasts for 2012 that were made one-year-ahead were published in December 2011.

[11] For example, the one-year-ahead forecast for 2009 (i.e., the forecast made in 2008) overestimated the rate of employment by almost 7 percent.

[12] The outturn is the *QNHS* average annual growth rate of persons aged 15 years and over in employment. The forecast error is calculated as the difference between actual growth in employment and the employment growth rate forecast by the Department of Finance. Thus, a positive forecast error indicates that the outturn was greater than the forecast.

FIGURE A1: CONTRIBUTION TO THE DEPARTMENT OF FINANCE REAL GDP FORECAST ERRORS: FORECASTS MADE IN THE CURRENT YEAR

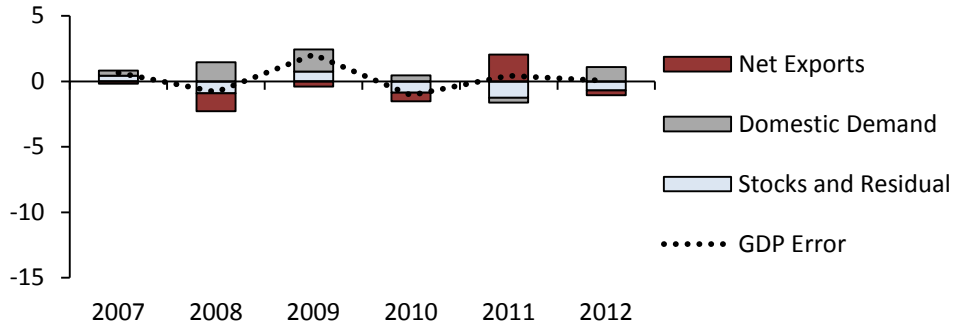



FIGURE A2: FORECASTS MADE ONE YEAR AHEAD


FIGURE A3: FORECASTS MADE TWO YEARS AHEAD

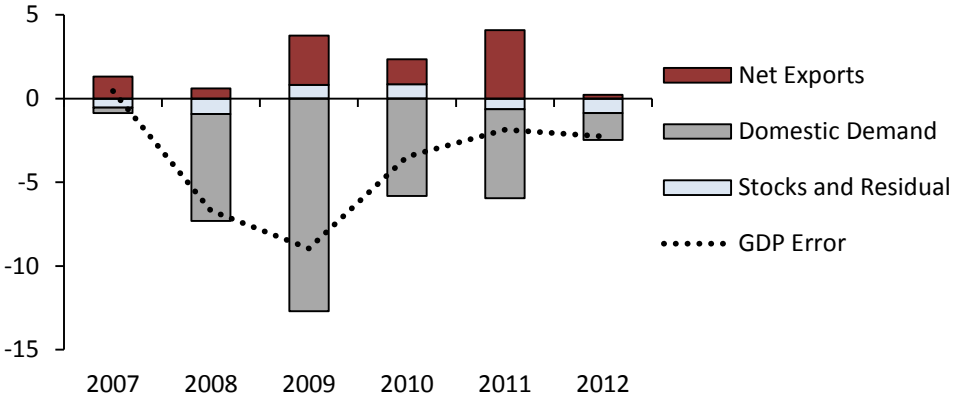
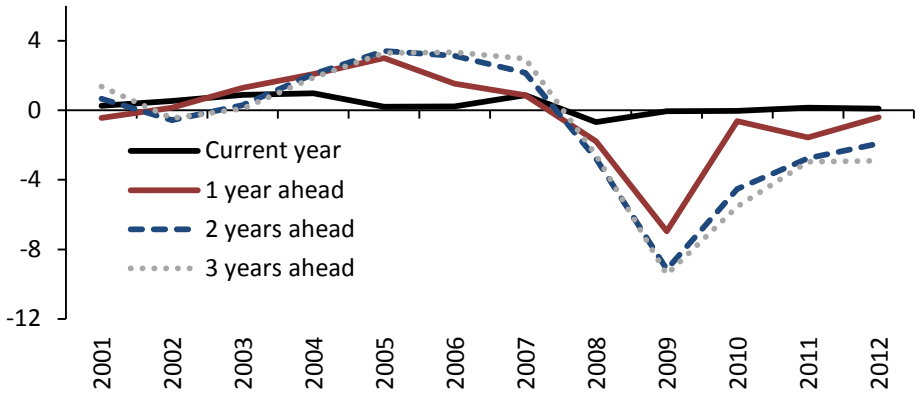


FIGURE A4: EMPLOYMENT FORECAST ERRORS




*Note: The labels on the horizontal axis refer to the year for which the forecast is published.*

## 1.5 FORECASTING METHODS

### 1.5.1 INTRODUCTION

This section provides the results of an exercise undertaken to establish the methods used by the Department of Finance in arriving at its macroeconomic forecasts. One objective was to provide a better basis for assessing the appropriateness of the forecasting methods.

### 1.5.2 THE APPROACH

Representatives from the Council met with a relevant official in the Department of Finance so that the process could be explained. Discussions were also held with the CBI and the ESRI so that comparisons could be made. The description that follows is based on these discussions.

### 1.5.3 THE DEPARTMENT OF FINANCE'S SHORT-TERM FORECASTING METHODS

The Department of Finance forecasts are prepared by a small team of about four economists.[13] Publications such as the *SPU* contain the Department's forecasts with a four year time horizon. For example, in *SPU 2012*, forecasts for 2012, 2013, 2014 and 2015 were provided. Forecasts for 2013, 2014 and 2015 were published in *Budget 2013*. The forecasts for the current year and the subsequent year are considered "short-term", while the forecasts for the later years are "medium-term". For the three Irish forecasting agencies considered here, the approach to short-term forecasting can be characterised primarily as being judgement based rather than model based.

[13] Similarly sized teams produce the short-term forecasts in the ESRI and the CBI.

In the case of short-term forecasting, the Department of Finance begins by examining the national accounts expenditure breakdown of consumption, investment, government spending on goods and services and exports minus imports. Exports are the first component to be considered. Values for key exogenous variables such as oil prices, exchange and interest rates are taken from various external sources. Most variables are forecast in real terms, with (forecast) deflators applied to arrive at nominal values.

### *EXPORTS*

To generate a forecast of exports, assumptions regarding economic growth in Ireland's major trading partners are needed. The Department of Finance, in preparing its forecasts in the spring of each year for *SPU* purposes, uses the latest projections for the international environment available from the European Commission. When the autumn forecasts are being prepared for the Medium-Term Fiscal Statement and the Budget, the Department has greater flexibility and often chooses the most recently published set from across the international agencies.

The Department's forecasting team employ a relatively simple, single-equation model that relates trends in exports of goods and services to trends in import growth in the major trading partners and in competitiveness in Ireland. The estimated coefficients of this model can be used to produce forecasts for exports assuming values for the independent variables. This output is used as a guide and is supplemented by elements of judgement before arriving at an overall forecast. For example, if the Department is aware of sizeable additional foreign direct investment (FDI) in a particular year, this will influence its view on possible export growth in the following and subsequent years.

The forecasting process is highly iterative, with all elements of the exercise interacting with each other. For example, forecasts of employment growth will typically impact upon those for wage growth and, hence, competitiveness. This also needs to be fed back into the outlook for exports. This iterative process should be kept in mind throughout this description.

### *INVESTMENT*

In contrast to exports, no statistical model is used in forecasting the volatile investment component. Instead, the basic approach is to combine the latest data with judgements on likely future trends.

Two components of investment are analysed separately – building/construction and machinery/equipment. For building and construction, data such as those on housing starts provide useful and timely information. The *Public Capital Programme* is also an important input. Forecasts for machinery and equipment take into account factors such as business confidence indicators. Given the size of the Irish economy, certain "lumpy" investments can have a significant impact on the forecast; the purchase of airplanes is the best example. The same is true in the case of specific large prospective FDI inflows that may be known in advance.

The distinction between foreign multinationals and domestic small and medium sized enterprises (SMEs) also matters. As foreign multinationals typically have access to capital outside of Ireland, they are not affected by whatever credit constraints may exist in Ireland, unlike in the case of domestic SMEs.

### CONSUMPTION

The basic forecasting tool used for consumption is a relatively simple model that relates consumption to disposable income. As with the exports equation described above, the model is employed as an anchor, with supplementary judgements applied. The forecasts for aggregate disposable income are broken up into three separate components: labour income; profits; and transfers/taxes.

The forecasts for labour income are derived from a parallel exercise that involves forecasts for other labour market variables such as employment, participation and unemployment (see below). Profits are forecast in a broader framework that takes account of output and wages and, perhaps to a greater extent than other variables, is linked to the overall exercise iteratively. Data on taxes and transfers are provided by the relevant government departments and agencies.

Judgement is then applied to the model based forecast to account for the fact that the long-run average relationship between consumption and disposable income might not be valid in any particular period. For example, a specific issue that is particularly relevant in current circumstances is the uncertainty surrounding movements in the savings rate. This partly reflects deleveraging on the part of households. To the extent that changes in the savings rate are in turn related to changes in consumer confidence, measures of the latter provide some input, although these indicators may have limited predictive power.

### GOVERNMENT SPENDING

The forecasts for government expenditure on goods and services do not involve any modelling and are treated as exogenous. Total expenditure is broken up into two components: the public sector pay bill; and other expenditure on goods and services. Forecasts for the nominal pay bill are taken directly from the Department of Public Expenditure and Reform. The non-pay element of government expenditure is forecast on the basis of information provided by the Department of Public Expenditure and Reform and the Department of Social Protection. This is then deflated using forecasts for the Harmonised Index of Consumer Prices (HICP). Although government expenditure is considered exogenous, there is an iterative process as regards the outlook for taxes and transfers, which in turn affects the forecasts for disposable income.[14]

### IMPORTS

As was the case with exports and consumption, a model of import demand is used as an input into the forecasts for imports. The model relates imports to consumption, investment in machinery and equipment and exports. The estimated coefficients, along with forecasts for the independent variables involved, generate forecasts for imports. As with other variables, these forecasts are modified to take account of particular developments not captured by the model, such as tax policy changes.

### GDP AND GNP

Summing the forecasts for exports, investment, consumption, government expenditure and subtracting imports, generates a forecast for GDP. However, if the value for GDP that emerges from this process is implausible (on the basis of the most recent trends or forecasts from other agencies), the forecasts will typically be reassessed and the components of expenditure revised as appropriate.

In order to provide a forecast for GNP, forecasts for net factor income flows are required. Gross outflows are forecast partly with reference to forecasts for exports from the multinational sector, due to the relationship between these exports and profits remitted from the sector. On the debit side, interest on the public debt is a large component currently.

[14] The Fiscal Unit is a separate economic unit within the Department of Finance, responsible for producing forecasts for the public finances.

### *INCOMES AND THE LABOUR MARKET*

The macroeconomic identity that expenditure equals income equals output is a useful framework within which to assess the internal consistency of forecasts. While the Department of Finance does not provide forecasts from the output side, income forecasts are prepared. As the largest component of incomes is wages and salaries, forecasts involving the likely trends in the labour market are required, a process that involves several rounds of analysis and iteration.

The starting point is a demographic model that is used to see how the working age population is likely to change each year. Gross outflows from the labour force through retirements can be estimated, together with gross inflows through assessing the likely number of people who will exit the educational system and enter the labour force. Judgemental elements play a role, for example, in the current recession many younger people are delaying entry into the labour force.

In addition to ageing, the other key demographic driver of changes in the labour force is migration. Previously, the Department of Finance forecasters had tended to assume (in line with practices elsewhere) that differences between the unemployment rates in the UK and Ireland were a reliable predictor of net population flows to and from Ireland. However, the large inflows in the mid-2000s could not be explained by such a model and forecasts of net migration currently rely much more on broader judgements.

By analysing demographic influences on labour force growth and labour force participation rates, a supply-side view of the labour market is developed. A demand side perspective of the labour market is also formed. First, the GDP forecast (described above) provides some guidance on employment changes. However, in order to output changes to the demand for labour, a view on productivity growth is needed. Changes in productivity are typically related to the stage of the business cycle (for example, at the outset of a downturn, labour is not immediately released and so productivity falls). The Department of Finance aims to arrive at a forecast for employment that is consistent with the forecast for GDP growth and trends in productivity.

Forecasts for migration, the labour force, and employment in turn generate a forecast for unemployment, subject to the iterative process already described.

The final major element in this part of the process is wages. Forecasts for wages in the public sector are provided by the Department of Public Expenditure and Reform. For private sector wages, the

conceptual framework used is essentially a Phillip's Curve approach that assumes that the change in average wages is negatively related to the rate of unemployment. While this framework provides a view of possible changes in wages, there are also many other considerations that influence the forecast.

#### *PRICES AND DEFLATORS*

A complete set of macroeconomic forecasts includes forecasts for overall prices (such as CPI or HICP) and for deflators of all individual components as well as for GNP and GDP. The Department's forecasts for HICP are broken up into six separate parts. One major component is energy prices which are heavily influenced by international developments.

### 1.5.4 SHORT-TERM FORECASTING BY THE OTHER IRISH AGENCIES

As regards short-term forecasting methods used by the CBI and the ESRI, the most striking point to emerge was the similarities between their approach and that of the Department of Finance. Both of these agencies also adopt heavily judgement based iterative approaches as opposed to model driven methods. Their processes also take the international environment as a starting point, with exports the first component of demand to be forecast. Thereafter, their broad approach (as well as the resources devoted to forecasting) is similar to that of the Department of Finance.

While the ESRI described their short-term forecasts as being primarily judgement based, their macroeconomic model (*HERMES*) is used to provide a benchmark for their forecasts and also to undertake simulations. The *HERMES* model provides a framework to consider structural aspects of the economy and the relationships between various sectors. The ESRI approach contrasts somewhat with that of the Department of Finance where the forecasting exercise has a more directly operational purpose, closely linked to the preparation of the annual Budget. The ESRI approach also relies heavily on an internal peer review process.

All three domestic agencies are cognisant of the volatility of data such as the quarterly national accounts. To address this aspect, the CBI has undertaken work on what is referred to as "now-casting" – a process whereby the most recent indicators of economic activity and sentiment are combined to provide a GDP estimate in advance of the official estimates (see d'Agostino *et al*. (2008) and Liebermann (2012)).

### 1.5.5 Medium-Term Forecasting in Ireland

Only one of the three agencies concerned, namely, the ESRI, conducts medium-term forecasting using a macroeconomic model. The CBI does not produce medium term macroeconomic forecasts. The Department of Finance does provide medium term forecasts (*Budget 2013* contained forecasts out to 2015) but the methodology employed is less developed than that used in short-term forecasting. The Department takes a view on potential output and potential output growth, on the basis of the methodology used by the EC (see Chapter 4 for a fuller discussion of this approach). Subsequently, the likely speed with which the economy will converge towards potential is assessed.

The ESRI uses its *HERMES* model for medium term forecasting. This is a large-scale structural model with 150 behavioural equations (of which 25 are core) estimated using annual data. The model has been designed with an emphasis on capturing the key role of trade and competitiveness in the economy. World demand is a key driver, as are Irish relative costs. *HERMES* also includes a detailed demographic model. [15]

The model was originally developed in the 1980s with inputs from the Department of Finance, the CBI and the ESRI itself. In recent years, the ESRI has taken sole responsibility for updating and maintaining the model although the outputs of the model are used by the Department of Finance. For example, sensitivity analyses using *HERMES* are reported upon in official publications such as the annual Budget.

### 1.5.6 Ongoing Developments

The ESRI and the CBI have recently embarked on a joint research programme with the goal of developing a suite of economic models that can be used for both forecasting and policy analysis. The programme involves the development and modification of the *HERMES* model. It is also intended that a different form of macro model will be developed alongside the *HERMES* model. Macro-modellers internationally have increasingly devoted resources to the development of Dynamic Stochastic General Equilibrium (DSGE) models, in which more microeconomic theoretical considerations (including rational expectations) are built into the structure of the model. There are plans to develop a DSGE model for Ireland, together with a number of "satellite" models that will focus on specific issues such as fiscal aggregates and the labour market.

[15] The *HERMES* model does not contain a financial sector.

## APPENDIX A: MACROECONOMIC FORECASTS TABLES

### TABLE A1: DEPARTMENT OF FINANCE MACROECONOMIC FORECASTS FOR 2012 VERSUS THE OUTTURN FOR 2012

| % change unless otherwise stated | *Budget 2012* | *SPU* 2012 | *Budget 2013* | Outturn |
|---|---|---|---|---|
| | Dec 2011 | Apr 2012 | Dec 2012 | CSO |
| Real GDP | 1.3 | 0.7 | 0.9 | 0.9 |
| Real GNP | 0.7 | -0.2 | 1.4 | 3.4 |
| Consumption | -1.3 | -1.7 | -2.0 | -0.9 |
| Investment | -1.0 | -2.5 | -3.8 | 1.2 |
| Government | -2.2 | -2.2 | -4.0 | -3.7 |
| Exports | 3.6 | 3.3 | 3.0 | 2.9 |
| Imports | 1.6 | 1.4 | 0.0 | 0.3 |
| Current Account (% GDP) | 1.7 | 1.1 | 3.4 | 4.9 |
| Employment | -0.2 | -0.4 | -0.7 | -0.6 |
| Unemployment Rate (%) | 14.1 | 14.3 | 14.9 | 14.7 |
| HICP | 1.9 | 1.8 | 2.1 | 2.0 |
| GDP Deflator | 1.1 | 0.9 | 1.7 | 1.9 |
| Nominal GDP (€ billions) | 159.1 | 158.9 | 163.2 | 163.6 |
| Nominal GDP | 2.5 | 1.6 | 2.6 | 2.9 |
| Nominal GNP (€ billions) | 128.8 | NA | 130.9 | 133.4 |
| Nominal GNP | 1.9 | NA | 3.0 | 5.0 |

*Note the employment growth figure is average annual growth in 2012 compared to 2011 based on QNHS data. The unemployment rate is the annual average in 2012 compared to 2011 based on QNHS data.*

TABLE A2: DETAILED MACROECONOMIC FORECASTS FOR 2012

| % change unless otherwise stated | *Budget 2013* | ESRI | CBI | EC | IMF |
|---|---|---|---|---|---|
| | Dec 2012 | Jan 2013 | Jan 2013 | Feb 2013 | Apr 2013 |
| Real GDP | 0.9 | 1.3 | 0.7 | 0.7 | 0.7 |
| Real GNP | 1.4 | 3.1 | 1.5 | NA | 0.7 |
| Consumption | -2.0 | -1.0 | -1.3 | -1.8 | -1.8 |
| Investment | -3.8 | -3.9 | -0.8 | -2.0 | -2.0 |
| Government | -4.0 | -3.0 | -3.0 | -3.6 | -4.0 |
| Exports | 3.0 | 2.7 | 3.0 | 2.6 | 2.6 |
| Imports | 0.0 | 0.0 | 1.3 | 0.4 | 0.4 |
| Current Account (% GDP) | 3.4 | 4.8 | 3.7 | 2.1 | 2.9 |
| Employment | -0.7 | -0.9 | -0.7 | -1.0 | -0.6 |
| Unemployment Rate (%) | 14.9 | 14.9 | 14.8 | 14.8 | 14.7 |
| HICP | 2.1 | 2.0 | 2.0 | 1.9 | 1.9 |
| GDP Deflator | 1.7 | 1.3 | 1.8 | 1.8 | 1.8 |
| Nominal GDP (€ billions) | 163.2 | 163.2 | 162.9 | 163.0 | 162.9 |
| Nominal GDP | 2.6 | 2.7 | 2.5 | 2.5 | 2.5 |
| Nominal GNP (€ billions) | 130.9 | 132.1 | 130.9 | NA | NA |
| Nominal GNP | 3.0 | 4.0 | 3.1 | NA | NA |

*Note: The EC's nominal GDP figures are derived.*

TABLE A3: DETAILED MACROECONOMIC FORECASTS FOR 2013

| % change unless otherwise stated | *Budget 2013* | ESRI | CBI | EC | IMF |
|---|---|---|---|---|---|
| | Dec 2012 | Jan 2013 | Jan 2013 | Feb 2013 | Apr 2013 |
| Real GDP | 1.5 | 1.3 | 1.3 | 1.1 | 1.1 |
| Real GNP | 0.9 | -2.0 | 0.5 | NA | 0.1 |
| Consumption | -0.5 | -0.5 | -0.4 | -0.5 | -0.5 |
| Investment | 3.2 | 3.1 | 0.6 | -1.5 | -1.5 |
| Government | -2.7 | -1.5 | -1.6 | -2.5 | -2.5 |
| Exports | 3.3 | 3.9 | 3.0 | 3.0 | 3.0 |
| Imports | 2.3 | 4.3 | 1.9 | 1.6 | 1.7 |
| Current Account (% GDP) | 4.3 | 2.6 | 4.3 | 3.4 | 3.4 |
| Employment | 0.2 | 0.0 | 0.3 | 0.1 | 0.1 |
| Unemployment Rate (%) | 14.6 | 14.6 | 14.5 | 14.6 | 14.6 |
| HICP | 1.7 | 1.7 | 1.3 | 1.3 | 1.3 |
| GDP Deflator | 1.3 | 1.6 | 1.8 | 1.3 | 1.3 |
| Nominal GDP (€ billions) | 167.7 | 168.1 | 166.9 | 166.9 | 166.7 |
| Nominal GDP | 2.8 | 3.0 | 2.4 | 2.4 | 2.3 |
| Nominal GNP (€ billions) | 133.9 | 131.1 | 133.0 | NA | NA |
| Nominal GNP | 2.3 | -0.7 | 1.6 | NA | NA |

*Note: The EC's nominal GDP figures are derived.*

TABLE A4: DETAILED MACROECONOMIC FORECASTS FOR 2014

| % change unless otherwise stated | *Budget 2013* | ESRI | CBI | EC | IMF |
|---|---|---|---|---|---|
| | Dec 2012 | Jan 2013 | Jan 2013 | Feb 2013 | Apr 2013 |
| Real GDP | 2.5 | 2.3 | 2.5 | 2.2 | 2.2 |
| Real GNP | 1.7 | 1.4 | 1.4 | NA | 1.5 |
| Consumption | 1.0 | -0.5 | 0.2 | 1.2 | 1.2 |
| Investment | 8.3 | 3.6 | 4.3 | 3.0 | 3.0 |
| Government | -2.3 | -1.5 | -3.3 | -2.8 | -1.3 |
| Exports | 4.3 | 4.9 | 5.4 | 4.2 | 4.0 |
| Imports | 3.9 | 4.4 | 4.1 | 3.3 | 3.5 |
| Current Account (% GDP) | 4.2 | 3.9 | 5.3 | 4.3 | 4.0 |
| Employment | 0.9 | 0.4 | 1.2 | 0.9 | 0.9 |
| Unemployment Rate (%) | 14.1 | 14.3 | 13.9 | 14.1 | 14.1 |
| HICP | 1.8 | 2.0 | 1.2 | 1.3 | 1.3 |
| GDP Deflator | 1.3 | 2.8 | 1.0 | 1.4 | 1.4 |
| Nominal GDP (€ billions) | 174.1 | 176.7 | 172.7 | 173.0 | 172.8 |
| Nominal GDP | 3.8 | 5.2 | 3.5 | 3.6 | 3.7 |
| Nominal GNP (€ billions) | 137.8 | 136.4 | 136.1 | NA | NA |
| Nominal GNP | 2.9 | 4.0 | 2.3 | NA | NA |

*Note: The EC's nominal GDP figures are derived.*

TABLE A5: DETAILED MACROECONOMIC FORECASTS FOR 2015

| % change unless otherwise stated | *Budget 2013* | EC | IMF |
|---|---|---|---|
| | Dec 2012 | Jan 2013 | Apr 2013 |
| Real GDP | 2.9 | 2.8 | 2.7 |
| Real GNP | 2.1 | NA | 2.2 |
| Consumption | 1.2 | 1.9 | 1.6 |
| Investment | 4.4 | 5.2 | 6.0 |
| Government | -1.5 | -3.4 | -0.5 |
| Exports | 4.8 | 4.5 | 4.2 |
| Imports | 3.8 | 3.6 | 3.9 |
| Current Account (% GDP) | 4.3 | 4.7 | 4.1 |
| Employment | 1.3 | 2.0 | 1.9 |
| Unemployment Rate (%) | 13.1 | 13.1 | 13.3 |
| HICP | 2.0 | 1.6 | 1.6 |
| GDP Deflator | 1.3 | 1.6 | 1.6 |
| Nominal GDP (€ billions) | 181.4 | 180.5 | 180.3 |
| Nominal GDP | 4.2 | 4.5 | 4.3 |
| Nominal GNP (€ billions) | 142.3 | NA | NA |
| Nominal GNP | 3.3 | NA | NA |

*Note: The EC's European Economic Forecast for Ireland, published in February 2013, did not contain forecasts for 2015.*

# 2. ASSESSMENT OF BUDGETARY FORECASTS

## SUMMARY

- The budgetary outturn in 2012 was significantly better than estimated by the Department of Finance throughout the course of last year. Stronger than expected receipts helped to offset higher than anticipated spending in key areas. While *Budget 2013* projected a General Government deficit of 8.2 percent of GDP in 2012, based on the end-year Exchequer returns and a higher than forecast level of nominal GDP, a deficit of significantly less than 8 percent is now more likely.

- The better than expected 2012 Exchequer outturn has improved the outlook for the General Government deficit in 2013. A deficit of less than the 7.5 percent of GDP projected in *Budget 2013* looks achievable. The promissory note announcement in February improves the General Government deficit by 0.6 per cent of GDP in 2014 and 2015.

- Based on the better than expected 2012 outturn and the promissory note transaction in February, the General Government deficit to GDP ratio in 2015 now appears likely to be closer to 2 percent of GDP (compared to the official target of 2.9 percent) based on technical adjustments made by the Council to *Budget 2013* projections. This assumes the full implementation of the Government's planned €5.1 billion in consolidation measures in 2014-15 taking the nominal GDP growth outlook from *Budget 2013*.

- While the budgetary outlook has improved, significant macroeconomic and public finance risks remain. The *Budget 2013* projections assume the delivery of sizable expenditure savings. Achieving these savings, notably in the health sector, will be a key challenge.

- Fan chart analysis by the Council highlights the sensitivity of key budgetary aggregates to changes in the macroeconomic outlook. This analysis suggests there is approximately a one-in-three probability that the General Government deficit will exceed 3 percent of GDP in 2015 based on unchanged policies.

## 2.1 Introduction

Under the *Fiscal Responsibility Act*, the Council is required to assess the official forecasts in relation to each Budget and Stability Programme. This chapter assesses the budgetary forecasts contained in *Budget 2013*. The Council's assessment follows the approach of the previous *Fiscal Assessment Report* (IFAC, 2012b) and involves a number of steps: (i) a review of the accuracy of Department of Finance forecasts for 2012 (Section 2.2); (ii) an assessment of the forecasts in *Budget 2013*, which includes a comparison with recent forecasts of other agencies (Section 2.3); and (iii) an examination of the sensitivity of the main budgetary aggregates to changes in the economic outlook (Section 2.4). The chapter also considers the accuracy of Department of Finance tax forecasts, the promissory note transaction in February and current expenditure ceilings.

## 2.2 How Close was the 2012 Budgetary Outturn to Department of Finance Forecasts?

This assessment is based on the end-2012 Exchequer position. A full analysis of the accuracy of Department of Finance budgetary forecasts in 2012 will not be possible until official estimates of the General Government balance and debt are published in April.[16]

### *Exchequer Balance*

The 2012 Exchequer deficit was consistently overestimated by the Department of Finance last year (Table 2.1). Although the forecasts of the deficit were reduced successively as the year progressed, the *Budget 2013* projection, made in December 2012, still overestimated the deficit by €0.8 billion or 0.5 percent of GDP. This overestimate was relatively large by historical standards (Figure 2.1).

The divergence between the deficit outturn and projections made in *Budget 2012* and *SPU 2012* reflected unforeseen one-off factors such as the change in the accounting treatment of the 2012 promissory note payment.[17]

[16] The General Government balance (GGB) is a more comprehensive measure of the Government's financial performance than the Exchequer balance (see Glossary). For more details on the GGB see *Budget 2013* (Table 13) and the *National Income Expenditure Accounts 2011* (Table 21a). The official General Government estimates will be published in the Maastricht returns (EDP Notification Tables). These are submitted to Eurostat by each Member State twice a year, at end-March and end-September. The tables contain official estimates for the levels of the GGB and General Government debt for the preceding four years as well as forecasts for the current year. They are compiled by the Department of Finance and the Central Statistics Office.

[17] The Exchequer deficit projections in *Budget 2012* and *SPU 2012* included €3.1 billion in capital expenditure in respect of the promissory note payment to Irish Bank Resolution Corporation (IBRC). This payment was settled through a Government bond, which was reflected in the end-April Exchequer statement. This had the effect of lowering capital expenditure and the 2012 Exchequer deficit by €3.1 billion.

Much of the remaining differences reflected a significant underestimation of revenues, an aspect that persisted up to and including *Budget 2013*.

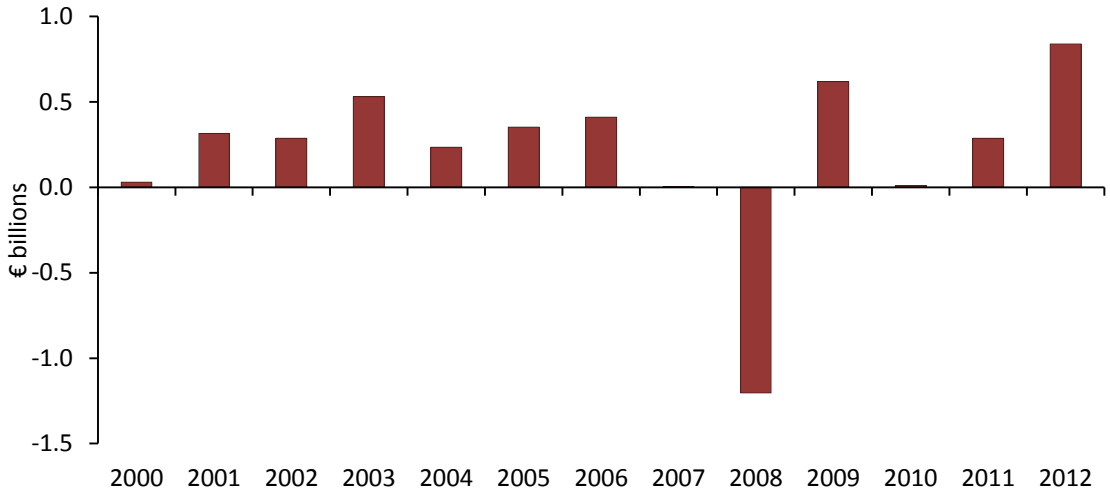
TABLE 2.1: DEPARTMENT OF FINANCE PROJECTIONS FOR 2012 AND OUTTURN

| € Billions | *Budget 2012* | *SPU* 2012 | *Budget 2013* | Outturn |
|---|---|---|---|---|
| | Dec-11 | Apr-12 | Dec-12 | |
| **Exchequer Deficit** | **18.9** | **18.7** | **15.7** | **14.9** |
| **Revenue** | 40.1 | 40.9 | 40.9 | 41.7 |
| ***Tax*** | 35.8 | 36.4 | 36.2 | 36.6 |
| ***Non-Tax*** | 2.5 | 2.7 | 2.8 | 2.8 |
| ***Capital*** | 1.8 | 1.7 | 2.0 | 2.3 |
| **Expenditure** | 59.0 | 59.5 | 56.6 | 56.6 |
| ***Primary Current Expenditure*** | 42.9 | 43.3 | 44.1 | 43.9 |
| ***Interest***[18] | 6.6 | 6.1 | 5.7 | 5.7 |
| ***Capital*** | 9.5 | 10.1 | 6.8 | 7.1 |
| **Adjusted Expenditure (excluding promissory note)** | 55.9 | 56.4 | 56.6 | 56.6 |
| **General Government Deficit** | 13.7 | 13.1 | 13.3 | 12.7 (e) |
| **General Government Deficit, % of GDP** | 8.6 | 8.3 | 8.2 | 7.7 (e) |
| **General Government Debt, % of GDP** | 115.0 | 117.5 | 117.6 | 116.8 (e) |
| **Nominal GDP** | 159.1 | 158.9 | 163.2 | 163.6 |

*Sources: Budget 2012, SPU 2012, Budget 2013, end-2012 Exchequer Returns, CSO and IFAC calculations.*
*Note: General Government deficit outturn in 2012 based on IFAC estimates (see Section 2.3 for details).*

[18] This is an IFAC estimate as the data were not published. Interest is derived based on figures for General Government interest and the profiles for Exchequer debt servicing costs published during the course of last year. General Government interest in 2012 is estimated at €6.3 billion with only a minor interest charge in relation to the promissory note due to the interest holiday (for more details see *Budget 2013*, Table 11, page C.20).

FIGURE 2.1: EXCHEQUER BALANCE FORECASTING ERROR




*Note: Values above the axis indicate that the current year Exchequer outturn was better than the Budget day estimate .*
*Source: IFAC estimates.*

The outturn for Exchequer revenues in 2012 exceeded the *Budget 2012* forecast by €1.6 billion. Much of this was accounted for by technical and timing factors.[19] The tax revenue outlook was subsequently revised in *SPU 2012* and the 2012 outturn for overall tax revenues was €0.2 billion above that estimate. Non-tax revenues were underestimated in both *Budget 2012* and *SPU 2012* due to larger than expected receipts from the Spectrum auction in November 2012. In *Budget 2013*, taxes were underestimated by approximately €0.5 billion due to stronger than expected receipts in December.[20] This had followed relatively weak tax outturns in October and November (see Box B for a discussion of Department of Finance tax forecasts).

Total expenditure in 2012 was below both the *Budget 2012* and *SPU 2012* projections by €2.4 billion and €2.9 billion, respectively. However, the accounting treatment of the promissory note distorts comparisons. If the latter element is excluded, primary current expenditure exceeded *Budget 2012* and *SPU 2012* projections by an estimated €1.0 billion and €0.6 billion, respectively. Much of this reflected higher expenditure in the Departments of Social Protection and Health, in

[19] These relate mainly to the late receipt of Corporation Tax income, a reclassification of PRSI receipts to income tax and Social Insurance Fund receipts.

[20] In *Budget 2013* it was assumed that end-year Exchequer taxes would be €0.2 billion below the Department of Finance tax profile for 2012 whereas end-year taxes outperformed the profile by €0.3 billion. On the capital side there was a €0.3 billion repayment of loans to the Social Insurance Fund which added to capital receipts in December. This transaction, however, was revenue neutral as both the loan and its repayment occurred in December.

part due to weak PRSI receipts (see Box D for more details).[21] In contrast, interest payments last year were significantly below what was estimated in *Budget 2012* and *SPU 2012*. The outturn for overall expenditure in 2012 was close to the *Budget 2013* estimate, with primary current spending below the estimate.

### General Government Balance

It appears likely that the General Government outturn in 2012 will be significantly better than was projected in *Budget 2012*, *SPU 2012* and *Budget 2013* (Table 2.1). The *Budget 2013* estimate of a General Government deficit of 8.2 percent of GDP in 2012 was based on an Exchequer deficit of €15.7 billion. As the actual Exchequer outturn was €0.8 billion lower, it is likely that the General Government deficit will have improved. This is consistent with recent official statements.[22] In addition, the outturn for nominal GDP in 2012 was approximately 0.3 percentage points higher than was estimated in *Budget 2013*. The exact figure for the General Government deficit, however, will not be known until the publication of revised General Government estimates in April. The subsequent analysis contained in this report is based on the assumption that the General Government deficit in 2012 was 7.7 percent of GDP with a positive annual carryover improvement of 0.2 percent of GDP over the period to 2015.[23]

### General Government Debt

Over the course of 2012, the forecast for the level of General Government debt was revised upwards by almost €9 billion reflecting borrowing by the NTMA in the bond markets.[24] This borrowing will ease funding requirements in early 2014.[25] By end-2012, the Government had substantial holdings of cash balances (€19.3 billion). This provides an important cushion in respect of post-2013 funding needs.

[21] Of the €560 million net overrun in current spending in the Department of Social Protection, €356 million related to a shortfall in PRSI receipts.

[22] See the transcript of the Oireachtas Committee on Public Accounts, 07 March 2013.

[23] The carryover assumption is that 90 percent of the better than expected Exchequer outturn in 2012 translates into the General Government balance in 2012 with a positive carryover of 0.2 percent of GDP in subsequent years. This is a technical assumption and not a forecast.

[24] This included bond switches (€4.5 billion); the issuing of conventional bonds (€4.2 billion); the issuing of amortising bonds (€1.0 billion); and a return to regular Treasury Bill auctions.

[25] Ireland had faced a bond repayment of €11.9 billion in January 2014. This payment has now been eliminated as a result of NTMA activity, which included a further €2.5 billion syndicated bond sale in January 2013. In March, a further €5 billion was raised with the sale of a new 10-year benchmark bond.

### BOX B: DEPARTMENT OF FINANCE ONE-YEAR-AHEAD TAX FORECASTS

This box examines the Department of Finance's tax forecasting performance over the period 1997-2012. Of interest are the size and direction of forecast errors as well as the relative contributions of different tax categories to the overall error.[26] Forecasting errors are measured by comparing one-year-ahead tax forecasts published in the Budget for total tax revenue and for individual tax heads with outcomes from the end-year Exchequer returns.[27]

Summary measures of forecasting errors are shown in Table B1 and Figure B1, both for the entire period under review and for three sub-periods (corresponding roughly to the pre-crisis period, the height of the crisis and the aftermath). The mean error (ME) shown in Table B1 is calculated as the average of the yearly differences between tax outturns and the corresponding one-year-ahead Budget forecast, expressed as a percentage of the actual outturn.[28] This measure is a useful indicator of the average direction of the forecast errors and can be informative about possible bias in the forecasting process. The root mean square error (RMSE) measure shown in Figure B1 gives a better sense of the magnitude of the errors, as it is not differentially affected by positive and negative errors.[29]

For the period as a whole, the ME across tax heads was slightly negative (-1.1 percent). It is evident from Table B1, however, that this average was influenced heavily by large negative errors in 2008-2009, as the Department of Finance (and forecasting agencies generally) failed to predict the sharp economic downturn.[30] For 10 of the 16 years in the sample, forecast errors for overall tax revenue were positive, peaking at 8.5 percent in 2006 (Figure B2).

With the exception of the 2010-2012 period, the largest RMSEs have been consistently in capital taxes and the "other" category, with the latter including stamp duties. The major influence of property market developments on these tax categories is reflected in the large positive MEs during the boom years, as revenues from this source were underestimated, followed by even larger negative errors during the subsequent correction. Figure B2 shows that the contributions of errors in capital and "other" taxes became more significant between 2003 and 2009, when these categories had a major influence on the overall tax forecasting error, despite the small size of their contributions to the total tax take. For example, in 2005,

[26] We examine six tax categories. These include the four main tax heads – income tax, VAT, excise and corporation tax – which accounted for 33 percent, 29 percent, 15 percent and 14 percent of the total tax take respectively over the 1997-2012 period. The remaining two categories are capital taxes, comprising capital gains tax and capital acquisitions tax (5 percent of total) and "other", that includes stamp duties and customs duties (4 percent of total). Customs duties are forecast by the Revenue Commissioners.

[27] For example, for 2012, tax outturns published in the end-year Exchequer Statement for 2012 are compared with forecasts made in *Budget 2012*, published in December 2011.

[28] A positive error indicates that the outturn was greater than the forecast and implies that the Department of Finance underestimated the actual outturn in a particular year. Negative errors imply that the Department of Finance overestimated actual outturns.

[29] The RMSE is calculated as the square root of the mean of the errors squared, where the error is defined in the same way as for the ME.

[30] Forecasting errors during the previous economic downturn in 2001 and 2002 were also negative.

capital and "other" taxes contributed 13 percent to total tax revenue but accounted for over two-thirds of the forecasting error.

Table B1: Mean Error by Tax Head

| | 1997-2012 | 1997-2007 | 2008-2009 | 2010-2012 |
|---|---|---|---|---|
| **Income Tax** | 0.3 | 2.3 | -8.6 | -1.2 |
| **Excise** | -2.5 | -0.9 | -16.0 | 0.4 |
| **Capital Taxes** | -0.7 | 21.8 | -128.8 | 2.5 |
| **VAT** | -1.9 | 1.3 | -20.7 | -1.1 |
| **Corporation Tax** | -3.0 | 2.0 | -42.4 | 5.3 |
| **Other** | 0.6 | 7.9 | -54.9 | 10.9 |
| **Total** | -1.1 | 2.7 | -24.7 | 0.6 |

FIGURE B1: ROOT MEAN SQUARE ERRORS BY TAX HEAD

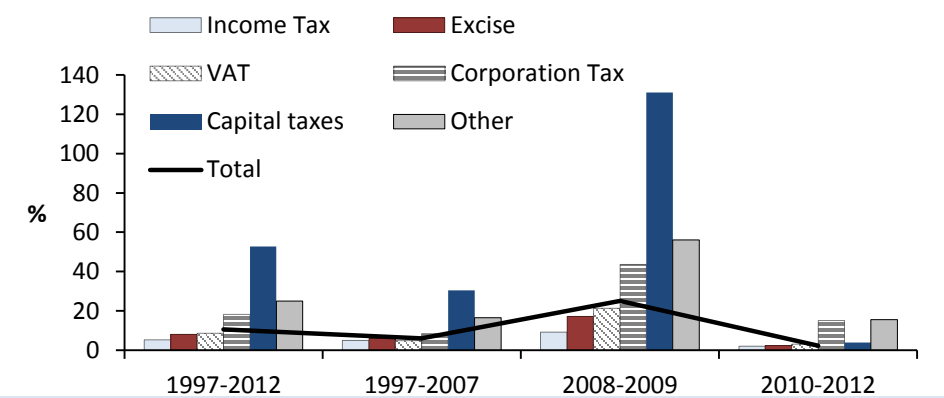
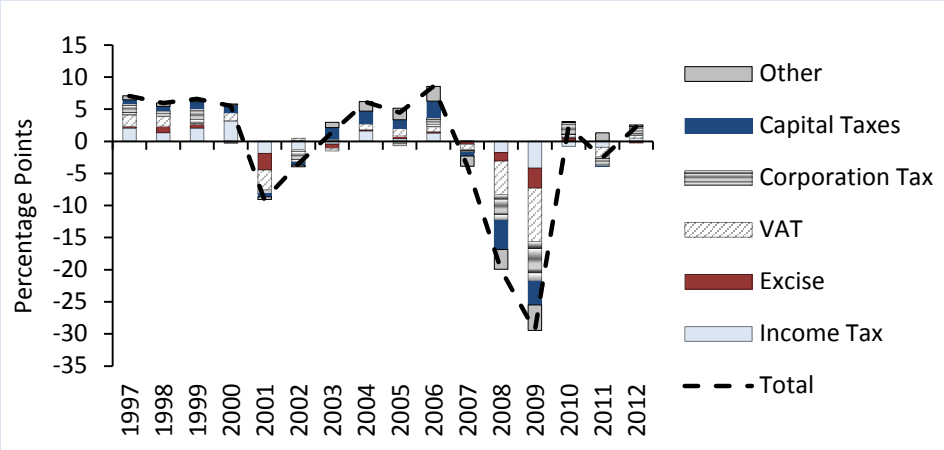



FIGURE B2: CONTRIBUTION OF EACH TAX HEAD TO THE OVERALL ERROR[31]




[31] This chart shows the proportion of the overall percentage forecasting error that can be attributed to each tax head. A negative error implies that the outturn was less than the forecast and vice versa. For example, in 2009, total tax receipts were overestimated by almost 30 percent. The overestimation of VAT and corporation tax accounted for over 8 and 6 percentage points of this error respectively.

## 2.3 An Assessment of the Budget Forecasts for 2013 to 2015

### 2.3.1 Overview and Updated Budgetary Outlook

*Budget 2013* involved total consolidation measures of €3.5 billion with the objective of reducing the General Government deficit to 7.5 percent of GDP in 2013.[32] Further measures of €3.1 billion in 2014 and €2.0 billion in 2015 were planned to bring the General Government deficit down to 2.9 percent of GDP by 2015 (See Appendix Table B1 for details on the consolidation measures).

There have been two important post-Budget developments which improve the budgetary outlook. First, as mentioned above, the Exchequer outturn in 2012 was €0.8 billion better than was estimated in *Budget 2013.* Given this, the Council is basing its analysis on a General Government deficit in 2012 of 7.7 percent of GDP. In addition, the Council is making a technical assumption that this provides a positive annual carryover of 0.2 percent of GDP for the period to 2015 relative to the outlook in *Budget 2013*. Second, in February the promissory notes owed by the Government to the Irish Bank Resolution Company (IBRC) were replaced with a portfolio of Irish Government bonds as part of the orderly wind-up of the IBRC (see Box C). According to Department of Finance estimates, this transaction is largely deficit neutral in 2013 but improves the General Government deficit by 0.6 percent of GDP in 2014 and 2015 (Department of Finance, 2013b).

In Table 2.2, the *Budget* 2013 projections updated based on these technical assumptions is shown. The 2013 General Government deficit would be less than 7.5 percent of GDP and by 2015 would be approximately 1 percentage point of GDP below the *Budget 2013* outlook.[33] Similarly, the level of General Government debt is likely to be below the *Budget 2013* outlook by 2015 reflecting the effects of the promissory note transaction and lower budget deficits.

[32] The composition of this adjustment was altered between *SPU 2012* and *Budget 2013* with a €0.3 billion reduction in the expenditure adjustment offset by measures on the revenue side.

[33] This update is based on the outlook for nominal GDP growth from *Budget 2013*. The figures in this report refer to the underlying General Government deficit. According to *Budget 2013*, the underlying deficit was 9.1 percent of GDP in 2011, 8.2 percent in 2012, 7.5 percent in 2013, 5.1 percent in 2014 and 2.9 percent in 2015. This compares with an actual General Government deficit of 13.4 percent in 2011, 8.2 percent in 2012, 7.6 percent in 2013, 5.2 percent in 2014 and 3.0 percent in 2015, as set out in *Budget 2013*. The difference between the actual and underlying deficit reflects financial sector measures estimated at €6.8 billion in 2011, €0.1 billion in each of 2012-2014 and €50 million in 2015 (for more details see *Budget 2013*, Table 12).

The most recent data from the Exchequer returns showed an Exchequer deficit of €3.7 billion in the first quarter of 2013 down from €4.3 billion at end-March 2012.[34] Exchequer tax revenues and overall expenditures were in line with Government expectations in the first quarter. These data have not affected the Council's view on the fiscal outlook in 2013.

TABLE 2.2: TECHNICAL UPDATE OF *BUDGET 2013* OUTLOOK FOR THE GENERAL GOVERNMENT DEFICIT

| % of GDP | 2013 | 2014 | 2015 |
|---|---|---|---|
| **Budget 2013** | 7.5 | 5.1 | 2.9 |
| **Impact on General Government Deficit** | | | |
| **Promissory Note Transaction** | 0.0 | +0.6 | +0.6 |
| **Carryover from 2012 Exchequer Outturn** | +0.2 | +0.2 | +0.2 |
| **Updated Budgetary Outlook** | | | |
| **General Government Deficit** | 7.3 | 4.3 | 2.1 |

*Note: IFAC calculations. Numbers rounded to one decimal place.*

[34] This included €934 million in ELG payments associated with the liquidation of the Irish Bank Resolution Corporation. This is largely offset by a €1 billion Exchequer receipt from the sale of the Bank of Ireland CoCo in January.

## Box C: Impact of the Promissory Note Announcement on the Government Accounts

In February 2013, the Government announced a set of transactions related to official support for the financial sector, including the orderly wind-up of the state-owned IBRC and the replacement of the promissory notes (PNs) issued by the Government to IBRC with a portfolio of Irish Government bonds. The transactions are explained in a number of Department of Finance documents (see, for example, Department of Finance 2013b and 2013c). The details in this box are based on the calculations and assumptions in the documents published by the Department of Finance at the time of the transaction.

### Overview of the Pre- and Post-Promissory Note Transaction

The February transactions involve the Exchequer and the General Government sector, as well as a number of institutions outside the General Government sector:

- The former IBRC, a vehicle set up to wind down two nationalised financial institutions:
- Anglo Irish bank and Irish Nationwide Building Society.
- The National Asset Management Agency Investment Ltd (NAMAIL), a special purpose vehicle in which the Government has a 49 percent stake.[35]
- The Central Bank of Ireland (CBI), which is owned by the Government but remains independent in the performance of its functions.

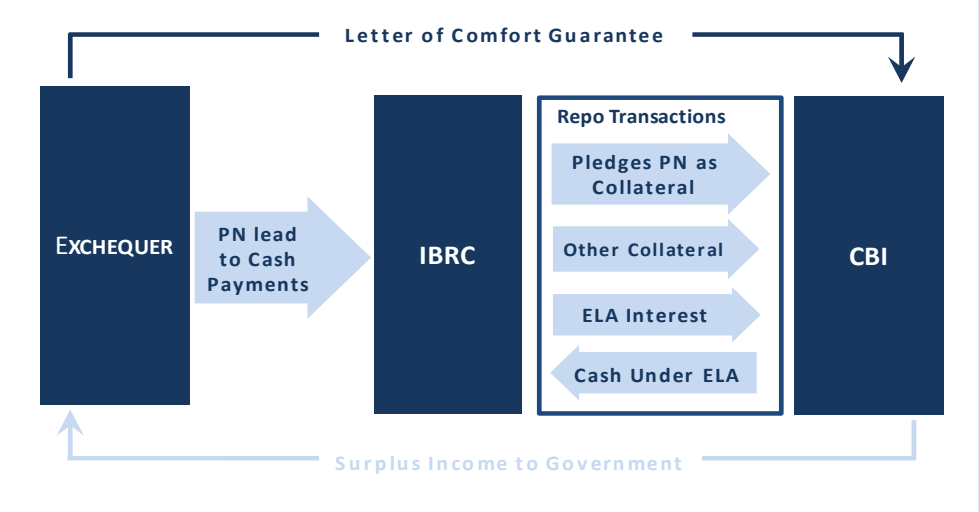
Immediately prior to the February 2013 transactions, the Exchequer was committed to making annual interest and remaining principal payments under the PN with a nominal value of approximately €25 billion that had been previously issued to IBRC. The arrangement aimed to provide capital to IBRC and allowed it to access CBI funding. Exceptional Liquidity Assistance (ELA) from the CBI was secured by the PNs, along with a Ministerial Guarantee and a floating charge over all IBRC assets. The majority of CBI net interest income from the ELA facility provided to IBRC was remitted back to the Exchequer, allowing for the cost of funding to the Eurosystem and any retention of profits by the CBI in accordance with legislation.

The PN required the Government to make fixed payments for a number of years. The full details of the arrangements are complex and were set out in IFAC (2012a, pp. 26-29). From 2011 to 2023, the Government was committed to paying €3.1 billion each year (including an interest charge and amortisation of the capital) with lower final payments out to 2031.[36]

[35] "In order to achieve its objectives, NAMA established a special purpose vehicle (SPV), National Asset Management Limited, which is responsible for the purchase, management and disposal of loan assets from participating institutions and financing such purchases through the issuance of debt securities. The SPV is owned jointly by private investors (51%) and NAMA (49%) through an investment holding company, National Asset Management Agency Investment Limited. NAMA maintains a veto over all activities of the SPVs. The annual return to the private investors is capped as it is linked to the Irish Government 10 year bond yield at the time it is declared with the potential upside of 10% of capital invested to be paid at maturity if NAMA meets its objectives. All other profits and losses accrue to NAMA" (NAMA 2010, p.15).

[36] Total Government payments due under the PN to IBRC amounted to €47.4 billion (€30.6 billion in capital and €16.8 billion in interest) over the twenty year period to 2031.

The operation of these arrangements is summarised in the following diagram:




The February 2013 transactions had several elements. There is an orderly wind up of IBRC. The CBI took economic ownership of the PNs that it held as collateral for the provision of ELA. The CBI then exchanged this for a portfolio of new Irish Government bonds and also took ownership of a related bond held by Bank of Ireland.[37,38] NAMA paid its own senior bonds in exchange for the remaining assets in IBRC which were secured by a floating charge.

The CBI will assign rights and entitlements over the remaining IBRC assets to NAMA in exchange for NAMA bonds. The Special Liquidators of IBRC will be obliged to dispose of the assets and apply the proceeds of the sale to discharge the creditors of IBRC including NAMA. Any assets not sold to third parties will be acquired by NAMA. Any resulting losses for NAMA will be compensated by the Government. The full impact on the Government accounts will, therefore, not be known until the final required transfers to NAMA are concluded.

The new Irish Government bonds pay interest based on the variable 6-month Euribor interest rate plus an interest margin which averages just over 2.6 percent. The maturities range from 25 to 40 years and have bullet redemptions, meaning that the capital is only repaid at end of the life of the bond rather than being amortised during the course of the loan. The maturities are:

- Three tranches of €2 billion each maturing after 25, 28 and 30 years.
- Three tranches of €3 billion each maturing after 32, 34 and 36 years.
- Two tranches of €5 billion each maturing after 38 and 40 years.

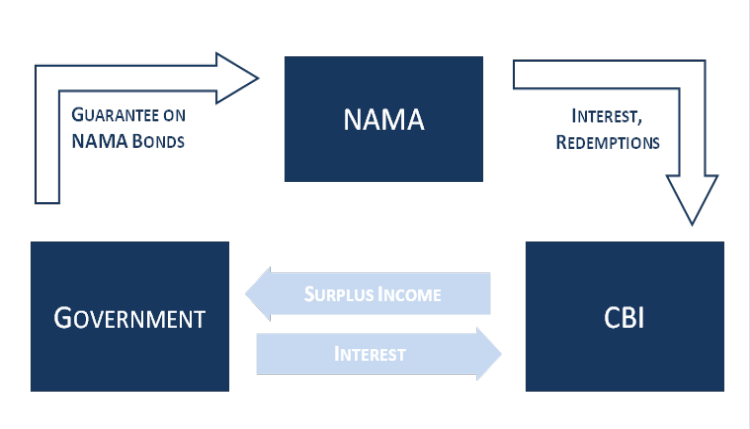
[37] The 2025 Government bond repo agreement between IBRC and Bank of Ireland has been unwound with the CBI now holding this asset. This bond related to the settlement of the 2012 PN payment.

[38] In contrast to the original PN structure, the February transaction involves fully marketable instruments.

The new arrangements imply that the Government will pay interest to the bond holders, eventually repaying the capital beginning in 2038.[39] Where the CBI continues to hold these assets, it will receive income from the coupon payments on the bonds. The CBI will continue to remit surplus income to the Exchequer in accordance with accounting standards and legislative requirements.

The CBI has undertaken to sell the Irish Government bonds that it owns due to the liquidation of IBRC to market investors "as soon as possible" but subject to financial stability considerations.[40] The CBI has committed to a minimum schedule of sales beginning by end-2014. These sales will result in an inflow of cash to the CBI, thereby allowing it to reduce Eurosystem *TARGET* liabilities. However, future interest payments and redemptions on those bonds sold will be made to private investors, which will reduce future potential CBI surplus income payable to the Exchequer. Any capital gains or losses on CBI bond holdings could also affect the surplus income to be transferred to the Exchequer. Sales of the CBI bond holdings to the market may have a broadly similar market impact as an increase in sales of Government bonds directly to the primary market.[41]

The initial operation of these arrangements, prior to CBI sales to the private sector, are shown in the following diagram:




[39] See NTMA (2013) for details.

[40] In addition, the CBI will have an option to exchange a portion of new floating rate bonds for fixed coupon bonds.

[41] These bond sales will add to the Exchequer Borrowing Requirement by, at least, the amount of the reduction in surplus income that will be returned to the Exchequer. The income recorded by the CBI is determined by a number of factors including market valuations.

### ACCOUNTING TREATMENT IN THE GENERAL GOVERNMENT ACCOUNTS

On a cash basis in the Exchequer accounts, €3.1 billion of PN payments were included in the Exchequer borrowing requirement from 2011 and would have been added to the Exchequer Accounts in every year to 2023 (with smaller amounts out to 2031). In 2012, this PN payment was settled through the issuance of a 2025 Government bond rather than in cash. This bond was held by Bank of Ireland through a repo with IBRC, which is now being unwound, with the CBI now holding the bond.

The General Government (GG) ESA 95 Eurostat accruals accounting treatment of the PNs was complex. In 2010, the face value of future redemptions under the PN (then amounting to €30.85 billion) worsened the GG deficit and increased GG debt.[42] This amounted to approximately 20 percent of GDP in 2010.[43] For 2011 and 2012, the GG accounts allowed for an "interest holiday" during which no interest payments were made. As a result, in 2013, prior to the February transaction being agreed, there was due to be a sharp increase in recorded interest spending of €1.8 billion. The level of these interest payments under the PN accrued to the GG would have declined gradually in future years.

The Department of Finance estimates that the February 2013 PN transaction may have almost no impact on the GG balance for 2013 but a positive impact of around €1 billion in both 2014 and 2015 based on a no policy change assumption (Table C1). In 2013, there will be costs of approximately €1 billion incurred by the Government associated with claims under the Eligible Liabilities Guarantee (ELG). The improvement in the GG balance in 2014 and 2015 reflects lower (ESA 95) interest costs for the Government, with a small additional benefit in terms of higher CBI surplus income because the interest income for the CBI on the new bonds is higher than the interest income arising from the ELA provided to IBRC. For 2013, these gains are effectively offset by estimated ELG claim costs related to the winding up of IBRC. The Department of Finance did not show the effect of the February transactions on the Structural Budget Balance (SBB). There is likely to be an improvement in the SBB in 2013 as the one-off nature of the ELG claim costs means that it is excluded from this balance.

The impact on the GG debt is shown in Table C2. In 2013, the level of GG debt has been revised up by €1.35 billion due largely to ELG claim costs. The higher interest costs are due to the fact that coupon payments on the newly issued Government bonds exceed the coupon payments on the PN. By 2015 cumulatively there is a slight decline in the GG debt to GDP ratio as a result of the transaction.

[42] The face value of future redemptions had fallen to €25 billion by 2013 due to repayments already made in earlier years.

[43] In 2010 in accordance with ESA 95 rules the full PN amount of €30.85 billion was included in the GG balance for that year.

TABLE C1: GENERAL GOVERNMENT BALANCE IMPACT 2013-2015

| € millions | 2013 | 2014 | 2015 |
|---|---|---|---|
| Promissory Note – GG Interest Savings | 1,875 | 1,775 | 1,675 |
| Government Bonds – Coupons | -800 | -875 | -950 |
| Change in Central Bank Surplus Income | 0 | 50 | 125 |
| Interest Cost Savings[44] | 0 | 100 | 225 |
| ELG Claim Costs | -1,000 | 0 | 0 |
| Interest Costs Adjustment[45] | -50 | -50 | -50 |
| NAMA Compensation | | (not known) | |
| Change in Underlying GGB due to transaction | **25** | **1,000** | **1,025** |
| Change in GGB relative to ***Budget 2013*** Outlook, % of GDP | **0** | **0.6** | **0.6** |

*Source: Department of Finance (2013b).*

TABLE C2: GENERAL GOVERNMENT DEBT IMPACT 2013-2015

| € millions | 2013 | 2014 | 2015 |
|---|---|---|---|
| Promissory Note – GG Interest Savings | -500 | -1,825 | -1,750 |
| Government Bonds – Coupons | 800 | 875 | 950 |
| Change in Central Bank Surplus Income | 0 | -50 | -125 |
| Interest Savings | 0 | -100 | -225 |
| ELG Claim Costs | 1,000 | 0 | 0 |
| Interest Costs Adjustment | 50 | 50 | 50 |
| NAMA Compensation | | (not known) | |
| Change in GGD in year | **1,350** | **-1,050** | **-1,100** |
| Change in GGD relative to ***Budget 2013*** Outlook, % of GDP | **0.8** | **0.2** | **-0.4** |

*Source: Department of Finance (2013b).*

This box has focused on the known impact of the February 2013 transactions on the General Government accounts to 2015. The overall impact of these transactions on the General Government accounts may be additionally affected by currently unknown factors, namely, potential capital gains or losses from the sales of CBI held bonds from end-2014 onwards as well as the possibility of transfers being required to NAMA related to IBRC assets.[46] To understand the full impact on the overall public finances, further work is required by means of a comprehensive analysis of the State's balance sheet going beyond the standard General Government Accounts (Barnes and Smyth, forthcoming).[47] In order to undertake a full net present value assessment of the PN transactions, assumptions would also be required regarding key variables such as the discount rate for which a range of alternatives could be considered appropriate.

[44] This relates to savings from lower borrowing requirements.

[45] This relates to interest on borrowings to meet claims under the ELG.

[46] The breakdown of bonds purchasers between domestic and foreign residents will also impact on the CBI's borrowings from the Eurosystem. This would, in turn, affect the CBI's surplus income due to the interest paid by the CBI on these borrowings.

[47] Forthcoming IFAC paper: "Towards a Comprehensive Government Balance Sheet: A Preliminary Analysis", Barnes, S., and Smyth, D.

The main revenue and expenditure projections from *Budget 2013* are set out in Table 2.3.[48] On the revenue side, the outlook in *Budget 2013* is similar to that in *SPU 2012*, with revenues projected to increase by just over 4 percent per annum from 2013-15, about half a percentage point higher than the outlook for nominal GDP.

In 2013, Exchequer taxes were projected to increase by €1.8 billion or by 5 percent, driven by revenue raising measures announced in the Budget (see Appendix Table B2 for details). The projected increase in taxes is close to the underlying rate of increase in 2012.[49] Non-tax revenues are projected to decline by €0.4 billion this year. This reflects an assumption that fees from the Bank Guarantee Scheme will fall by close to 60 percent as the Scheme is phased out. This will be partly offset by an increase in surplus income from the Central Bank.[50] These non-tax revenue items are a significant source of income and were discussed in the Council's previous *Fiscal Assessment Report* (IFAC, 2012b).[51]

In 2014 and 2015, revenues are projected to increase slightly faster than nominal GDP. This reflects carryover effects from past tax changes and an assumed gradual recovery in domestic demand as well as a further €1.5 billion in new taxation measures.

On the expenditure side, the forecasts assume a period of negative growth in primary (non-interest) spending. The bulk of the expenditure adjustment is split between public sector pay (compensation of employees), social payments and intermediate consumption (Table 2.3 and Figure 2.2).

[48] These projections do not take account of the two post-Budget developments discussed above.

[49] On an unadjusted basis, Exchequer taxes increased by 7.7 percent in 2012, partly as result of new tax measures announced in *Budget 2012*. However, once adjustments are made for delayed corporation tax receipts and a technical reclassification of PRSI, taxes increased by 5.3 percent.

[50] This relates to *Budget 2013* forecasts and does not account for post-Budget news.

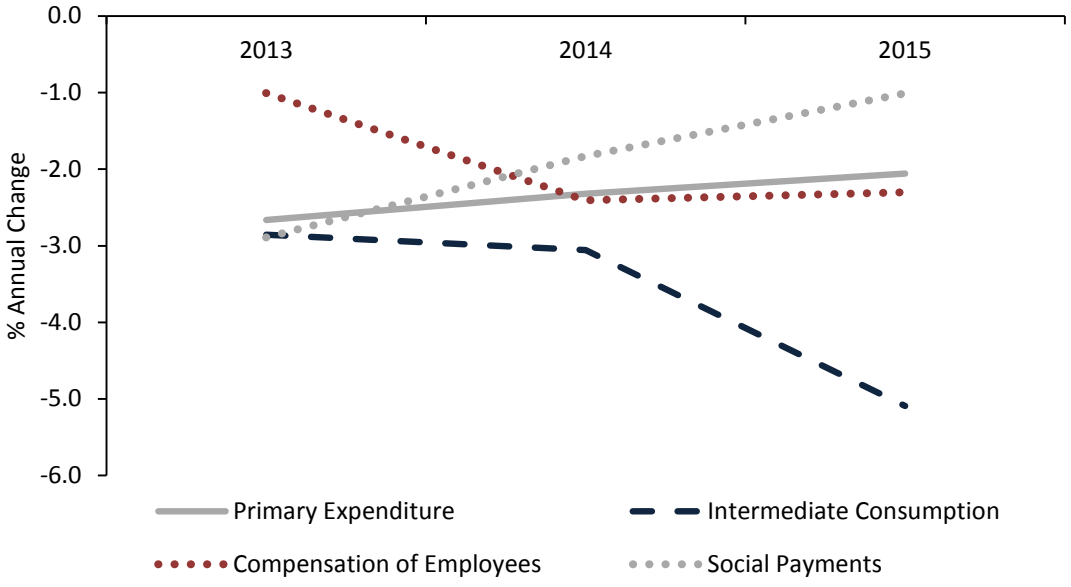
[51] The Department of Finance (2013a) publication 'Monthly EBR Profiles 2013', presented a very informative outline of projected monthly tax and non-tax revenues as well as expenditures over the course of 2013.

TABLE 2.3: *BUDGET 2013* PROJECTED CHANGES IN GOVERNMENT REVENUE AND EXPENDITURE

| € Billions | 2013 | 2014 | 2015 | Cumulative 2013-15 |
|---|---|---|---|---|
| ***Total Revenue*** | **1.9** | **2.7** | **2.7** | **7.4** |
| Tax | 1.9 | 2.9 | 2.6 | 7.3 |
| Social Contributions | 0.4 | 0.3 | 0.2 | 0.9 |
| Other | -0.3 | -0.5 | -0.1 | -0.9 |
| ***Primary Expenditure*** | **-1.7** | **-1.4** | **-1.2** | **-4.3** |
| Compensation of Employees | -0.2 | -0.5 | -0.4 | -1.1 |
| Intermediate Consumption | -0.3 | -0.3 | -0.4 | -0.9 |
| Social Payments | -0.8 | -0.5 | -0.3 | -1.5 |
| Other | -0.4 | -0.2 | -0.2 | -0.8 |

*Note: This table makes no allowance for post-Budget 2013 news. Numbers rounded to one decimal place.*

FIGURE 2.2: *BUDGET 2013* PROJECTIONS FOR GROWTH IN MAJOR EXPENDITURE CATEGORIES

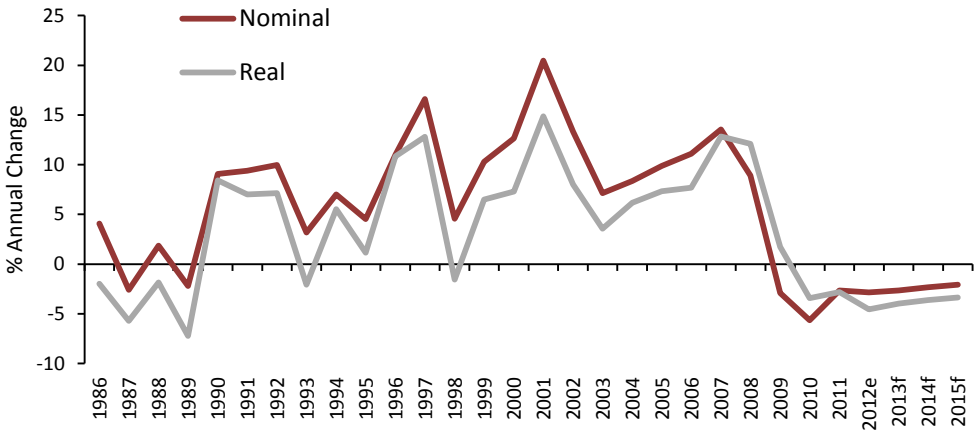



*Source: Budget 2013.*

In 2013, primary expenditure is projected to decline by €1.7 billion. Almost all of this adjustment was anticipated to come from the two largest spending departments: Social Protection and Health, where there were significant expenditure pressures in 2012. This contributed to a number of changes to the departmental expenditure ceilings in 2013. These ceilings are discussed in more detail in Box D.

In 2014 and 2015, the bulk of the budgetary adjustment will be on the expenditure side split between social payments, government consumption and public sector pay. These three areas combined account for nearly 80 percent of total spending and are expected to deliver cumulative savings of €2.3 billion in 2014 and 2015. Implicit in these projections, notably for social payments, is the assumed recovery in the labour market. In addition, substantial "unallocated savings" which include payroll savings of €0.8 billion are assumed in 2014 (See Box D). In total, primary expenditure in 2014 and 2015 is projected to decline by 2.2 percent per annum. With annual inflation expected to average over 1 percent, this amounts to a significant decline in real terms. Judging by historical experience, sustaining negative expenditure growth over a number of years will be difficult (Figure 2.3).

FIGURE 2.3: PRIMARY EXPENDITURE 1986-2015




*Source: Eurostat, Budget 2013 and IFAC calculations.*
*Notes: Series exclude capital transfers. GDP deflator used to derive real series.*

There are significant risks associated with the delivery of the necessary expenditure adjustments given the experience with expenditure ceilings in 2012. The scale of expenditure savings planned over the period to 2015 is sizable (notably in Health). Careful monitoring of expenditure will be essential. The options for further expenditure reduction have also narrowed partly reflecting the very large reductions to date in the capital budget.[52]

In February 2013, following negotiations between the Public Services Committee of the Irish Congress of Trade Unions (ICTU) and the Government, under the auspices of the Labour Relations Commission, a series of proposals aimed at reducing the public service pay bill by €1 billion by 2015 were set out.[53] This new agreement, if passed, would make a valuable contribution to achieving the necessary payroll savings.

### BOX D: CURRENT EXPENDITURE CEILINGS

With the publication of the *Comprehensive Expenditure Report 2012-14 (CER*) in 2011, the annual Estimates campaign was replaced by a multi-annual expenditure ceilings framework. The new approach was aimed at encouraging more medium term expenditure planning and adherence to budgetary targets. The *CER* set out departmental expenditure allocations over a three-year period to 2014. The following statements contained in the *CER* pointed to the binding nature of the ceilings:

"Ceilings for 2012 are binding and fully specified in terms of programme–level allocations."

"Ceilings for 2013 are binding, although there may be some reallocations between Departments, within the set aggregate expenditure level."

"Ceilings for 2014 should be viewed as upper limits of expenditure in that year" (Department of Public Expenditure and Reform, 2012, p.21).

In 2012, spending exceeded ceilings in the Departments of Social Protection and Health partly due to cyclical pressures. The *Expenditure Report 2013 (ER 2013*), published in December 2012, revised the ceilings for 2013 by almost €500 million, thus breaching the "set aggregate expenditure level". This increase has essentially been passed through to 2014 (Table D1). Given these developments, the question arises as to what is meant by the "binding" nature of the ceilings referred to originally.

[52] According to *Budget 2013*, Government investment is projected to decline to 1.4 percent of GDP by 2015. This compares with a share of 4.7 percent of GDP in 2007.

[53] For details see: http://per.gov.ie/wp-content/uploads/LRC-Proposals-printed.pdf

TABLE D1: EXPENDITURE CEILINGS FOR 2013 AND 2014

| € million | Comprehensive Expenditure Report | | Expenditure Report | |
|---|---|---|---|---|
| | 2013 | 2014 | 2013 (change in ceiling) | 2014 (change in ceiling) |
| **Health** | 13,565 | 13,359 | 13,627 (+62) | 13,420 (+61) |
| **Social Protection** | 19,906 | 19,296 | 20,246 (+340) | 19,633 (+337) |
| **Other Departments** | 17,298 | 16,891 | 17,415 (+117) | 17,009 (+118) |
| **Unallocated Savings (incl. pay bill measures)** | 180 | 830 | 220 (+40) | 830 |
| **Gross Current Expenditure** | **50,589** | **48,716** | **51,068 (+479)** | **49,232 (+516)** |

### EXPENDITURE OUTTURN IN 2012

In 2012, current expenditure exceeded its target for the year by €666 million due to spending overruns in the Departments of Social Protection and Health.[54] The overrun in the Department of Social Protection amounted to €560 million and mainly reflected labour market pressures, which included weaker than expected receipts from PRSI and higher spending on unemployment-related allowances. Labour market outturns last year were significantly less favourable than was expected in *Budget 2012*. For example, in *Budget 2012* the unemployment rate was forecast to average 14.1 percent in 2012 but the outturn according to the *QNHS* was 14.7 percent.

The Department of Health exceeded its ceiling by €311 million. According to the *ER 2013*, this arose in part from "service and demographic pressures" which amounted to €713 million. The demographic pressures were largely attributed to a greater than anticipated demand for medical cards.[55] Most of the other departments kept within their expenditure budgets, which helped to partly offset the current expenditure overruns in the Departments of Social Protection and Health.[56] On the capital side, expenditure in 2012 amounted to €3,489 million which was €145 million below budget.

### REVISED AGGREGATE EXPENDITURE CEILINGS IN 2013 AND 2014

In the *ER 2013*, the overall current expenditure ceiling in 2013 was increased by approximately €500 million to €51,068 million with the 2014 ceiling revised by a similar amount (see Table D1). The 2013 ceiling was increased in part due to cyclical pressures associated with the labour market, although little detail has been provided on how the

[54] These figures refer to net voted cumulative current expenditure in the end-2012 Exchequer Statement.

[55] Despite the policy changes announced in *Budget 2013* that will reduce eligibility for approximately 40,000 people currently in receipt of medical cards, the anticipated net growth in medical cards in 2013 is 60,000 (HSE, 2013).

[56] Current spending in Government departments excluding the Departments of Social Protection and Health in 2012 was €205 million under the allocation for the year.

adjustments were made. Offsetting adjustments on the revenue side were taken to keep to the planned €3.5 billion fiscal adjustment in 2013 so the overall budgetary stance was not affected.

### Department of Health Ceiling

The Department of Health's current expenditure ceiling for 2013 was revised upwards from the *CER* ceiling by €62 million. However, in order for spending to be kept within this ceiling, a total of €781 million in saving measures were announced in the *ER 2013*.[57] The savings for this year are partly aimed at correcting an ongoing operating deficit in the Department in the region of €500 million but are also aimed at correcting additional spending pressures that arose in 2012. Half of the €781 million in savings are to be delivered through pay-related initiatives (which include professional fees). Most of the remaining adjustment arises from a reduction in prescription charges and drug related costs (see Table D2). Anticipating expenditure pressures in the Department of Health is more difficult than in other departments given the demand-driven nature of the health services. A welcome recent development is that the Health Service Executive (HSE) and the Department of Health will report on a monthly basis to the Cabinet Committee on Health on the implementation of the Health sector measures to proactively prevent expenditure overruns.

### Department of Social Protection Ceiling

The Department of Social Protection's current expenditure ceiling was revised upwards by €340 million. Most of this reflected cyclical labour market pressures that arose in 2012. The remainder of the increase was accounted for by the decision in *Budget 2013* to increase spending in social welfare by €150 million. To adhere to the new ceiling for 2013, however, €390 million in new saving measures were announced in *Budget 2013*, the most important of which was a reduction in child benefit (see Table D2). For future expenditure reports, it would be helpful if changes to expenditure ceilings as a result of cyclical and non-cyclical developments were documented more explicitly.

### Risks

While the Department of Social Protection exceeded its ceiling in 2012, the reasons appear to reflect predominantly cyclical pressures. In the case of the Department of Health, while there were also cyclical pressures, the impact arising from other areas is less clear. The Department of Health has persistently exceeded its expenditure budget in recent years.[58] A recent report by the HSE highlighted the challenges facing the sector in 2013.[59] The failure to deliver on planned current expenditure savings in 2012 and the significant measures planned for 2013

[57] The required level of savings for the Department of Health in 2013 has been revised upwards significantly since the publication of the *CER 2012-2014* which specified savings of €71 million.

[58] In 2009, 2010, 2011 and 2012, the current expenditure overruns in the Department of Health were €0.2 billion, €0.4 billion, €0.1 billion and €0.3 billion, respectively. The Department of Social Protection exceeded its budget in 2010 and 2012 but under spent in 2009 and 2011.

[59] The HSE (2013) report referred to "... unavoidable pressures of €748 million" facing the HSE and the need to achieve savings of €721 million.

are a key risk to meeting budgetary targets this year. While savings of €781 million have been specified in the *ER 2013*, questions must be raised about the capacity of the Department of Health (and of the HSE) to deliver. These may ultimately be achieved but recent experience suggests that careful monitoring throughout the year will be needed.

Beyond the Departments of Health and Social Protection, there are also sizable unallocated savings, primarily pay bill savings, in the *ER 2013* of €0.2 billion in 2013 and €0.8 billion in 2014. These pay bill savings account for half of the planned expenditure adjustment in 2014. A failure to deliver on these pay savings is another sizable risk and would necessitate cuts in expenditure in other areas and/or higher taxes and charges. However, the Croke Park Extension Agreement could make a valuable contribution to achieving the necessary payroll savings.

While the binding nature of the ceilings was discussed in the *CER*, the intended legal nature of the ceilings is set out in the *Ministers and Secretaries (Amendment) Bill* (*MSAB*), published in September 2012.[60] The *MSAB* sets expenditure ceilings on a rolling three-year financial basis.

TABLE D2: SAVINGS MEASURES IN THE DEPARTMENTS OF HEALTH AND SOCIAL PROTECTION

| *Department of Health* | Savings in 2013 | Full Year Savings |
|---|---|---|
| | € million | |
| Reduction in cost of drugs and other prescribed items | 160 | 330 |
| Increase DPS threshold to €144 per month | 10 | 10 |
| Increase prescription charges for medical card holders | 51 | 51 |
| Reduced professional fees | 70 | 80 |
| Other changes to Primary Care scheme | 32 | 44 |
| Pay-related savings | 308 | 458 |
| Increased generation of private income | 65 | 115 |
| Savings on Department vote | 60 | 60 |
| Procurement measures | 20 | 20 |
| Other measures | 5 | 5 |
| Total net savings | **781** | **1,173** |

[60] http://www.oireachtas.ie/documents/bills28/bills/2012/8112/b8112.pdf

TABLE D2 (CONTINUED): SAVINGS MEASURES IN THE DEPARTMENTS OF HEALTH AND SOCIAL PROTECTION

| *Department of Social Protection* | Savings in 2013 | Full Year Savings |
|---|---|---|
| | € million | |
| Child Benefit: Reduction in Rates | 136 | 142 |
| Back to school clothing and footwear allowance: Reduction in rates | 17 | 17 |
| Changes to the Farm Assist programme | 4 | 5 |
| Job Seekers Benefit: Reduction in duration | 33 | 82 |
| Changes to Redundancy Payments Scheme | 25 | 30 |
| Changes to Supplementary Welfare Allowance | 6 | 6 |
| Changes to Back to Education Allowance | 11 | 24 |
| Reduction in Respite Care Grant | 26 | 26 |
| Changes to Household Benefits Package | 81 | 84 |
| Fraud, Control and Overpayments: Increased control measures | 60 | 60 |
| Administrative savings | 5 | 5 |
| Increased funding for activation programmes and school meal provision | (13) | (28) |
| Total net savings | **390** | **452** |

### 2.3.2 FORECASTS BY OTHER AGENCIES

A comparison of *Budget 2013* projections with recent forecasts of other agencies is shown in Table 2.4. Around the time of the Budget, there was a consensus on the outlook with all agencies expecting the budget deficit to fall to just below 3 percent of GDP in 2015. Similarly, the debt to GDP ratio was projected to peak this year at just over 121 percent of GDP. A more recent forecast from the IMF based on more up to date information has a more positive outlook for the General Government balance, with the deficit projected to improve to 2.2 percent of GDP in 2015.

TABLE 2.4: FISCAL OUTLOOK 2013 TO 2015

| % of GDP | *Budget 2013* | OECD Dec 2012 | ESRI Jan 2013 | EC Jan 2013 | IMF[61] Apr 2013 |
|---|---|---|---|---|---|
| ***2013*** | | | | | |
| **General Government Balance** | -7.5 | -7.5 | -7.5 | -7.5 | -6.8 |
| **General Government Debt** | 121.3 | 121.9 | 121 | 122.1 | 122.5 |
| **Nominal GDP, % y/y** | 2.8 | 1.6 | 3.0 | 2.4 | 2.3 |
| ***2014*** | | | | | |
| **General Government Balance** | -5.1 | -5.3 | -5.1 | -5.1 | -4.4 |
| **General Government Debt** | 120.2 | 122.0 | 118.0 | 119.5 | 120.7 |
| **Nominal GDP, % y/y** | 3.8 | 2.9 | 5.2 | 3.7 | 3.7 |
| ***2015*** | | | | | |
| **General Government Balance** | -2.9 | NA | NA | -2.9 | -2.2 |
| **General Government Debt** | 116.8 | NA | NA | 117.4 | 116.9 |
| **Nominal GDP, % y/y** | 4.2 | NA | NA | 4.4 | 4.3 |

## 2.4 SENSITIVITY ANALYSIS

Previous *Fiscal Assessment Reports* by the Council have served to underscore the high uncertainty surrounding the budgetary outlook.

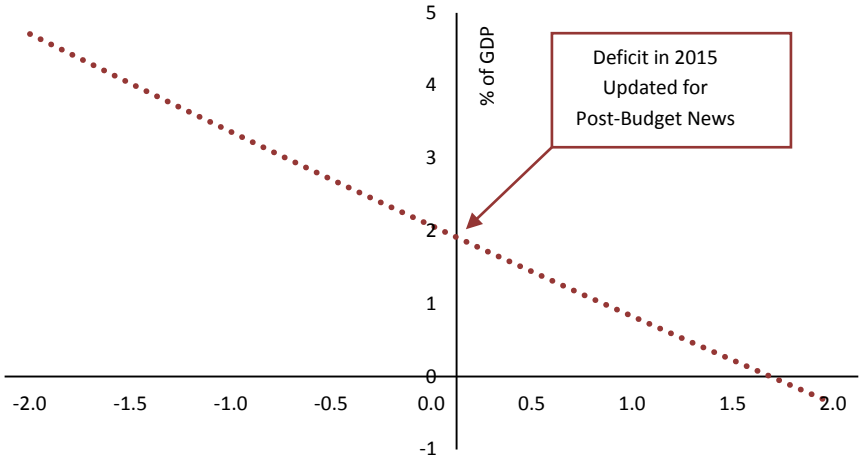
The Council's Fiscal Feedbacks Model can be used to highlight the effect on key fiscal ratios of different growth assumptions. *Budget 2013* projected an average annual nominal GDP growth rate of 3.6 percent from 2013-2015. In Figure 2.4, the growth rate is allowed to vary within two percentage points of this average in each of the years to 2015. These scenarios assume no change in the Government's planned discretionary budget adjustments but are updated to reflect the post-Budget developments described above. Under these assumptions, if growth turns out to be one percentage point weaker per annum over the projection period, then the General Government deficit by 2015 would be 1.3 percentage points higher than in the baseline case (Figure 2.4a). Conversely, if growth surprised on the upside and was one percentage point stronger per annum than in the baseline case, then the General Government deficit in 2015 would be 1.2 percent of GDP lower.

Despite the improvement in the budgetary outlook, overall debt levels in the economy will remain elevated and sensitive to changes in the growth outlook (Figure 2.4b). The sustainability of debt also appears more challenging when alternative measures of output are used. Using GNP, the debt

[61] The IMF figures exclude projected bank restructuring costs related to the Eligible Liabilities Guarantee associated with the liquidation of IBRC.

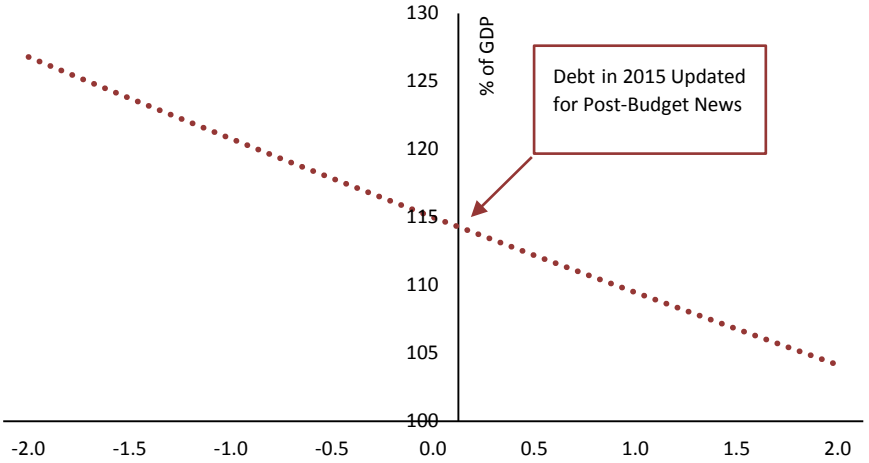
ratio peaks at 149 percent this year, or using the Council's Hybrid measure of output (IFAC, 2012b), the debt ratio reaches 137 percent.

FIGURE 2.4a: GENERAL GOVERNMENT DEFICIT




% Annual difference in nominal GDP from *Budget 2013* outlook

FIGURE 2.4b: GENERAL GOVERNMENT DEBT

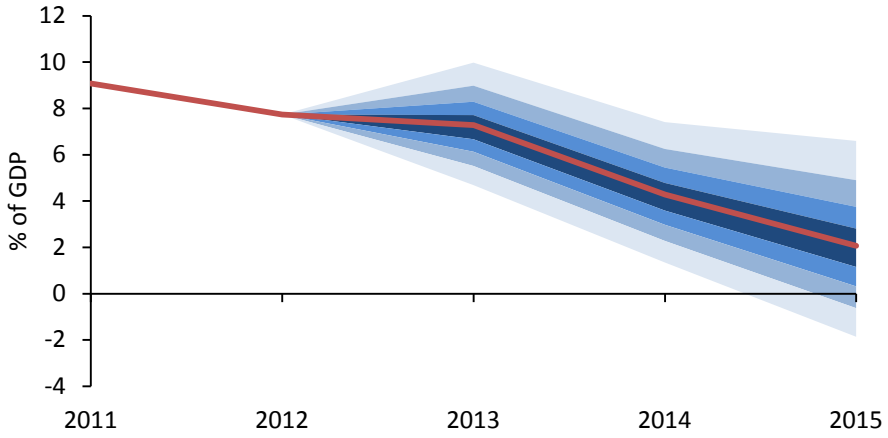



% Annual difference in nominal GDP from *Budget 2013* outlook

In the previous *Fiscal Assessment Report*, fan charts were used to illustrate the impact of alternative growth paths on the public finances. Revised fan charts based on *Budget 2013* and updating for post-Budget developments are shown in Figure 2.5. While there are limitations associated with the use of fan charts, the figures serve to illustrate the fragility of the fiscal position.

The fan charts suggest approximately a one-in-three probability that the deficit to GDP ratio would be above the 3 percent of GDP in 2015 in the absence of offsetting adjustments (Figure 2.5a). Similarly, it implies an estimated one-in-four probability that the debt to GDP ratio will fail to stabilise by the end of the projection period unless further policy measures beyond those currently planned are taken (Figure 2.5b). A fan chart was also constructed for the additional cumulative budgetary adjustments that would be needed to meet existing *Budget 2013* deficit targets (Figure 2.5c).[62]

FIGURE 2.5a: GENERAL GOVERNMENT DEFICIT[63]

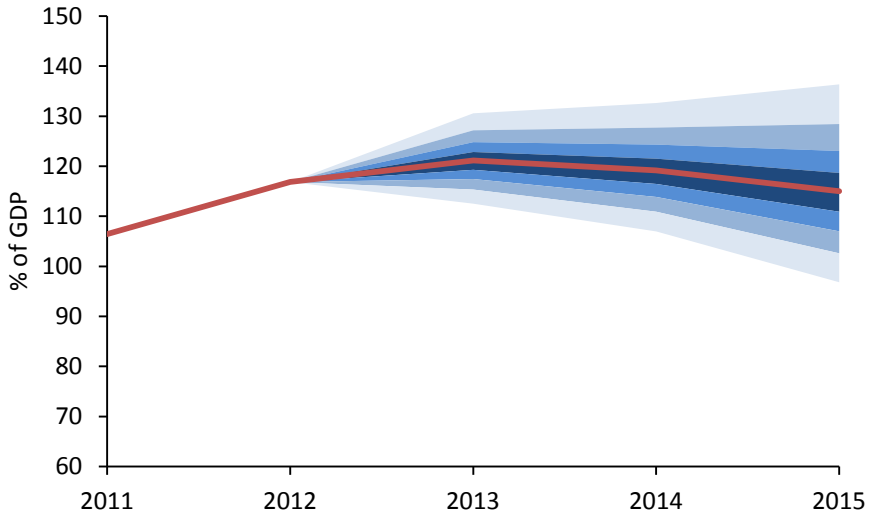



*Source: Budget 2013 and IFAC calculations.*

[62] These adjustments would be additional to the already planned €5.1 billion in 2014-2015.

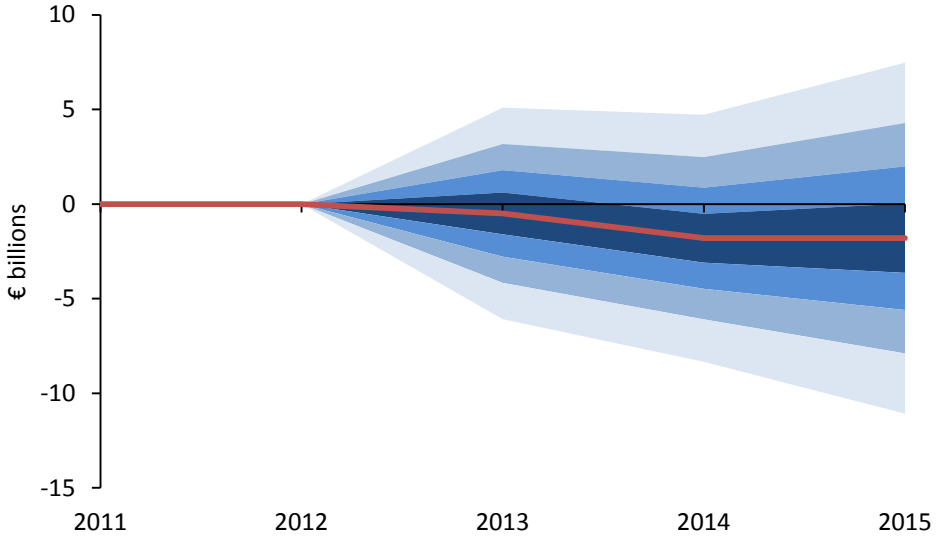
[63] Figure updates the underlying General Government deficit outlook from *Budget 2013*.

FIGURE 2.5b: GENERAL GOVERNMENT DEBT




*Source: Budget 2013 and IFAC calculations.*

FIGURE 2.5c: ADDITIONAL ADJUSTMENTS




*Source: Budget 2013 and IFAC calculations.*

## APPENDIX B: CONSOLIDATION MEASURES TABLES

### TABLE B1: CONSOLIDATION MEASURES: 2013-15

| Consolidation Measures, € Billions | 2013 | 2014 | 2015 |
|---|---|---|---|
| **Total Consolidation** | **3.5** | **3.1** | **2.0** |
| **Tax** | **1.5** | **1.1** | **0.7** |
| ***New*** | *1.2* | *0.9* | *0.6* |
| ***Carryover*** | *0.3* | *0.2* | *0.1* |
| **Expenditure** | **1.9** | **2.0** | **1.3** |
| ***Current*** | *1.4* | *1.9* | *1.3* |
| ***Capital*** | *0.5* | *0.1* | *0.0* |

*Note: Numbers rounded to one decimal place. The carryover in 2013 includes dividends.*

### TABLE B2: DETAILS ON *BUDGET 2013* TAX MEASURES IN 2013

| Revenue | € Billions |
|---|---|
| **Excise Duty** | 0.3 |
| **Property Tax** | 0.3 |
| **Income Tax** | 0.2 |
| **PRSI** | 0.3 |
| **Other Taxes** | 0.2 |
| **Total** | **1.2** |

*Note: Numbers rounded to one decimal place.*

# 3. ASSESSMENT OF COMPLIANCE WITH FISCAL RULES

## SUMMARY


- The *Fiscal Responsibility Act* came into force on 31 December 2012, strengthening Ireland's fiscal institutions by establishing new fiscal rules and placing the Irish Fiscal Advisory Council on a statutory basis as an independent fiscal council.

- *Budget 2013* projections imply compliance with the Budgetary Rule in 2013, 2014 and 2015 as the Adjustment Path Condition for the structural balance would be significantly exceeded.

- The structural budget balance plays a key part in the domestic and EU fiscal rules. However, this poses serious measurement challenges. These need to be addressed both at EU level and by the development of a more comprehensive domestic analysis.


## 3.1 INTRODUCTION

*The Fiscal Responsibility Act* (*FRA*) came into force on 31 December 2012. This strengthens Ireland's fiscal institutions by putting in place new fiscal rules, the Budgetary Rule and the Debt Rule, and by establishing the Irish Fiscal Advisory Council on a statutory basis.

This chapter assesses compliance with the fiscal rules. Section 3.2 sets out key features of the *FRA* and the Council's future approach to monitoring fiscal rules. It assesses the consistency of the current fiscal position in *Budget 2013* with the new budgetary framework. Section 3.3 discusses the measurement and use of the structural budget balance in the fiscal rules.

## 3.2 COMPLIANCE WITH THE FISCAL RULES

Compliance with the fiscal rules set out in the *FRA* is in part supported by monitoring by the Irish Fiscal Advisory Council. The Council also undertakes assessments of official macroeconomic and budgetary projections and an evaluation of the Government's fiscal stance (Box E).[64] The different roles included in the Council's mandate act together to provide independent oversight of whether budgetary management is prudent. The Council's political independence and arms length relationship to Government is underscored by measures to help to protect it from political pressure. This underpins the credibility of the Council's assessments.

[64] "Official" estimates are those published by the Department of Finance.

### BOX E: THE IRISH FISCAL ADVISORY COUNCIL

*The Fiscal Responsibility Act (FRA)* establishes the Irish Fiscal Advisory Council on a statutory basis, a year and half after the Council started operation.

The Act requires the Council to:

- Assess and monitor the forecasts produced by the Department of Finance.
- Monitor and, at least once a year, provide an assessment of compliance with the Budgetary Rule. The Council would be required to provide an assessment under the Correction Mechanism if this rule was not met.
- Assess whether the fiscal stance of the Government is conducive to prudent economic and budgetary management, including by reference to the *Stability and Growth Pact (SGP)*.

The Act defines the Council as an independent body. To support its independence:

- Council members are appointed on the basis of their expertise for fixed terms of office of four years (after a transitional period). A member may not serve for more than two consecutive terms.
- Council members can only be removed from office on limited grounds related to incapacity or misbehaviour and a resolution of Dáil Éireann is needed (unless a Council member is disqualified from serving).
- Council members cannot hold or stand for political office.

The Council is funded from the Central Fund, meaning that its budget is outside voted expenditure.

Council members are appointed by the Minister for Finance. The Council determines its budget within a ceiling of €800,000 (inflation-indexed) established in the *FRA*. The Council is accountable to Dáil Éireann for the use of its resources and to the Comptroller and Auditor General for audit. The Council will publish an Annual Report. Additional details about the Council and its operation can be found on www.fiscalcouncil.ie

The Government has an obligation to comply with the fiscal rules set out in the *FRA*. In addition, it is required to meet EU fiscal rules. These two sets of fiscal rules are complex, both individually and taken together.[65] However, there are essentially three types of requirement:

- The *FRA* Budgetary Rule sets a norm of a balance or surplus for the General Government budget balance, while the EU *SGP* requires a deficit of less than 3 percent of GDP.
- The *FRA* Budgetary Rule and the EU *SGP* refer to the structural budget balance meeting an EU-agreed country-specific Medium-Term Budgetary Objective (MTO), which is currently a structural balance of -0.5 percent of potential GDP for Ireland. If this condition is not met, a 0.5 percentage point annual improvement in the structural balance is required under the Budgetary Rule to meet the Adjustment Path Condition. This requirement also applies under the EU rules.[66]
- The *FRA* Debt Rule and EU *SGP* require that a General Government debt to GDP ratio in excess of 60 percent of GDP should be reduced according to a formula that requires approximately a 1/20$^{th}$ reduction of the excess over 60 percent per year. For more details see Appendix C. The Debt Rule is expected to apply three years after Ireland has exited the Excessive Deficit Procedure.

The Council is required under the *FRA* to monitor and, at least once a year, to provide an assessment of national compliance with the Budgetary Rule. Furthermore, in the event of non-compliance, the *FRA* provides for a Correction Mechanism.[67] The Council is required to assess whether progress towards compliance with the Budgetary Rule is being made in accordance with the Government's correction plan.

[65] The September 2012 *Fiscal Assessment Report* provides a fuller discussion of the *Fiscal Responsibility Bill*, which is in line with the *FRA*. However, it should be noted that page 63 of that report incorrectly summarised the proposed Budgetary Rule as applying only in structural terms.

[66] It is important to note that the *FRA* Budgetary Rule and MTO are not identical to the extent that the *FRA* Budgetary Rule could be met by achieving a General Government budget balance, even if there were a structural deficit larger than the MTO.

[67] For more details see IFAC (2012b, p.65).

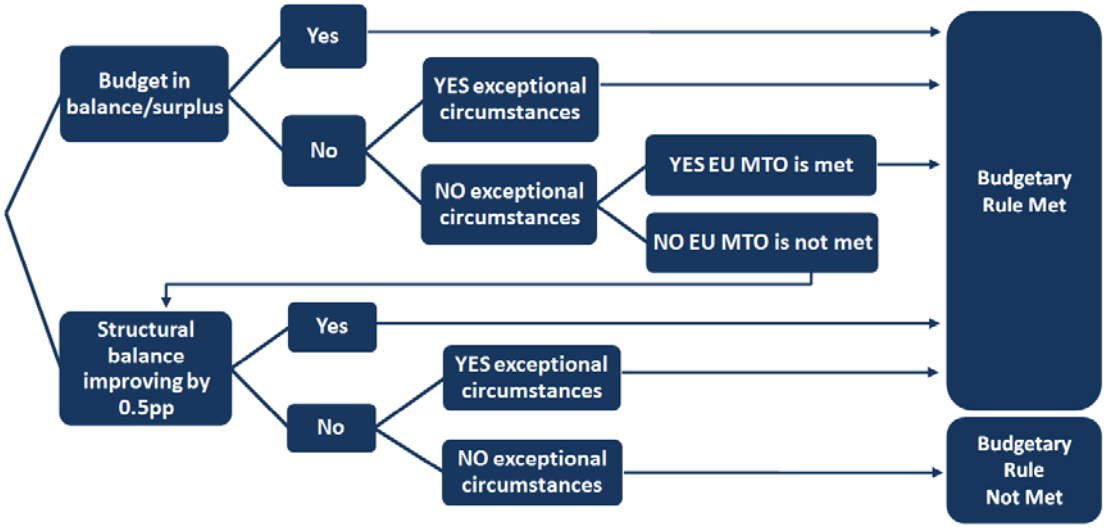
The Council has no formal mandate to monitor the domestic Debt Rule and the EU fiscal rules.[68] However, it is required in its assessment of the fiscal stance to include "...reference to the provisions of the Stability and Growth Pact" (Irish Statute Book, 2012).

### 3.2.1 Monitoring Compliance with the Budgetary Rule

The Budgetary Rule is satisfied if any of three conditions is met:

- There is a General Government budget balance or surplus.
- The structural balance is at the MTO. This is currently set at a deficit of 0.5 percent of potential GDP.[69]
- The structural balance is converging towards the MTO in line with the Adjustment Path Condition and the EU timeframe, both of which require annual consolidation of 0.5 percentage points of GDP in structural terms.

The exact conditions are more complex and can be represented using a flow diagram:[70]




[68] Independent monitoring of compliance with the Budgetary Rule is required to comply with the EU *Fiscal Compact* but this obligation does not cover the domestic Debt Rule.

[69] There is a lower bound for this in the EU rules of a structural balance of -1 percent of potential GDP.

[70] There is more than one way of presenting the rules in terms of a flow diagram. This broadly follows the order in which the conditions are specified in the text of the *FRA*.

The Budgetary Rule must be met each year. Compliance is assessed based on data published in the following year (released alongside Department of Finance forecasts). Given this sequence, the mandate means that the Council assesses compliance with rules after the event (*ex post* compliance).[71,72]

Given the lags involved, the Council will monitor the likelihood of compliance with the Budgetary Rule on a forward-looking basis based on available information. This should be useful in setting policy to ensure that the rules are met.

*Budget 2013* projections are consistent with compliance with the Budgetary Rule in 2013 and subsequent years as the Adjustment Path Condition of improving the structural balance by at least 0.5 percentage points of GDP per annum would be significantly exceeded (Table 3.1).

TABLE 3.1: DEPARTMENT OF FINANCE DEFICIT AND DEBT PROJECTIONS

| % of GDP | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|
| General Government Deficit | 8.2 | 7.5 | 5.1 | 2.9 |
| Primary Deficit | 4.3 | 2.0 | -0.4 | -2.6 |
| Structural Deficit | 8.2 | 7.7 | 5.9 | 3.9 |
| General Government Debt | 118 | 121 | 120 | 117 |

### 3.2.2 COMPLIANCE WITH OTHER IRISH AND EU FISCAL RULES

In terms of compliance with other Irish and EU rules:

Ireland remains subject to an EU Excessive Deficit Procedure (EDP) as the General Government balance exceeds the 3 percent of GDP deficit criterion of the *SGP*. However, Ireland is complying with its obligations to bring down the deficit under the EDP and the programme supported by the EU/IMF. *Budget 2013* projections show that the General Government deficit is expected to fall below 3 percent of GDP by 2015 and the updated outlook in Chapter 2 (see Table 2.2) suggests this would be achieved with some margin.

[71] The first opportunity for the Council to assess compliance with the Budgetary Rule in a given year is the following year based on the publication of the Maastricht Returns data and the *SPU* (which provides estimates of the structural position) in April. The Council's first formal assessment of compliance will be made in 2014 based on outturns for 2013.

[72] Given data revisions for the public finances and GDP, the Council will also monitor whether the rules would have been met in earlier years.

The requirement of progress towards the MTO matches the Adjustment Path Condition of the Budgetary Rule and is therefore met.

Debt remains higher than the *SGP* requirement of 60 percent of GDP. The domestic Debt Rule requires compliance with the *SGP* debt criterion in terms of progress being made towards reaching the 60 percent standard. The EC is required to publish a report on compliance if the debt to GDP ratio is above 60 percent and if the debt is not falling in line with a backward-looking measure of debt reduction or a forward-looking measure of the fall in debt (assuming unchanged policies) based on the EC forecasts (see Appendix C).

The EU benchmark for convergence towards the debt criterion involves a transition period of three years following the ending of the EDP, currently anticipated for 2015. During this transition period, the EC identifies a minimum adjustment that would ensure compliance with the Debt Rule at the end of the transition period.[73] This should take into account the influence of the cycle and the forward-looking nature of the debt benchmark.

The EU has an expenditure benchmark that non-interest spending should not rise faster than potential GDP, except if fully offset by revenue increases mandated by law.[74] This benchmark is to be taken into account by the EU in assessing compliance with the other rules. This benchmark would also be met under current official projections given falling non-interest spending.

## 3.3 THE STRUCTURAL BALANCE

The structural budget balance plays a key role in domestic and EU fiscal rules. This is defined as the cyclically-adjusted budget balance net of one-offs and temporary measures. This measure is used in the Budgetary Rule and the EU rules for the MTO. More generally, assessing and projecting GDP, potential output and the structural balance are important to setting the fiscal stance and projecting the public finances over the medium term.

[73] The annual structural adjustment should not deviate by more than ¼ percent of GDP from the minimum linear structural adjustment. In addition, "....at any time during the transition period, the remaining annual structural adjustment should not exceed ¾ percent of GDP" (EC, 2012b, p.9).

[74] Expenditure on EU programmes fully matched by EU funds and non-discretionary changes in unemployment benefit expenditure are excluded. The expenditure aggregate should be adjusted by averaging the investment expenditure over four years.

### 3.3.1 Measuring Cyclically-Adjusted Budget Balances

The official assessment of the cyclically-adjusted budget balance (CABB), including projections of it and its main elements for future years, are made in the official forecasts. The CABB estimates and projections have been published in the *SPU* each spring.

Although in theory the cyclically-adjusted measure of the budget balance is the most appropriate concept for fiscal rules, its use involves significant measurement problems (IFAC, 2012c, p.20). As an example, the 2007 *SPU* for Ireland estimated the 2007 structural budget balance to be a surplus of 0.5 percent of potential GDP and with output slightly below potential. However, it is now clear that the General Government balance during this period was boosted by above trend demand and exceptional revenues linked to the unsustainable boom in the property sector.

Calculation of the CABB rests on two unobservable and difficult to assess parameters:

- An estimate of the cyclical position of the economy, based on the difference between actual and potential output (the "output gap").[75]
- The cyclical sensitivity of the budget balance to the output gap.

As the CABB is derived by subtracting the estimated cyclical component from the General Government balance, any error in the estimate of the cyclical component is included in the estimate of the "structural" balance and can give rise to a misleading picture of the underlying budgetary position.

To facilitate the interpretation of the CABB, it would be helpful if the Department of Finance published revised estimates for previous years alongside the projections included in the official forecasts (including both the CABB and the estimated output gap).

[75] Potential output corresponds to some "normal", rather than cyclical, level of output defined in terms of a normal level of efficiency of factor inputs or as the level of output consistent with stable inflation. This is likely to follow a moving long-run average of actual output.

### 3.3.2 Estimates of Potential Output and the Output Gap

Estimating potential or trend output is an inherently difficult and uncertain process. The key challenge is that, since only actual output is observed, there is no way of directly measuring potential output. A variety of techniques can be used, including statistical filtering to derive trends and more structural assumptions about future growth. All techniques involve some element of judgement and the resulting estimates are uncertain and likely to be prone to revision.

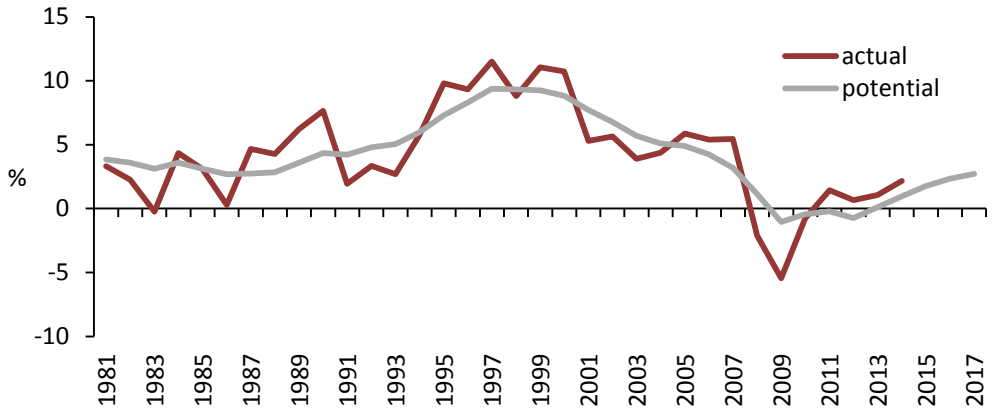
For techniques based on filtering, there can be an "end point" problem, whereby the most recent observations used to calculate the trend have a disproportionate impact on the estimated trend. This can lead to large revisions as new observations are added. It creates additional difficulties in situations, such as the present, where the economy has been subject to large shocks.

The official estimate of the output gap (i.e., the Department of Finance estimate) is derived by subtracting an estimate of potential GDP, based on a methodology determined by the EC, from actual GDP data. To make projections for potential output, Department of Finance forecasts for actual output are incorporated into the process. These may differ from the EC's projections for actual output, resulting in small differences between the EC and the Department of Finance potential output projections. The EC methodology is described in Appendix D.

The EC methodology suggests that there was a small negative output gap in 2012, which is closing so that GDP is projected to be significantly above potential GDP in 2015 (Figure 3.1).[76] This profile appears at odds from an economic perspective with the strong downward forces currently acting on demand. These forces would suggest that GDP is currently well below potential and is unlikely to reach overheating levels anytime soon.

[76] The EC estimates for the output gap, potential output and the structural balance are available from its CIRCABC website. The EC estimate for the output gap in 2012 is -1.4 percent. The Department of Finance estimate is -1.1 percent.

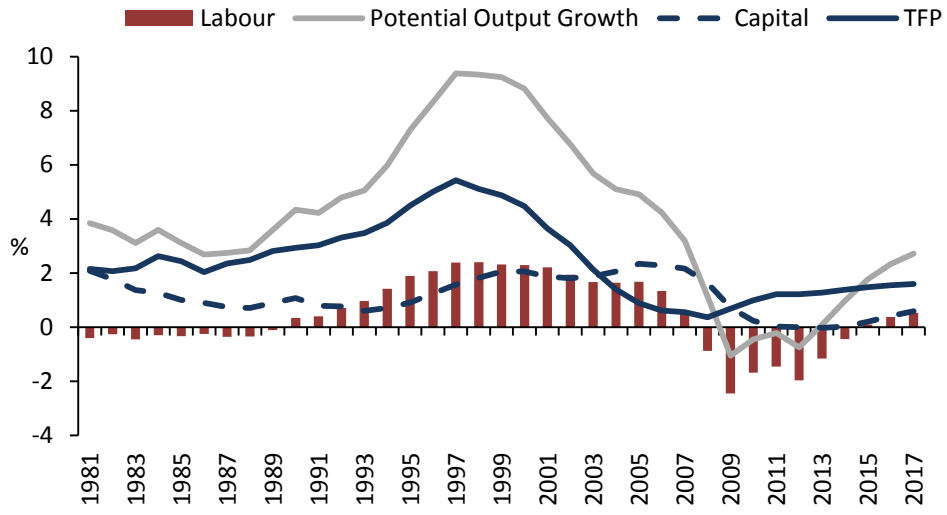
FIGURE 3.1: EUROPEAN COMMISSION ESTIMATES AND PROJECTIONS OF ACTUAL AND POTENTIAL GDP GROWTH




*Source: European Commission, CIRCABC Website.*

Furthermore, the weak level of potential output in the EC's estimates is predicated on very low contributions to growth in the coming years from labour utilisation, as well as historically weak growth in capital services and productivity (Figure 3.2). Strikingly, it is assumed that the structural unemployment rate continues to rise above the current high level of actual unemployment (see Appendix Figure D). While structural unemployment is likely now to be higher than pre-crisis levels, the extent of such unemployment assumed in the EC's estimates appears high given the characteristics of the Irish labour market. For comparison, the IMF's projection for the actual unemployment rate in 2017 is 11.5 percent with an output gap close to zero (IMF, 2013).

FIGURE 3.2: CONTRIBUTIONS TO GROWTH OF POTENTIAL GDP




*Source: European Commission, CIRCABC Website.*

The official estimate of the current output gap is much less negative than estimates based on alternative methodologies from the IMF and the OECD, both of which imply that there will be spare capacity in the economy until at least 2015.[77] These differences largely reflect alternative views of the level and future path of potential output. Even if the output gap is larger than the current official estimate, it may be that the weaker view of potential output in the coming years underpinning the official forecasts will be correct and that the level of actual GDP could be closer to this view than current forecasts suggest.

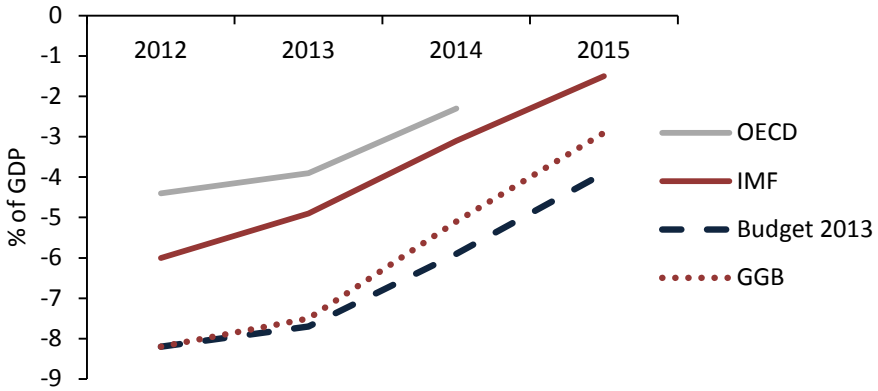
TABLE 3.2: ACTUAL AND POTENTIAL GDP AND THE OUTPUT GAP

| Department of Finance | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|
| **Real GDP** | 0.9 | 1.5 | 2.5 | 2.9 |
| **Potential Real GDP** | -0.8 | 0.1 | 0.9 | 2.5 |
| **Output Gap** | -1.1 | 0.4 | 2.0 | 2.4 |
| **Alternative Estimates of the Output Gap** | | | | |
| **IMF (Apr 2013)** | -1.9 | -1.8 | -1.1 | -0.3 |
| **OECD (Nov 2012)** | -8.2 | -7.7 | -6.6 | N.A |

These different estimates for the output gap imply a wide range of estimates for the CABB. Figure 3.3 shows that *Budget 2013* projected a General Government deficit of close to 3 percent of GDP in 2015. While the *Budget 2013* projection interprets this as consistent with a very large structural deficit, the OECD forecast interprets it as essentially cyclical in nature and the IMF sees the majority of the deficit as being cyclical. These different estimates of the structural balance would imply very different pictures of how much consolidation is required to meet the Budgetary Rule.

[77] The revised OECD modelling approach is set out in Johansson *et al*. (2012). This is based on a conditional convergence growth framework and uses assumptions about how the economy evolves in the long run, combined with filtering approaches for the near term. The IMF employs an approach based on statistical filtering of GDP using an HP filter.

FIGURE 3.3: ALTERNATIVE ESTIMATES AND PROJECTIONS OF THE STRUCTURAL BALANCE




*Note: The OECD does not provide a forecast beyond 2014.*

### 3.3.3 ESTIMATES OF THE EFFECT OF THE CYCLE ON THE BUDGET BALANCE

The official methodology for correcting the General Government balance for the impact of the cycle is based on OECD estimates (Girouard and André, 2005), which also underpin the EC methodology and the Council's Fiscal Feedbacks Model. This takes into account both cyclical changes in the size of tax bases and the link between the tax bases and revenues, as well as unemployment related spending. In the case of Ireland, it is assumed that the General Government balance increases by around 0.4 for each 1 percentage point positive change in the output gap.

The estimated tax elasticities can misstate the impact of the cycle, as was the case during the housing boom which generated "windfall" tax revenues (especially very strong stamp duty and VAT receipts from property transactions). In addition, the method ignores potentially cyclical behaviour in non-tax revenues and government investment (Bénétrix and Lane, 2012).

### 3.3.4 IMPROVING THE ASSESSMENT OF THE STRUCTURAL BALANCE

Estimating the output gap, projecting the future path of potential GDP and adjusting the budget balances for the cycle are inherently difficult, especially in small and highly open economies that tend to be volatile. It is particularly complex in the Irish case given that the economy has altered so much over the past decades, including during the credit boom. The EC has recently amended its methodology and data for calculating the CABB. These amendments were endorsed by the Economic Policy Committee in June 2012, and have been incorporated in the Commission's Winter 2013 forecasts (which were published in February 2013). It is expected that the revised

methodology and data will be used in Ireland's upcoming *SPU*. Details of the updated approach can be found in Mourre *et al*. (2013).

Efforts should continue to improve the EC methodology so that it provides a more accurate picture of current and prospective developments, both for Ireland and other countries. However, this is likely to take a considerable length of time to bring to fruition. It is also unlikely that a simple method that aims to treat all countries identically will always provide the most appropriate assessment for each individual country.

There is currently no independent official methodology for assessing potential output, other than the EC based estimates. In terms of other forecasting and modelling tools used in Ireland, the ESRI uses the *HERMES* model for medium-term forecasting . The CBI does not publish forecasts beyond a two-year horizon. Overall, the tools available to policymakers to assess potential output in Ireland are currently limited.

Given the complexities involved with assessing and projecting potential output, a more comprehensive set of methodologies should be put in place by the Department of Finance, informed by a variety of techniques and assumptions, to improve the understanding of the cyclical position of the economy, potential output and the structural position of the public finances. This would complement the use of the EC methodology. This approach should rely on a range of measures and expert judgement. Estimates should be presented together with measures of the range of probabilities around the central estimate. An on-going initiative by the CBI and the ESRI to develop a medium-term model could make a substantial contribution to this process.

In a highly open and financially developed economy going through significant structural change, the output gap as a measure of the difference between actual and potential output may only provide a partial benchmark of whether the economy is on a sustainable path. From the perspective of the sustainability of the public finances, the assessment needs to take into account the sustainability of the external balance and domestic credit developments. Further work is needed to better understand these relationships. However, recent analysis by the IMF begins to consider some of these issues in an Irish context, correcting the balance for equity price, house price and unemployment gaps, as well as the output gap, based on a disaggregated analysis of revenues (IMF, 2012a).

### 3.3.5 Measuring the Structural Balance in the Budgetary Rule and the Medium-Term Objective

Significantly, the *FRA* legislation does not refer to a specific methodology for the estimation of the structural balance in terms of "cyclical-adjustment" or "one-off and temporary measures". It is thus possible for compliance with the Budgetary Rule to be judged against a domestic measure of the structural balance rather than the EC methodology based measure.[78]

The Council is required to assess compliance against the data published alongside official forecasts, irrespective of what measure is presented. However, assessment in a European context of the EU rules will be applied on the basis of the EC methodology.

In principle, there is a strong presumption to use the EC methodology as the benchmark for compliance with the domestic Budgetary Rule. It is simpler and more coherent to use the same measure for both. At the European level, it is important to have consistency across countries as part of the effort to improve budgetary discipline in the Euro Area.

There could be a case for using a domestic methodology with good methodological underpinnings if the EC methodology were assessed to be clearly providing significantly misleading signals. The Council could then take the domestic methodology into account in assessing compliance with the Budgetary Rule.

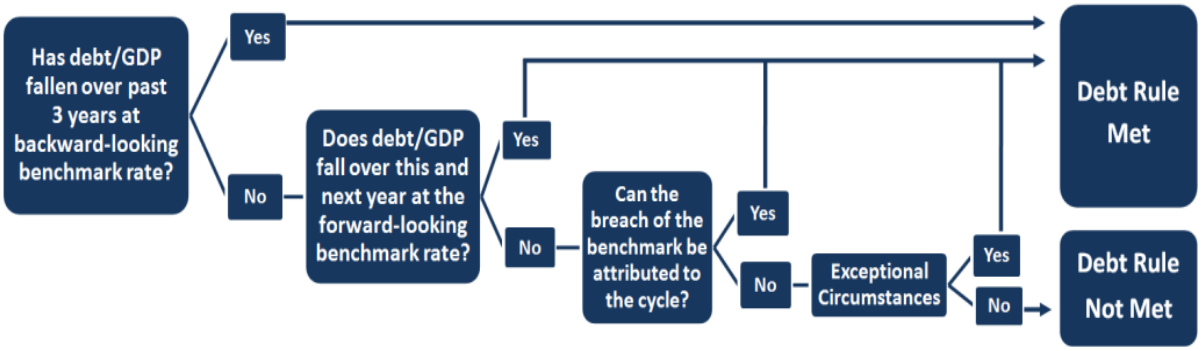
It is possible that a situation could arise where a domestic measure of the structural balance suggested compliance with the Budgetary Rule requirement but the EU measure suggested non-compliance. In such a situation, an independent and convincing domestic analysis of the structural position could help in making the case that judgement should be used by the EC and the ECOFIN Council in enforcement of the EU rules.

Alternatively, the EU rules could suggest compliance with the MTO but a domestic assessment might still signal a larger structural deficit. This would correspond to Ireland's pre-crisis situation, when EU requirements were met but fiscal policy was on an unsustainable path. Such a possibility would be taken into account by the Council in its assessment of the fiscal stance.

[78] For a given MTO benchmark objective.

## APPENDIX C: THE FISCAL RESPONSIBILITY ACT AND THE EU DEBT RULE

The *FRA* and the EU *Stability and Growth Pact* both apply a complicated debt rule, which can be represented using a flowchart:[79]




- The backward-looking benchmark is defined as:

$$\text{Benchmark}_t = 60\% + 0.95/3\,(b_{t-1} - 60\%) + 0.95^2/3\,(b_{t-2} - 60\%) + 0.95^3/3\,(b_{t-3} - 60\%)$$

  where $\text{benchmark}_t$ is the benchmark for the debt ratio in year t and $b_t$ is the debt to GDP ratio in year t.

- The forward-looking benchmark is defined on the basis of EC forecasts and with unchanged policies the following standard is met:

$$\text{Benchmark}_{t+2} = 60\% + 0.95/3\,(b_{t+1} - 60\%) + 0.95^2/3\,(b_t - 60\%) + 0.95^3/3\,(b_{t-1} - 60\%)$$

- There is no methodology which has been published for taking into account the effect of the cycle.

- Exceptional circumstances refer to an unusual event outside the control of the country concerned and with a major impact on the financial position of the General Government or the result of a severe economic downturn.

[79] For more details see European Commission (2012b). The EU benchmark for convergence towards the debt criterion involves a transition period of three years following the ending of the EDP, currently anticipated for Ireland for 2015.

## APPENDIX D: EUROPEAN COMMISSION METHODOLOGY FOR ESTIMATING POTENTIAL OUTPUT

The EC methodology assesses potential output using a "production function" approach. Potential output is defined as the level of output that can be produced with a normal level of efficiency of factor inputs. The production function approach is based on a model of the supply side of the economy. This contrasts with purely statistical methodologies that extract the trend directly from GDP, although in practice the production function methodology relies heavily on statistical filtering at a lower level of aggregation and yields similar results.

While the production function potential output estimates provide a picture of the present output capacity of economies, the EC stresses that they should not be seen as forecasts of medium-term sustainable rates of growth. They are merely an indication of likely developments if past trends were to persist in the future (D'Auria *et al*., 2010).

In the medium-term, potential output (YPOT) is estimated as:

$$YPOT = LP^{\alpha} K^{1-\alpha} SRK, \quad (1)$$

where LP is potential employment, K is the capital stock and SRK is the Kalman-filtered Solow Residual. This can be used to derive a medium-term measure of the output gap.

In order to facilitate international comparisons, all countries are dealt with identically.

The assumed production function follows a standard Cobb Douglas specification, where GDP (Y) is the combination of labour measured in terms of hours worked (L), the capital stock (K) and the level of efficiency or productivity ($E_L$, $E_K$), corrected for the degree of excess capacity ($U_L$, $U_K$):

$$Y = (U_L L E_L)^{\alpha} (U_K K E_K)^{1-\alpha} = (L^{\alpha} K^{1-\alpha})(TFP), \quad (2)$$

α and 1- α are the output elasticities of labour and capital respectively.[80] Total Factor Productivity (TFP) summarises both the degree of utilisation of factor inputs as well as the level of technology:

$$TFP = (E_L^{\alpha} E_K^{1-\alpha})(U_L^{\alpha} U_K^{1-\alpha}), \quad (3)$$

Trends in hours worked and productivity are estimated using statistical techniques.[81] The capital stock is not detrended. In the case of trend hours worked, the trend labour force is estimated using

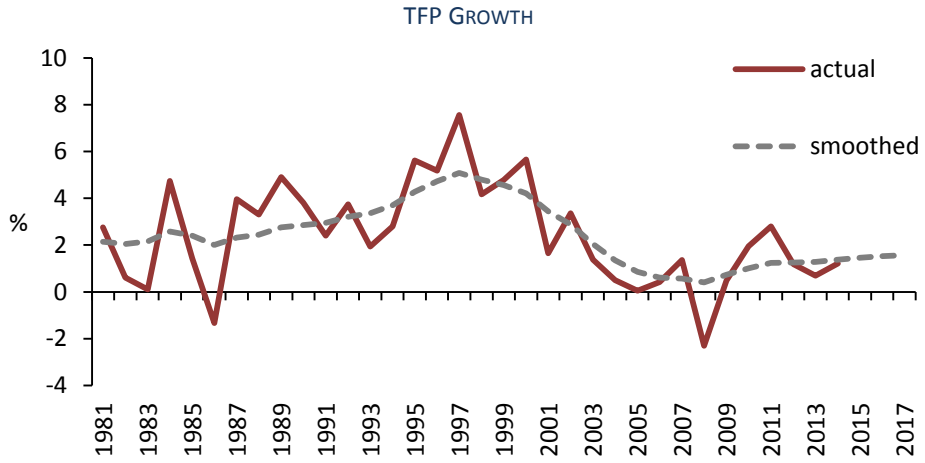
[80] The output elasticities are estimated under the assumption of constant returns to scale and perfect competition from the wage share. α =0.65. A factor price elasticity of one is assumed.

the actual population of working age and the participation rate. The trend un/employment rate is based on estimates of the stable, non-accelerating, wage inflation rate. Finally, the trend of average hours per worker is estimated. The exact details of the methodology change over time: for example, the definition of the working age population has recently between extended from 15-64 years to 15-74 years.

There are some differences between the EC and Department of Finance estimates for potential output historically, because of different data vintages and, for projections, different forecasts for the drivers of potential output.

Appendix Figure D shows the EC's estimates of key components of potential output, based on its own projections for total factor productivity growth, employment and the unemployment rate. While underlying productivity growth is due to recover, it would remain well below its average since 1980. Potential employment is projected to remain almost flat over the coming years, in part because the structural unemployment rate is expected to rise above the current unemployment rate.

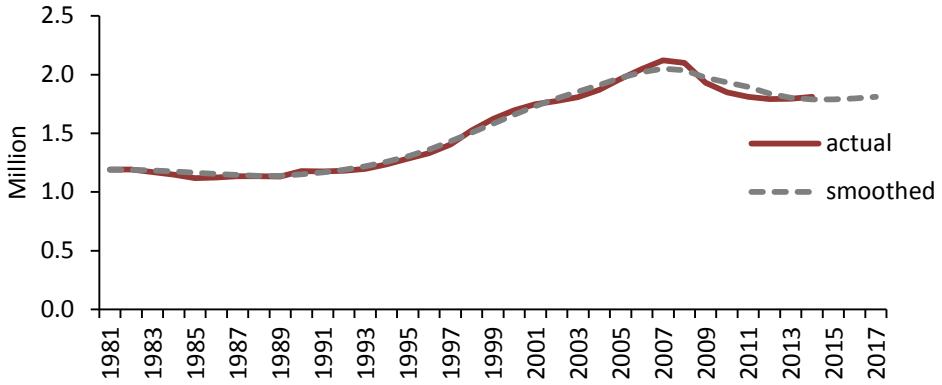
APPENDIX FIGURE D: EUROPEAN COMMISSION ESTIMATES OF SELECTED COMPONENTS OF POTENTIAL OUTPUT




*Source: European Commission, CIRCABC Website.*

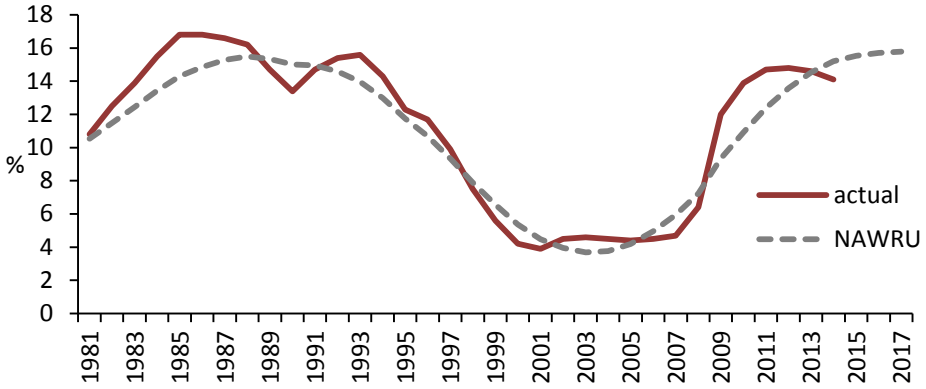
[81] The trend efficiency level is measured using a bivariate Kalman filter model which exploits the link between the TFP cycle and the degree of capacity utilisation in the economy. For Ireland, capacity utilisation data has not been available since 2008.

EMPLOYMENT




*Source: European Commission, CIRCABC Website.*

UNEMPLOYMENT RATE




*Source: European Commission, CIRCABC Website.*

# 4. ASSESSMENT OF THE FISCAL STANCE

## SUMMARY

- The Council views the current fiscal stance as, in the language of the *Fiscal Responsibility Act*, "conducive to prudent economic and budgetary management".

- In the September 2012 *Fiscal Assessment Report*, the Council suggested €1.9 billion in additional adjustments compared to Government plans over the period 2014-2015. Recognising the uncertainties surrounding economic growth, the report argued for the additional measures so as to provide a margin of safety to get the General Government deficit below 3 percent of GDP by 2015 and to ensure the stabilisation of the debt to GDP ratio.

- Post-*Budget 2013* developments have improved the budgetary outlook. These developments were the better than anticipated Exchequer outturn for 2012, the General Government deficit and debt implications of the promissory notes transaction, and higher than forecast nominal GDP in 2012. Based on the technical adjustments to *Budget 2013* projections (outlined in Chapter 2), the General Government deficit in 2015 is now likely to be closer to 2 percent of GDP and the debt to GDP ratio will be falling at a rate of approximately 4 percent per annum. The impact of the recent developments is estimated to be equivalent to €1.6 billion of additional adjustments during 2014-2015.

- The suggested margin of safety has therefore been broadly achieved under the Government's current plans and so the Council is no longer making the case for €1.9 billion in additional adjustments in this assessment. However, the Council's assessment is that the planned adjustments of €3.1 billion in 2014 and €2.0 billion in 2015 should not be reduced.

- There are significant uncertainties surrounding these budgetary projections. While there are tentative signs of a stabilisation in domestic demand, the weakening of growth in key trading partners is curbing growth in net exports. Expenditure pressures in key sectors in 2012, in part driven by service demand, have also raised concerns about the implementation of planned adjustment measures. Budget-impacting developments will have to be monitored closely, with particular attention paid to any shortfalls in growth and the effective implementation of expenditure-reduction plans.

- A robust return to State creditworthiness – which has continued to show the improvement highlighted in the September 2012 *Fiscal Assessment Report* – would be further reinforced by post-programme precautionary funding arrangements and extensions to the maturities on official loans.

## 4.1 Introduction

As part of its mandate under the *Fiscal Responsibility Act*, the Council shall "[I]n relation to each *Budget* and stability programme, provide an assessment of whether the fiscal stance for the year or years concerned is, in the opinion of the Fiscal Council, conducive to prudent economic and budgetary management, including by reference to the provisions of the Stability and Growth Pact" (Irish Statute Book, 2012). This chapter provides an assessment of the fiscal stance set out in *Budget 2013* – the most recent statement of the Government's fiscal policy position.

The chapter is organised as follows. Section 4.2 reviews and assesses the Government's fiscal stance. Section 4.3 reviews the recent fiscal multiplier debate and conducts a sensitivity analysis of the fiscal projections based on alternative multiplier assumptions. Finally, Section 4.4 notes some complementary actions to support a robust return to creditworthiness.

## 4.2 Assessing the Fiscal Stance: An Update

The Council's approach to identifying the appropriate fiscal stance recognises a trade-off between supporting domestic demand and the need to ensure debt sustainability, in part with a view to regaining robust market access and sustaining access to official-creditor support (as and if needed), under reasonable conditions (see Box F). To assess the evolution of this trade-off, the most recent projected path for the debt to GDP ratio, market indicators of creditworthiness and the main macroeconomic aggregates are reviewed in turn. The appropriate fiscal stance under current conditions is then considered.

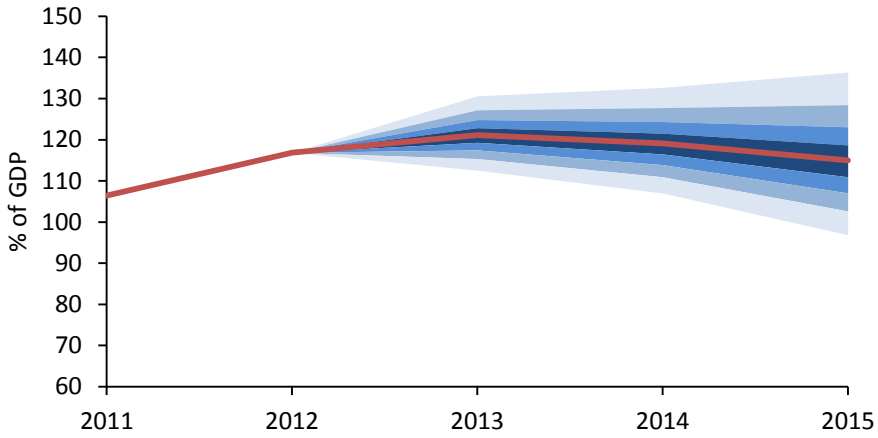
### 4.2.1 Debt Sustainability

Figure 4.1 shows the debt to GDP ratio out to 2015, updated for post-Budget developments. As outlined in Chapter 2, this includes adjustments for the better than expected Exchequer outturn in 2012 and the promissory notes transaction. The debt ratio is expected to peak this year at 121.1 percent of GDP, with small declines over the following two years. By 2015, the debt ratio is envisaged to be declining at a rate of 4.1 percentage points of GDP, helped by a projected primary budget surplus of 3.0 percent of GDP.

There is significant uncertainty surrounding these debt projections as illustrated by the fan chart in Chapter 2 (which is repeated in Figure 4.1). It should be stressed that these fan charts must be treated with care given the limitations of using past forecast errors to form judgements on

uncertainty surrounding future projections.[82] Nevertheless, even allowing for these limitations, the debt ratio fan chart does highlight the fragility of debt sustainability over the medium-term. For example, it implies an estimated one-in-four chance of the debt to GDP ratio failing to stabilise by the end of the projection period unless further policy measures beyond those currently planned are taken.

FIGURE 4.1: EVOLUTION OF THE DEBT TO GDP RATIO




*Source: Budget 2013 and IFAC calculations.*

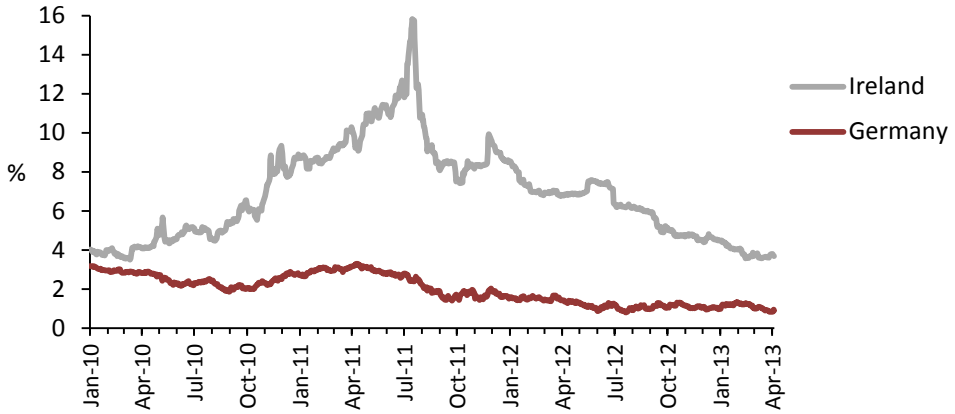
### 4.2.2 MARKET ASSESSMENTS OF CREDITWORTHINESS

The improvement in market indicators of the State's creditworthiness noted in the September *Fiscal Assessment Report* has continued. Figure 4.2 shows the evolution of both the 8-year and 2-year bond yields since the beginning of 2010. Having peaked at 15.8 percent in mid-July 2011, the yield on the 8-year bond has fallen significantly, reaching 4 percent in early April 2013. The reasons for the improvement include developments in Euro Area crisis resolution policies (notably the announcement of the ECB's Outright Monetary Transactions programme), increased confidence in the Government's capacity to meet targets under the EU/IMF programme and the promissory notes transaction in February. The fall in Irish yields is part of a broader pattern of falling yields across crisis-affected Euro Area economies (see Figure 4.3). However, the fall in the Irish case has been particularly marked.

Continuing Euro Area tensions – notably relating to Italy and Cyprus – and ongoing growth uncertainties mean that the gains in creditworthiness remain fragile.

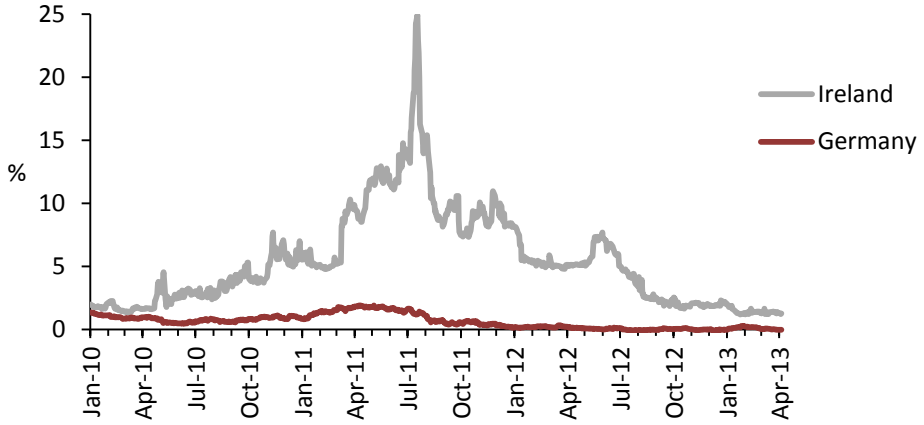
[82] The fan charts do not incorporate non-growth related determinants of fiscal uncertainty. The construction of the fan charts is explained in more detail in Annex A of the September 2012 *Fiscal Assessment Report* (IFAC, 2012b).

FIGURE 4.2a: 8-YEAR BOND YIELD



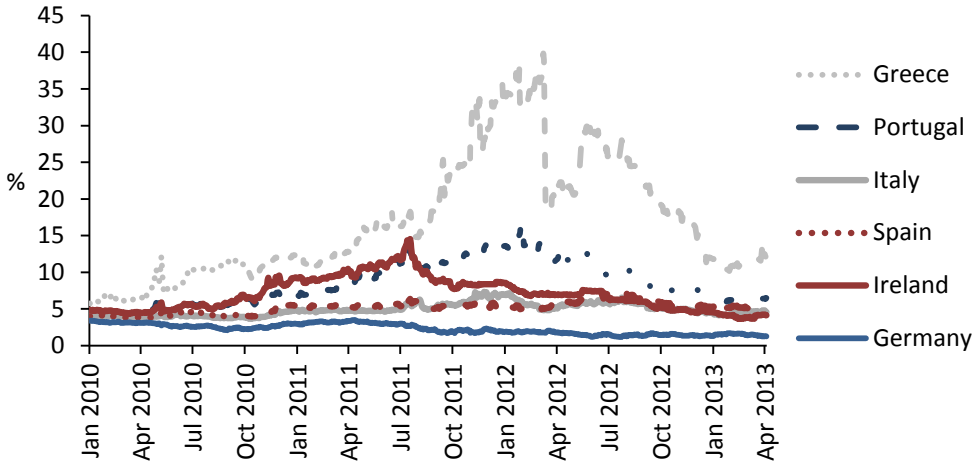

*Source: DataStream.*

FIGURE 4.2b: 2-YEAR BOND YIELD




*Source: DataStream.*

FIGURE 4.3: A COMPARISON OF TRENDS IN 10-YEAR BOND YIELDS

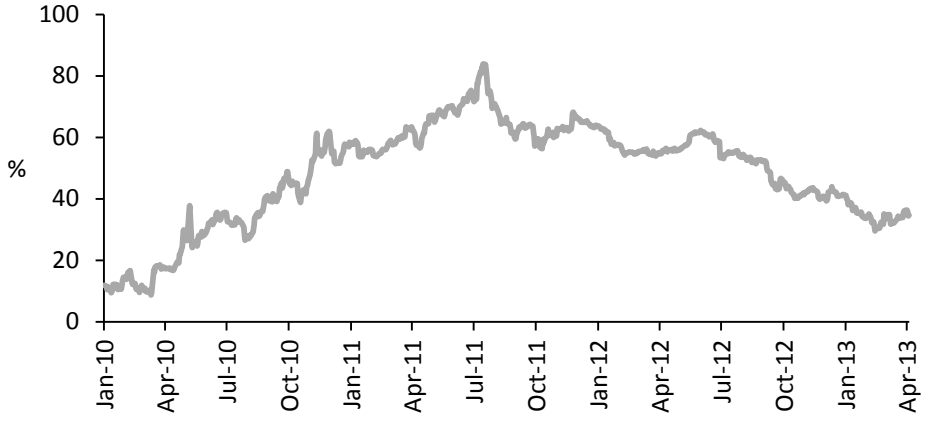



*Source: DataStream.*

The NTMA has conducted six auctions of treasury bills since September 2012. Each competitive auction raised €500 million.[83] In an encouraging development for renewed access to medium/longer-term funding, the NTMA raised €2.5 billion in January at a yield of 3.32 percent in a "syndicated tap" of a bond maturing in October 2017. Bids were submitted by 200 investors totalling €7 billion. This was followed in March by the sale of €5 billion worth of the new 10-year bonds at a yield of 4.15 percent. The issuance had bids of over €13 billion from approximately 400 investors.

While the sharp improvement in market sentiment represents a positive development in Ireland's crisis-resolution effort, the remaining spread between Irish and German yields indicates that a significant perceived risk of default remains. Figure 4.4 attempts to identify the evolution of perceived default risk based on the yield premium over German bonds that investors require to hold Irish bonds. Assuming risk-neutral investors, no liquidity premium, a 50 percent recovery rate in the event of a default, and treating the equivalent maturity German bond as risk free, the figure shows the implied default probability over the 8-year term of the bond. While this calculation should only be treated as indicative, it suggests that a significant default risk of approximately 35 percent remains, notwithstanding the large fall in this risk since mid-2011.[84]

FIGURE 4.4: IMPLIED PROBABILITY OF DEFAULT BASED ON 8-YEAR IRELAND-GERMANY BOND SPREAD



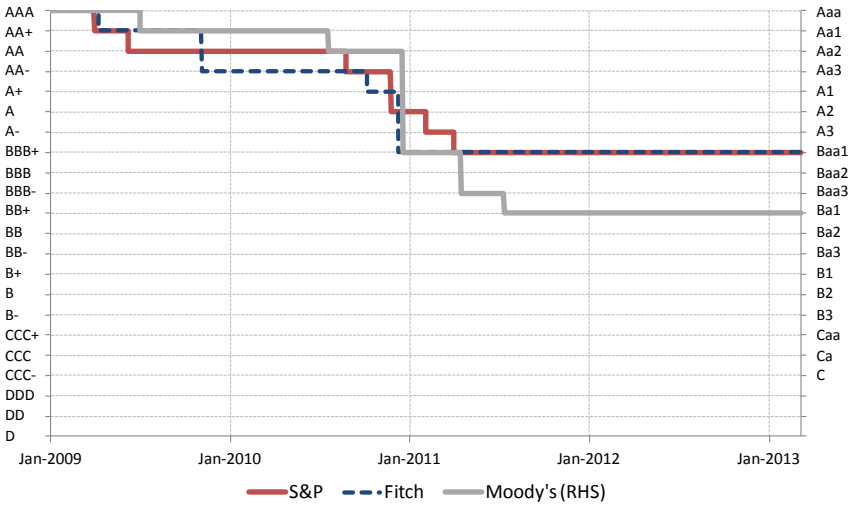

*Source: DataStream; IFAC calculations.*

[83] The yields were 0.7 percent (September 13), 0.7 percent (October 18), 0.55 percent (November 15), 0.2 percent (January 17), 0.24 percent (February 21) and 0.24 percent (March 21). Bid-to-cover ratios were in a range of 3 to 4.

[84] The annual implied probability of default under these assumptions is $p = (r - r^f)/(1 + r - c)$, where r is yield on the Irish bond, $r^f$ is the yield on the German bond, and c is the recovery rate in the event of default. For an n-year bond, the total probability that that bond will never default is $(1 - p)^n$. The probability that the bond will default before maturity is then $1 - (1 - p)^n$.

By late 2012, the ratings by the three major credit-rating agencies had remained largely unchanged since the downgrades of early to mid 2011 (see Figure 4.5). More positive ratings have emerged from some agencies in recent months.[85] In March, Moody's, the only rating agency to have Ireland at non-investment grade status, reaffirmed its Ba1 rating with a negative outlook. The agency acknowledged some positive recent developments, but remains concerned over the poor asset quality of the Irish banking system. It also noted the "Euro Area's continued vulnerability to shocks emanating from the regional debt crisis, most recently the agreement by the European Union (EU) to the "bail-in" of bank deposits to raise part of the funds needed for Cyprus' financial rescue". An investment-grade rating from all three agencies would support the improvement in market indicators of creditworthiness by broadening the potential investor base for Irish sovereign bonds.

FIGURE 4.5: EVOLUTION OF CREDIT RATINGS




*Source: NTMA.*

[85] Fitch now rates Ireland's outlook as stable, having upgraded it from negative in November 2012. In response to the promissory note deal in February 2013, Standard & Poor's revised Ireland's outlook from negative to stable, reflecting the expected reduction in the Government's debt-servicing costs and the lower refinancing risk. The higher rating was also attributed to "...the government's commitment to stabilizing Ireland's public finances, as well as the high wealth, openness, and resilience of the Irish economy". However, the agency noted that Ireland's substantial fiscal deficits, heavy debt burden, and weak financial system could hamper growth prospects as well as Ireland's ability to cope with future economic or financial shocks.

### 4.2.3 State of Aggregate Demand

Both recent developments and medium-term projections for aggregate demand are reviewed in Chapter 1. As noted in the chapter, the pattern of relatively strong net export growth and weak domestic demand growth has altered somewhat in recent quarters. There are tentative signs that domestic demand is finally stabilising. Unfortunately, this improvement has coincided with renewed weakness in Ireland's main trading partners, especially in the United Kingdom and the Euro Area. An additional recent headwind has come from the appreciation of the euro against sterling. Overall, aggregate demand conditions remain weak. The seasonally adjusted unemployment rate also remains extremely high at 14.0 percent (CSO, 2013a), despite more encouraging recent labour market data. If considerations of creditworthiness and debt sustainability were not a key factor, conditions in the real economy would warrant limiting pro-cyclical fiscal adjustment measures to a level consistent with projected compliance with the new fiscal rules assuming current central growth forecasts.

### 4.2.4 Assessment of the Fiscal Stance

Table 4.1 shows key indicators of the evolution of the Government's fiscal stance for the period to 2015. The deficit projections published in *Budget 2013* foresaw the General Government deficit falling to just below 3 percent of GDP in 2015. In previous *Fiscal Assessment Reports*, the Council argued that it was advisable to aim for additional adjustments over the period to 2015. Such additional adjustments would provide a margin of safety given the uncertainties that surround economic growth and non-growth related budgetary developments. The suggested additional adjustments in the Council's September 2012 *Fiscal Assessment Report* amounted to €1.9 billion over 2014 and 2015. Based on the *Budget 2013* baseline, these adjustments would have brought the deficit to close to 2.0 percent of GDP in 2015, and the debt to GDP ratio would have been falling at a projected rate of just under 4 percent of GDP.

TABLE 4.1: THE FISCAL POSITION: EVOLVING ASSESSMENTS

| GGB (% of GDP) | 2013 | 2014 | 2015 |
|---|---|---|---|
| ***Budget 2012*** | -7.5 | -5.0 | -2.9 |
| **IFAC Alternative April 2012** | -7.4 | -4.6 | -1.7 |
| ***SPU* 2012** | -7.5 | -4.8 | -2.8 |
| **IFAC Alternative September 2012** | -7.5 | -4.5 | -1.9 |
| ***Budget 2013*** | -7.5 | -5.1 | -2.9 |
| **IFAC Alternative March 2013*** | -7.3 | -4.3 | -2.1 |
| **Primary Balance (% of GDP)** | **2013** | **2014** | **2015** |
| ***Budget 2012*** | -1.9 | 0.8 | 2.8 |
| **IFAC Alternative April 2012** | -1.8 | 1.2 | 4.0 |
| ***SPU* 2012** | -1.9 | 0.8 | 2.8 |
| **IFAC Alternative September 2012** | -1.9 | 1.0 | 3.7 |
| ***Budget 2013*** | -2.0 | 0.4 | 2.6 |
| **IFAC Alternative March 2013*** | -2.4 | 0.7 | 3.0 |
| **Debt (% of GDP)** | **2013** | **2014** | **2015** |
| **Budget 2012** | 119.0 | 118.0 | 115.0 |
| **IFAC Alternative April 2012** | 119.8 | 118.6 | 114.7 |
| ***SPU* 2012** | 120.3 | 119.5 | 117.4 |
| **IFAC Alternative September 2012** | 120.3 | 119.4 | 116.8 |
| ***Budget 2013*** | 121.3 | 120.2 | 116.8 |
| **IFAC Alternative March 2013*** | 121.1 | 119.1 | 115.0 |

| Assumed Consolidation € billions | 2013 | 2014 | 2015 | 2014 – 2015 |
|---|---|---|---|---|
| ***Budget 2012*** | 3.5 | 3.1 | 2.0 | 5.1 |
| **IFAC Alternative April 2012** | 3.9 | 3.8 | 3.7 | 7.5 |
| ***SPU* 2012** | 3.5 | 3.1 | 2.0 | 5.1 |
| **IFAC Alternative September 2012** | 3.5 | 3.5 | 3.5 | 7.0 |
| ***Budget 2013*** | 3.5 | 3.1 | 2.0 | 5.1 |
| **IFAC Alternative March 2013*** | 3.5 | 3.1 | 2.0 | 5.1 |

**Adjusted based on assumed carryover from lower than projected Exchequer deficit for 2012 to the General Government balance and the promissory notes transaction (see Chapter 2). Revised figures for the General Government balance will be available in late April.*

As described in detail in Chapter 2, two developments have taken place since the publication of *Budget 2013* in December 2012 that change the budgetary outlook significantly. First, the Exchequer outturn for 2012 was more favourable than anticipated in *Budget 2013*. Although final figures for the General Government deficit will not be available until the publication of the Maastricht Returns in late April, the Department of Finance now anticipates that the budget deficit for 2012 will be below 8 percent of GDP. This improved outturn is assumed to partially carryover to subsequent years. Second, the transaction between the Government and the Central Bank of Ireland that replaced the promissory notes with floating-rate Government bonds of varying

maturities has further improved the General Government deficit projected for 2015 by 0.6 percent of GDP (see Box C in Chapter 2 for an analysis of this transaction).

Assuming a General Government deficit of 7.7 percent of GDP for 2012, with partial carryover of the unexpected improvements into the years 2013-2015, the combined effect of the two developments on the General Government deficit is estimated to be equivalent to additional cumulative adjustments of roughly €1.6 billion by 2015. The revised projection for the General Government deficit in 2015 based on these technical adjustments, and a higher than forecast starting level of nominal GDP in 2012, is now put at 2.1 percent of GDP, almost one percentage point below the *Budget 2013* forecast. Moreover, the debt to GDP ratio in 2015 is projected to be falling at a rate of 4.1 percentage points of GDP, supported by a primary budget surplus of 3.0 percent of GDP. Thus, the margin of safety suggested by the Council has been broadly achieved as a result of the post-Budget developments.

Factoring in the post-*Budget 2013* developments, the fiscal fan charts reported in Chapter 2 show that the estimated probability of the deficit being above 3 percent of GDP is approximately one-in three, assuming no change in the Government's planned adjustments. The estimated probability that the debt to GDP ratio will fail to stabilise by 2015 is approximately one-in-four.[86] The structural deficit is projected to fall to 2.6 percent of GDP in 2015, which compares to an estimated 7.7 percent of GDP in 2012. The primary structural balance is projected to improve from a deficit of 3.8 percent of GDP in 2012 to a surplus of 2.5 percent of GDP in 2015.

Factors informing the Council's analysis of the fiscal stance are reviewed in Box F. The success to date in meeting fiscal targets and stabilising the debt to GDP ratio has underpinned the improvement in market assessments of creditworthiness, putting the economy on a firmer foundation for recovery and limiting the risk of disruptive default. This improvement has been further underpinned by the credibility-enhancing effects of strengthened fiscal institutions and national fiscal rules legislated in the *Fiscal Responsibility Act* (see Chapter 3). At the same time, the output losses from additional adjustments must be weighed against gains from reinforcing the trend improvement in creditworthiness. Aggregate demand conditions remain weak and additional adjustments will lead to further output losses.

[86] For reference, applying an extra €1.9 billion in adjustments (as suggested in the September 2012 *Fiscal Assessment Report*) would bring the estimated probability of a deficit greater than 3 percent in 2015 to approximately three-in-ten, and the estimated probability of the debt to GDP ratio failing to stabilise by 2015 to approximately one-in-five.

On balance, the Council views the fiscal stance set out in *Budget 2013* as broadly appropriate, and therefore "conducive to prudent economic and budgetary management". With the recommended margin of safety achieved through the recent favourable developments, the Council does not see a case at this time for the additional measures it had proposed earlier. However, the Council's assessment is that the planned adjustments of €3.1 billion in 2014 and €2.0 billion in 2015 should not be reduced. Budget-impacting developments will have to be monitored closely, with particular attention to potential growth shortfalls and the effective implementation of planned adjustment measures.

### BOX F: IDENTIFYING THE APPROPRIATE MEDIUM TERM FISCAL STANCE: SOME CONSIDERATIONS

The economic crisis has led to a large increase in the General Government deficit. Although there is disagreement on the precise measurement of the structural deficit (see Chapter 3), there is general agreement that much of the remaining deficit is structural in nature, and so will not disappear as the economy returns to its underlying potential. The requirements of long run fiscal sustainability, the national Budgetary Rule and the rules of the *Stability and Growth Pact* (*SGP*), mean that there is no choice but to correct the structural deficit over the medium to long run.

Notwithstanding this imperative, the Government does face a decision on how fast to correct the structural deficit. Of course, the room for policy choice is restricted by the conditions of the external assistance programme and the related commitments under the Excessive Deficit Procedure (EDP). Under the EDP, the maximum deficits are specified in nominal (i.e., that actual deficit as a share of GDP) rather than structural terms. A central requirement is to bring the General Government deficit to below 3 percent of GDP by 2015, with intermediate targets of 7.5 percent for 2013 and 5.1 percent for 2014. The structural balance as a share of GDP must also improve at a minimum rate of 0.5 percentage points of GDP per year.

With these constraints in place, the operational question for the Government in setting its medium term fiscal stance is whether to aim for lower nominal and structural deficits than allowed under the EDP and national Budgetary Rule given central projections for economic growth.

Competing considerations can be framed in terms of arguments for backloading the adjustments – which effectively means planning for no greater adjustments than are required to meet the targets under the central growth projections – and arguments for frontloading the adjustments by aiming at lower deficits than the maximum allowed.

In the international debate, the main argument advanced for backloading is that fiscal multipliers are likely to be larger in a recession. This means that the growth and employment loss from any given total adjustment in the structural primary balance (i.e., the structural

balance excluding interest costs) is likely to be larger if it is concentrated when the economy is already in recession. The debate about the size of fiscal multipliers in the current recession has been given impetus by recent IMF analysis that suggests that current multipliers are larger than they had previously believed, an underestimation that led them in turn to underestimate the negative effects of consolidation on growth. However, the IMF does not believe the multiplier has been underestimated for Ireland. We review the multiplier debate in Section 4.3.

Given Ireland's struggle to regain access to bond markets at affordable interest rates, a core argument for frontloading relates to creditworthiness. Under current conditions, Ireland's creditworthiness depends to a significant extent on perceptions that it would be able to meet conditions required for future official support – if needed – without funders demanding a restructuring of privately held Government debt. Uncertainty surrounding growth prospects leads to uncertainty over the capacity to meet nominal deficit targets and targets for stabilising the debt to GDP ratio without greater than planned adjustments.

Figures 2.5a and b in Chapter 2 show the uncertainty that surrounds projections for the General Government deficit and debt ratios given underlying uncertainty surrounding growth over the period to 2015. These figures assume no change to planned adjustments over this period. Figure 2.5c shows the uncertainty surrounding the additional nominal discretionary adjustments that would be required to meet the nominal targets. In the event of bad outcomes on growth, potential investors will be concerned that the required adjustments would not be politically feasible. This in turn leads to a "fear of default" that can put upward pressure on interest rates throughout the economy – including the cost of funding to the banking system – and harm domestic confidence. These effects would themselves slow growth in the short term.

Adjustments that are greater than required under central growth projections can then be viewed as providing a cushion should growth disappoint. This should help in the process of restoring creditworthiness. This effect could be reinforced by the further positive signal sent relating to Ireland's capacity to make difficult adjustments, although Ireland's reputation is already strong in this regard given the recent record.

A second argument for frontloading the adjustment is that it reduces domestic household and business uncertainty about the form the inevitable fiscal adjustments will take. This uncertainty could increase households' precautionary saving and lead businesses to hoard cash and delay planned hiring and investments until the fiscal picture becomes clearer.

Putting aside the issue of the size of near term adjustments, the effects of uncertainty about the form a given fiscal adjustment could take might also affect household and business spending plans in the near term. Rather than an argument for frontloading the adjustment, this could provide a case for supplying as much advance information as possible on the form the future planned adjustments will take. A counter argument is that although people have a general sense that further adjustments are coming, explicit announcements would make these effects more salient, leading to cutbacks in spending. Another counter argument is that

by announcing the detailed adjustments in advance, it will allow affected groups to better organise to lobby against the planned adjustments.

Other arguments for frontloading include limiting the extent to which the burden of adjustment is pushed onto younger generations and empirical evidence that large debt overhangs directly act as a drag on longer run growth.

Summing up, the decision on whether to frontload adjustments beyond the minimum necessary to meet nominal deficit targets under the central growth projections involves balancing the costs to near term growth and employment against the benefits of enhanced creditworthiness, intergenerational fairness and longer term growth prospects.[87]

## 4.3 The Fiscal Multiplier Debate

The international economic and financial crisis has led to a resurgence of interest in the size of fiscal multipliers. In the early stages of the crisis, much of the interest was in potential impacts of fiscal stimulus measures, at least for countries that had the "fiscal space" to pursue expansionary policies. As governments have moved to correct large deficits and rising debt levels, attention has turned more to the negative growth and employment effects of fiscal adjustment measures.

The economics literature on fiscal multipliers has responded rapidly to the greater policy interest, with significant output of both theoretical and empirical work. A general (though not universal) thrust of the recent work is to revise up estimates of fiscal multipliers, especially in the context of a financial crisis. A further theme has been how multipliers vary over time and across countries, depending on such factors as economic openness, exchange rate regimes, debt levels and economic conditions. Despite the surge in research, there remains considerable uncertainty about the size of multipliers that apply under current conditions (see Appendix E).

[87] The foregoing arguments have taken the nominal deficit targets imposed by official lenders and the EDP as given. However, the broader rules under the *SGP* allow for flexibility based on the state of the economy. In other words, the targets are specified in cyclically-adjusted terms. The benefits outlined above in terms of improved creditworthiness could potentially also be attained by specifying the conditions for official support in cyclically-adjusted terms. This would limit the requirement to scale up fiscal adjustments when growth disappoints. To the extent that potential investors in Irish debt doubt the capacity to push through even larger required adjustments in a weak growth environment, this is likely to also negatively affect creditworthiness. While retaining ambitious adjustment targets under central growth forecasts, the trade off between growth and creditworthiness could thus be improved by specifying targets in cyclically-adjusted terms. The challenges associated with measuring the cyclically-adjusted balance are discussed in Chapter 3.

One indicator of the uncertainty surrounding multipliers is the recent "battle of the boxes" that has taken place in reports from the IMF, European Commission and ECB (see, IMF, 2012b; European Commission, 2012a; and ECB, 2012b). This debate is reviewed in Box G.

Unfortunately, the literature focused on Ireland-specific multipliers remains quite limited. One influential source of model based multiplier estimates comes from the ESRI's large-scale *HERMES* macroeconomic model. Rather than directly estimating multipliers econometrically, reduced-form multipliers are derived based on simulated effects of fiscal changes in the model. Table 4.2 reports implied impact and long-run multipliers for a range of fiscal instruments analysed in Bergin *et al*. (2010). The first panel shows the estimates for the percentage changes in GDP that result from a €1 billion change in the fiscal variable. For purposes of comparison with estimates in the international literature, the second panel shows the percentage change in GDP that results from a 1 percent of GDP change in the fiscal variable.

TABLE 4.2: MULTIPLIER ESTIMATES BASED ON SIMULATIONS OF THE *HERMES* MODEL

| ***% Change in GDP for €1 Billion Change in Fiscal Variable*** | **Impact** | **Long-Run** |
|---|---|---|
| **Increase in Income Tax** | -0.2 | -0.5 |
| **Increase in Carbon Tax** | -0.1 | -0.5 |
| **Increase in Property Tax** | -0.2 | -0.3 |
| **Decrease in Public-Sector Pay Rates** | -0.2 | -0.3 |
| **Decrease in Public-Sector Employment** | -0.8 | -0.6 |
| **Decrease in Government Investment** | -0.3 | -0.1 |
| ***Simple Average*** | -0.3 | -0.4 |
| ***% Change in GDP for 1% of GDP Change in Fiscal Variable**** | **Impact** | **Long-Run** |
| **Increase in Income Tax** | -0.3 | -0.8 |
| **Increase in Carbon Tax** | -0.2 | -0.8 |
| **Increase in Property Tax** | -0.3 | -0.5 |
| **Decrease in Public-Sector Pay Rates** | -0.3 | -0.5 |
| **Decrease in Public-Sector Employment** | -1.3 | -1.0 |
| **Decrease in Government Investment** | -0.5 | -0.2 |
| ***Simple Average*** | -0.5 | -0.6 |

**Note: GDP in 2009 = €161.3 billion. The impact effect refers to the effect in Year 1 (2009).The long-run effect refers to the effect over a six-year period (2009-2015).*
*Source: Bergin et al. (2010) and IFAC calculations.*

Another notable contribution to the estimation of Irish multipliers is Bénétrix and Lane (2009). Following the structural vector autogregession (SVAR) methodology of Blanchard and Perotti (2002), they estimate multipliers for a range of fiscal instruments.[88] Bénétrix and Lane (2009) report their results in the form of impulse response functions that show the impact of a 1 percent of GDP shock to the fiscal variable over several years. A 1 percent of GDP shock to government spending has a first-year impact of about 0.7 percent of GDP, with the impact turning negative in the third year. A key finding, however, is that the size of the effect on GDP depends on the composition of the fiscal policy change, with multipliers for government investment significantly larger than multipliers for government consumption.[89]

In fulfilling its assessment function, the Council has employed the implied multiplier assumptions used by the Department of Finance and conducted a sensitivity analysis around the Department's baseline projections using the Council's Fiscal Feedbacks Model. The assumed baseline reduced-form multiplier is 0.5, which is broadly consistent with the national and international literature.[90] The model allows for fiscal policy changes to affect the economy and also allows for economic developments to feedback to fiscal aggregates through automatic stabiliser effects. (For a discussion of the model, see IFAC, 2012b pp 74-80). Rather than providing independent economic and fiscal projections, the model is designed to reproduce the Department of Finance's fiscal projections (updated for post-*Budget 2013* developments) based on their assumptions for economic growth and discretionary fiscal adjustments.[91] Using the updated projections as the

[88] One important difference is that they use annual instead of quarterly observations due to data availability. The key identifying assumption for exogenous fiscal shocks in Blanchard and Perotti (2002) is that fiscal policy cannot respond to output shocks in the quarter that they occur. This assumption is more tenuous for annual observations, but has some plausibility given that changes to fiscal policy are typically made in the annual Budget.

[89] They caution, however, that: ". . . the model is estimated over the 1970-2006 period, such that the fiscal multipliers are average effects across the range of economic conditions faced by Ireland over that interval. In particular, the size of the fiscal multiplier surely varies with the level of slack in the labour market and the perceived sustainability of the fiscal position" (Bénétrix and Lane, 2009 p.13).

[90] This baseline reduced-form multiplier, $m^*$, is based on the assumption of an *ex ante* multiplier, $m$, and an automatic-stabiliser coefficient, $b$, of 0.4. This automatic-stabiliser coefficient is consistent with the Department of Finance/European Commission methodology for calculating the structural balance. The *ex ante* multiplier is inferred based on the negative buoyancy calculation provided in Table 7 of the Economic and Fiscal Outlook provided as part of *Budget 2013* documentation. From the Fiscal Feedbacks Model the following relationship is assumed to hold: $\Delta pdef = (1/(1+mb))\Delta pdef^*$, where *pdef* is the primary deficit and $pdef^*$ is the structural primary deficit. Assuming $b$ equals 0.4, we infer that the *ex ante* multiplier, $m$, is 0.63. From the Fiscal Feedbacks Model, the reduced-form deficit multiplier is then $m^* = m/(1+mb)$. Thus, we infer that the value of the reduced-form multiplier is approximately equal to 0.5. Previous *Fiscal Assessment Reports* assumed a value of 0.42 for this reduced-from multiplier.

[91] It also uses multiplier and automatic stabiliser/buoyancy assumptions that are consistent with Department of Finance methodologies.

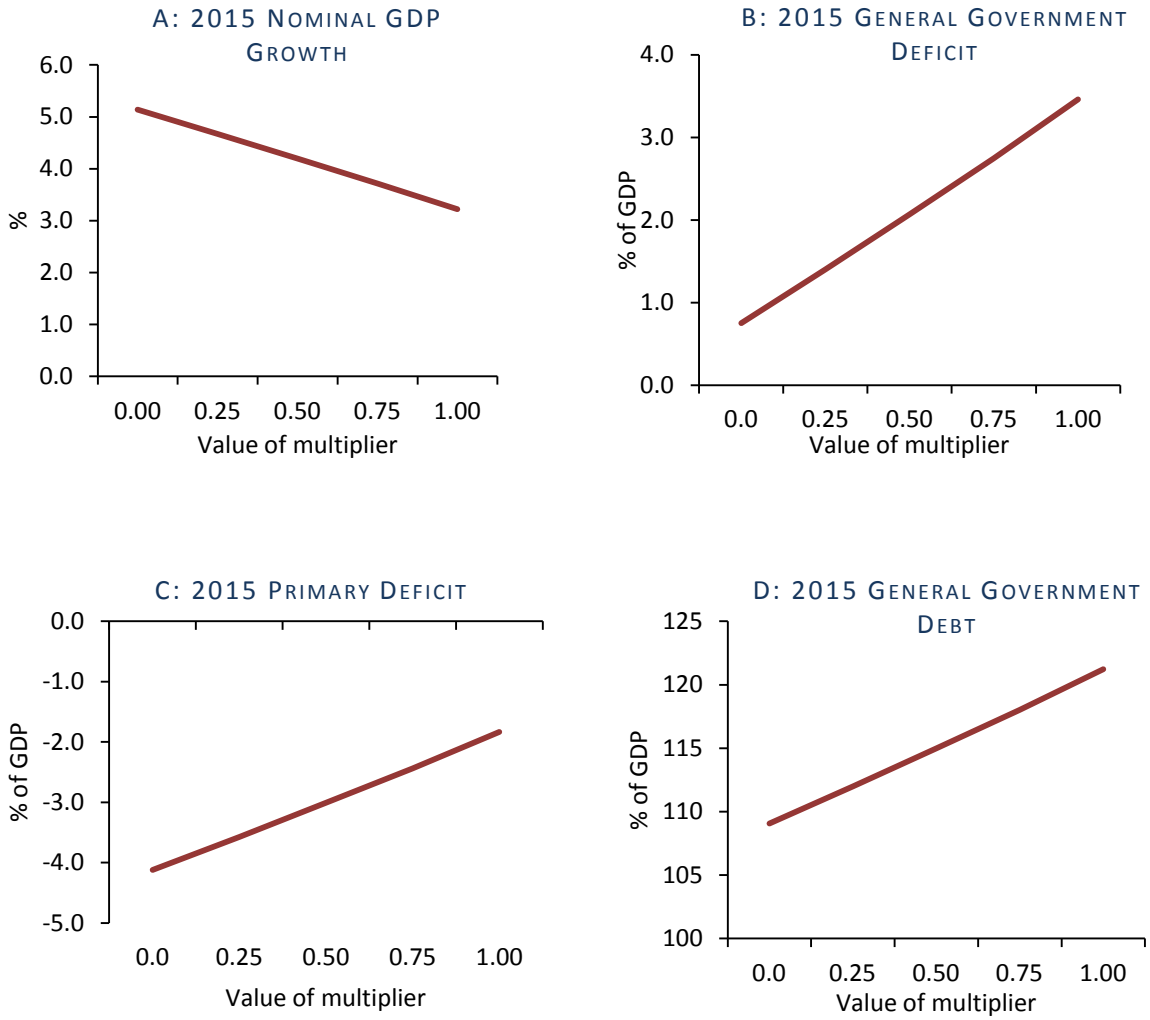
baseline, the model can then be used to examine the impacts of alternative assumptions for key variables and parameters.

Recognising the inevitable uncertainty that surrounds this baseline estimate, the Fiscal Feedbacks Model is used to consider the sensitivity of growth and fiscal projections to alternative overall deficit-multiplier assumptions for the period 2013-2015. Alternative assumptions ranging from zero to one are examined.[92]

The results are presented in Figure 4.6. Not surprisingly, the fiscal projections are quite sensitive to the assumed size of the multiplier. The updated projection for the General Government deficit is 2.1 percent of GDP for 2015, consistent with meeting the EDP requirement of bringing the deficit below 3 percent of GDP by 2015. With an assumed multiplier of zero – so that the fiscal adjustments have no effect on growth – the projected deficit for 2015 falls to 0.8 percent of GDP. With an assumed multiplier of one – so that fiscal adjustments have a larger negative impact on growth than under the baseline assumed value of 0.5 – the projected deficit rises to 3.5 percent of GDP, above the EDP ceiling. The debt to GDP ratio does stabilise by 2015 in all cases considered. However, with a multiplier of one, this ratio is 121.2 percent of GDP, which compares with 115.0 percent of GDP under the baseline and 109.1 percent of GDP with a multiplier of zero.

[92] Given an automatic-stabiliser coefficient of 0.4, this range for the reduced-form multiplier implies a range for the *ex ante* multiplier of 0 to 1.67.

FIGURE 4.6: SENSITIVITY ANALYSIS FOR 2015
BASED ON Alternative Multiplier Assumptions



## BOX G: BATTLE OF THE MULTIPLIER BOXES

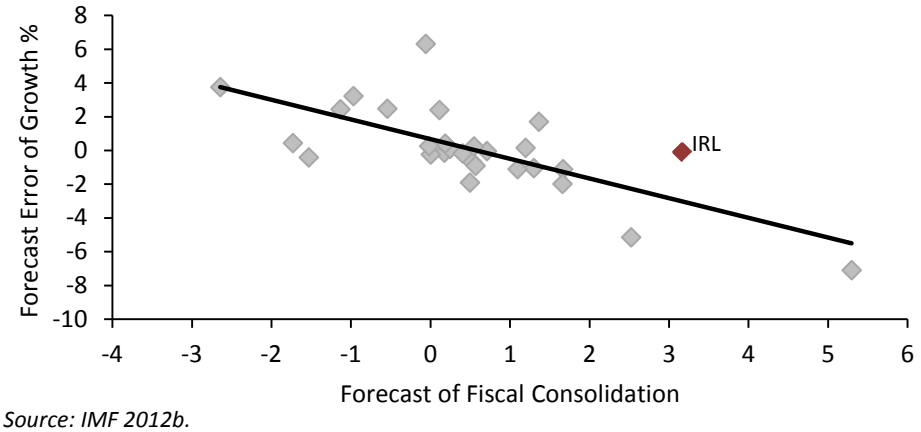
A box in the IMF's World Economic Outlook (IMF, 2012b) titled "Are we Underestimating Short-Term Fiscal Multipliers?" has led to intense debate over the size of fiscal multipliers during the crisis (see also Blanchard and Leigh, 2013). The box was followed by boxes from the European Commission (EC, 2012a) and the ECB (ECB, 2012b) questioning the IMF findings. This box briefly summarizes the debate with particular attention to potential lessons for Irish fiscal policy.

The core of the IMF's analysis is a regression of the size of growth forecasts' errors for the period 2010-2011 on the size of the planned consolidations for the same period. The growth forecasts were made in April 2010 and the consolidations are measured as the planned change in the structural primary balance as a share of potential GDP. The basic regression specification is:

$$\text{forecast error of growth} = \alpha + \beta \text{ forecast of fiscal consolidation} + \varepsilon.$$

A significant negative estimated value of β is taken as evidence that the size of fiscal multipliers was underestimated when making the growth forecasts. Essentially, all else equal, with a general underestimation of multipliers, larger planned adjustments are associated with larger overestimations of growth. With the base specification, the estimated value of β is statistically significant and close to 1 in absolute value (see Figure G1). The absolute value of β is taken as an estimate of the underestimation of the size of the overall deficit multiplier. The IMF finds that this result is robust with respect to the inclusion of a battery of controls and to the exclusion of outliers. It also finds that similar results hold for other forecasters, although the size of the estimated β is largest for the IMF's own forecasts (and smallest for forecasts made by the OECD).

FIGURE G1: RELATIONSHIP BETWEEN PLANNED DISCRETIONARY ADJUSTMENTS AND GROWTH FORECAST ERROR




*Source: IMF 2012b.*

*Note: Vertical axis displays WEO forecast error for real GDP growth in 2010 and 2011; horizontal axis displays WEO forecast of change in structural fiscal balance to GDP Ratio in 2010 and 2011.*

Although the assumed average value of the multiplier used when making the forecasts is 0.5, the IMF estimates that the true multiplier is in the range of 0.9 to 1.7, with the range determined by forecast source and specification. Such underestimation of the multiplier would have obvious implications for the nature of the trade off between supporting aggregate demand and ensuring debt sustainability/creditworthiness, and thus for the identification of the appropriate fiscal stance.

Although the IMF researchers conducted a number of robustness tests, subsequent analyses by the European Commission and the ECB have questioned the IMF results.

While accepting that multipliers are likely to be higher in a financial crisis, the European Commission has queried the applicability of the IMF's findings to the current Euro Area crisis (EC, 2012a). The Commission limits its sample to Euro Area countries, which it argues provides a more valid comparison as all countries are operating under the same exchange rate regime. For the full sample of EU countries similar results to those of the IMF are obtained.

Two caveats are emphasised, however, by the Commission study. First, the sample includes both countries engaged in temporary fiscal stimulus and countries engaged in permanent fiscal adjustment. Credible permanent adjustments are assumed to be associated with smaller multipliers, as households and businesses come to expect lower taxes in the future. Once the sample is limited to this latter group the negative relationship between forecast errors and the size of planned fiscal adjustments disappears. Second, the negative relationship in the full sample of Euro Area countries is not robust with respect to inclusion of a control for the increase in bond yields. To the extent that countries with the most serious debt problems were forced to pursue the largest adjustments and faced the most negative investor reaction over the period, this could lead to bias in the estimated relationship between the size of growth disappointments and the size of the adjustments. In essence, the concern is that the larger growth disappointments for countries engaging in the largest adjustments was not due to an underestimation of the multiplier, but rather to these countries being more negatively affected by a contemporaneous fall in investor confidence. It is important to note that the IMF study found the negative relationship to be robust to the inclusion of controls for starting debt levels and changes in CDS spreads. The differing results show how sensitive results can be to sample composition and the choice of control variables in small cross-country samples.

In its contribution, the ECB argues that the debate is too narrowly focused on the short-term fiscal multiplier (ECB, 2012b). Unlike the IMF and EC, it does not focus on regressions of the growth disappointment on the size of planned adjustment. Instead, it simulates both the short- and long-run effects of adjustment measures using its New Area-Wide Model. The ECB study makes three points: (i) the short-term negative effects of adjustment are smaller if the adjustment is credible, with the offsetting effects coming through reduced bond yields and expectations of positive supply-side effects; (ii) like the IMF and EC, it emphasises that multiple factors are at work at the time of adjustment making it difficult to credibly identify the specific effects of the adjustment measures; and (iii) while adjustment may harm growth

in the short term, this is more than compensated for positive effects on longer-term growth, especially where expenditure reductions make room for longer-term tax cuts that have positive supply side effects.

What are the implications of this debate for the potential underestimation of Irish fiscal multipliers during the crisis? In the IMF's analysis, an overestimation of growth was not observed for Ireland for this period. However, as documented in previous *Fiscal Assessment Reports*, there has been a pattern of downgrades to Irish growth forecasts for a given year as the forecast horizon shortened. This pattern is reproduced for 2012 in Figure G2. While an underestimation of the fiscal multipliers is certainly not the only possible explanation, the downgrade of forecasts is consistent with a pattern of underestimating the growth retarding effects of the significant consolidation measures taken in these years.

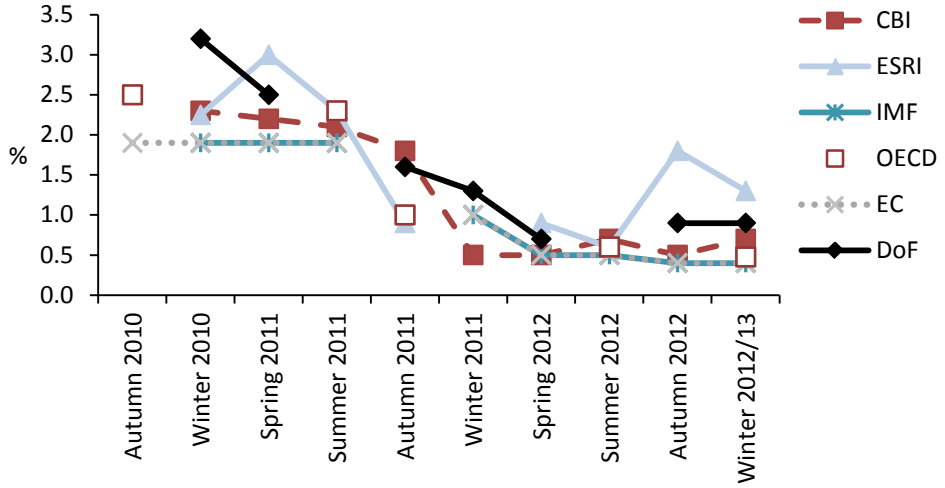
It is important to note, however, that the Ireland specialists at the IMF do not believe that multipliers have been underestimated in the Irish case. In the wake of the controversy following the initial IMF box, Ajai Chopra, head of the IMF negotiating team for Ireland, noted in a statement that:[93]

> "In the current discussion of the impact of fiscal adjustment on growth, it is important to note that no single fiscal multiplier is applicable to all countries and circumstances. And although there is uncertainty around any estimate of multipliers, there is no compelling evidence that a higher multiplier was at work in Ireland than the one assumed under the program. With overburdened bank, household and SME balance sheets, and weak growth in trading partners, a number of factors besides fiscal consolidation have been a drag on growth in Ireland."

As discussed in Appendix E the recent theoretical and empirical literature on fiscal multipliers underlines the sensitivity of multipliers to economic conditions and policy regimes. While multipliers tend to be higher in recessions – particularly recessions associated with financial crises – they tend to be lower in countries with high debt to GDP ratios and countries facing bond market stress. These factors pull in different directions in the Irish case. On balance, the Council judges a central estimate of the overall deficit multiplier for Ireland of 0.5 to be broadly appropriate given the openness of the economy. However, it also recognised the significant uncertainty surrounding this estimate, and that the true figure is likely to change over time. Based on the Council's Fiscal Feedbacks Model, a sensitivity analysis is provided to gauge the implications of alternative multiplier values on medium-term fiscal projections (see Figure 4.6).

[93] The full statement is available at http://www.irisheconomy.ie/index.php/2012/10/22/ajai-chopra-on-the-fiscal-multiplier-in-ireland/

FIGURE G2: EVOLUTION OF REAL GDP GROWTH FORECASTS FOR 2012




## 4.4 COMPLEMENTARY ACTIONS TO SUPPORT CREDITWORTHINESS

Although the State's creditworthiness has steadily improved since mid-2011 as fiscal targets have been achieved, unavoidable uncertainties around growth mean that there is no assurance that the trend improvement in the public finances will continue. As in previous *Fiscal Assessment Reports*, this chapter has argued for aiming at a margin of safety to increase confidence that all fiscal targets are met. This, in turn, should enhance the confidence of investors that they will be repaid with funds raised from either market or official sources, supporting a virtuous circle of rising confidence, growth and fiscal stabilisation. A limited margin of safety is now in place – although creditworthiness remains fragile. We conclude by briefly noting two potentially complementary elements of a strategy to robustly restore creditworthiness: post-programme precautionary funding arrangements; and more supportive terms on official debt.

### 4.4.1 POST-PROGRAMME PRECAUTIONARY FUNDING/BOND MARKET SUPPORT

The fall in Ireland's bond yields reflects, in part, a market view that official funding to cover ongoing deficits and rollovers of maturing debt would be available without a forced restructuring of debt owed to the private sector. While there are attractions to a clean exit from the programme, this confidence could be reinforced by explicit post-programme precautionary funding arrangements and/or through ECB commitments to support secondary market bond yields through its Outright Monetary Transactions (OMT) programme (ECB, 2012a). A precautionary programme from the European Stability Mechanism (ESM) is one of the requirements for access to the OMT:

A necessary condition for Outright Monetary Transactions is strict and effective conditionality attached to an appropriate European Financial Stability Facility/European Stability Mechanism (EFSF/ESM) programme. Such programmes can take the form of a full EFSF/ESM macroeconomic adjustment programme or a precautionary programme (Enhanced Conditions Credit Line), provided that they include the possibility of EFSF/ESM primary market purchases. The involvement of the IMF shall also be sought for the design of the country-specific conditionality and the monitoring of such a programme.

The Governing Council will consider Outright Monetary Transactions to the extent that they are warranted from a monetary policy perspective as long as programme conditionality is fully respected, and terminate them once their objectives are achieved or when there is non-compliance with the macroeconomic adjustment or precautionary programme.

Following a thorough assessment, the Governing Council will decide on the start, continuation and suspension of Outright Monetary Transactions in full discretion and acting in accordance with its monetary policy mandate (ECB, 2012a).

The ESM offers two precautionary credit facilities: the Enhanced Conditions Credit Line (ECCL) and (with more stringent qualifying conditions) the Precautionary Conditioned Credit Line (PCCL).[94] In addition to its Stand-By Arrangement (SBA),[95] which may be provided on a precautionary basis, the IMF also offers two dedicated precautionary credit lines: the Precautionary and Liquidity Line (PLL)[96] and (again with more stringent qualifying conditions) the Flexible Credit Line (FCL).[97]

Such precautionary supports would inevitably come with conditions, but these conditions are likely to be in line with commitments already in place under national and European fiscal rules. Moreover, post-programme monitoring by the EU is set to take place in any case until 75 percent of their programme loans have been repaid while similar arrangements will be in effect with respect to the loans from the IMF.

[94] For details, see: http://www.esm.europa.eu/pdf/ESM%20Guideline%20on%20precautionary%20financial%20assistance.pdf.

[95] For details, see: http://www.imf.org/external/np/exr/facts/sba.htm.

[96] For details, see: http://www.imf.org/external/np/exr/facts/pll.htm.

[97] For details, see: http://www.imf.org/external/np/exr/facts/fcl.htm.

### 4.4.2 More Supportive Terms on Official Debt

A second way to reinforce the improvement in creditworthiness is through negotiated relief on debts to official creditors. Such relief could be viewed as mutually beneficial if it helps secure a resolution of the Euro Area debt crisis. Three possibilities applicable to Ireland have been discussed intensively in recent months: restructuring of the promissory notes/Exceptional Liquidity Assistance arrangements used to finance the now-liquidated Irish Bank Resolution Corporation (IBRC); extending the maturities on official EFSF/EFSM loans made as part of Ireland's programme; and purchases of State-owned equity stakes in the "live" banks by the ESM.

Each of these negotiated reliefs has complex fiscal implications. The potentially affected fiscal variables include: the gross General Government debt; measures of net debt (i.e., gross debt less an appropriate measure of the State's financial assets); the General Government deficit; and the maturity profile of gross debt.

Given the complexity of the potential transactions involved, it is typically necessary to look beyond the General Government sector towards a more comprehensive measure of their effect on the State's balance sheet.

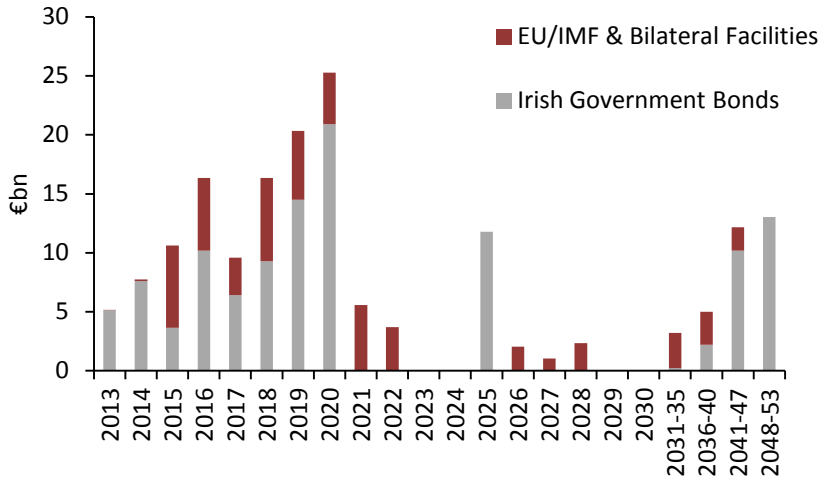
#### *Restructuring of Promissory Notes/ELA Arrangements*

In February 2013 the Government and the Central Bank of Ireland conducted a transaction to swap the promissory notes held by IBRC for floating-rate Government bonds of varying maturities. IBRC was liquidated, with the Government bonds moving to the Central Bank. An analysis of the transaction is provided in Box C in Chapter 2. The anticipated fiscal effects of the transaction on the General Government sector include a lowering of the present discounted value of State obligations, a reduction in funding requirements of approximately €20 billion over the next decade, and a reduction in the measured General Government deficit of approximately €1 billion in both 2014 and 2015.

### EXTENDING MATURITIES ON OFFICIAL LOANS

Following the restructuring of official EFSF/EFSM loans to Greece in December 2012, the possibility of extending the maturity on similar loans to Ireland and Portugal has been discussed by European finance ministers.[98] Figure 4.7 shows the maturity profile of Ireland's outstanding long-term marketable and official debt. The total outstanding debt to the EU/IMF will rise to €67.5 billion by the end of 2013. A significant amount of this debt will mature between 2015 and 2020. For EFSF/EFSM loans, €6.3 billion is due to mature in 2015, €4.2 billion in 2016, €3.9 billion in 2018 and €1 billion in 2019.[99] A further €20 billion of IMF loans is due to mature over the next decade. Such high medium term funding needs could be a deterrent to private investors, especially given possible concerns over perceived de facto seniority of official creditors. Lengthening the maturity on EFSF/EFSM loans could, thus, have a further positive effect on market creditworthiness.

FIGURE 4.7: MATURITY STRUCTURE OF LONG TERM AND OFFICIAL DEBT




*Source: NTMA.*

[98] An agreement in principle was made at the March 4th Eurogroup meeting to examine the extension of maturities on EFSF/EFSM loans to Ireland and Portugal. Finance ministers of all 27 EU countries agreed to examine such an extension on March 5th. On March 16th the Eurogroup issued the following statement relating to EFSF loans: "The Eurogroup ministers are determined to support Ireland's and Portugal's efforts to regain full market access and successfully exit their well-performing programmes, in the context of continued strong programme implementation and compliance. They have agreed to an adjustment of the maturities of the EFSF loans to both countries in order to smooth the debt redemption profiles of those countries. The technical details will be put forward to the Eurogroup by the Troika and the EFSF at the same time as the MoU underlying the Cypriot adjustment programme. As regards the EFSM, any extension of the maturities of the loans is for consideration and decision by ECOFIN Ministers."(Council of the European Union, 2013).

[99] While no EFSF/EFSM debt matures in 2020, a further €3 billion matures in each of 2021 and 2022.

### ESM Purchases of State-Owned Equity Stakes in Irish Banks

A third mooted mechanism to reduce the burden of official debts is the purchase by the ESM of the State's equity stakes in Irish banks. The State currently owns almost 100 percent of AIB and Permanent TSB, and 15 percent of Bank of Ireland. The value of the Government's stakes in AIB and Bank of Ireland in the "directed portfolio" of the National Pension Reserve Fund (NPRF) was estimated to be €8.6 billion on 31 December 2012.[100]

To gauge the potential value of such transactions it is essential to look beyond the impacts on gross debt to also consider the implications for net debt. A purchase of the equity stakes at market value would not change the value of appropriately measured net debt, as the fall in Government liabilities (i.e., the reduction in gross debt made possible by the sale) would be matched by a fall in Government assets (the value of equity stakes).

The ESM will not consider capital injections until the Single Supervisory Mechanism (SSM) – the first stage in the development of a banking union – is operational. This is not expected until 2014. There is also uncertainty at this point as to whether the ESM would be permitted to purchase existing equity stakes – the "legacy" issue – or would be restricted to new capital injections into stressed banks. Neither is it clear that the ESM would be willing to purchase stakes for above market value even if transactions relating to legacy assets are permitted. Based on current information, this mechanism appears to involve the most uncertain prospects in terms of reducing the debt burden and improving creditworthiness. However, by helping to break the link between the banking system and State finances, the potential for future capital injections into stressed banks by the ESM should help reduce an important (implicit) contingent liability of the State.

[100] "[T]he Directed Portfolio comprises ordinary shares in AIB valued at €0.0076 (0.76 cent) per share and in BoI valued at market price and preference shares in AIB valued at 63.5% of par and in BoI valued at 80.2% of par" (NPRF, 2012, p. 1).

## APPENDIX E: RECENT LITERATURE ON FISCAL MULTIPLIERS

Following a number of years of relative neglect, international theoretical and empirical research on fiscal multipliers has surged since the international financial crisis erupted in 2008. A major theme of this research has been the dependency of multipliers on the structure of the economy/policy regime as well as current economic/financial conditions. While the expanding literature is providing a fuller understanding of the factors affecting the growth and employment effects of fiscal adjustments, the recent work has also highlighted the complexity of the intermediating factors. There thus remains considerable uncertainty surrounding the size of multipliers for a given country at a point in time. In this appendix, some of the more influential developments in the theoretical and empirical literatures are reviewed.

### THEORETICAL LITERATURE

Recent theoretical work has focused on how the state of the economy and the policy regime can affect the size of fiscal multipliers, mainly within the framework of New Keynesian macro models. A key question has been how liquidity trap conditions following a financial crisis can influence the multiplier (see, e.g., Woodford, 2011).

For Ireland, a relevant debate is whether the multiplier is larger for a country that can conduct an independent interest rate policy but is constrained by a zero lower bound on the nominal interest rate or for a country that cannot independently adjust the interest rate because it is part of a currency union. The standard result that multipliers are larger in a currency union (i.e., fixed exchange rate) than under an independent interest rate policy (i.e., flexible exchange rate) can be overturned when a country is in a liquidity trap. Erceg and Linde (2012) find that the multiplier can be larger under an independent interest policy if inflation is sufficiently sensitive to the output gap, which leads to a rise in real interest rates. Fahri and Werning (2012) find an even stronger result in a liquidity trap: multipliers are larger under an independent interest rate policy.

An older concern, going back to Giavazzi and Pagano (1990), is how the level of debt affects the size of multipliers. Multipliers are found to be smaller – and can even reverse sign – when debt levels are high (see Corsetti *et al*., 2012, for a recent discussion).

A controversial recent finding in the literature is that, under certain conditions, attempts to reduce the deficit through contractionary policies could actually be self defeating in terms of bringing

down the deficit (Denes, *et al*., 2012). The possibility of self defeating efforts at deficit reduction comes through impacts on expectations of future taxes and spending. In a related vein, DeLong and Summers (2012) identify conditions – notably persistent (or "hysteresis") effects on output from temporary stimulus measures – under which temporary expansionary fiscal policies could reduce long-run debt financing burdens. In a recent paper, Eyraund and Weber (2013) use simulations to show that with relatively high multipliers and starting debt ratios, fiscal adjustment can raise the debt to GDP ratio in the short-run even as the deficit falls, but the effect is not long-lasting and the debt ratio eventually declines. However, they argue that creditworthiness could be adversely affected if financial markets focus on the short-term behaviour of the debt ratio, or if there are repeated rounds of fiscal tightening in an effort to get the debt ratio to converge to a target.[101]

### Empirical Literature

The financial crisis has also given impetus to the empirical measurement of multipliers. The challenge is to identify the true causal effects of changes in government spending or taxation given that policy will respond to conditions in the economy. For example, governments may respond to weak economic conditions with fiscal stimulus. Even if the policy stimulus leads to faster growth, it is difficult to disentangle the positive growth effect from the weak economic conditions that motivated the stimulus in the first place. The solution is to look for sources of variation in fiscal policy that are independent of the state of the economy.

Two broad approaches have been followed. The first approach is to use *structural vector autoregressions* (SVAR). SVAR is a statistical technique that aims to identify exogenous policy developments, typically by making an assumption about the speed at which policy can respond to unexpected economic developments. The classic paper applying this technique to fiscal policy is Blanchard and Perotti (2002).

The second approach has been labelled the *narrative method*. This attempts to use the historical record to isolate episodes where the change in fiscal policy was due to considerations – for example government spending in a war – that are independent of the state of the economy. Influential papers using this approach include Barro and Redlick (2011), Romer and Romer (2010),

[101] In the Irish context, the Council's April 2012 *Fiscal Assessment Report* considered the likelihood of fiscal adjustment being self defeating in terms of improvements in the primary deficit, the debt to GDP ratio and creditworthiness (see IFAC, 2012a pp46-48). The available evidence and simulations using the Council's Fiscal-Feedbacks Model do not support the self defeating hypothesis for Ireland.

and Ramey (2011). These studies have focused on fiscal policy episodes in the United States. An influential study that has extended this approach to cross-country episodes of large fiscal contractions is Guajardo *et al*. (2011). This work questions a finding from the earlier "expansionary fiscal contraction" literature (see, e.g., Alesina and Ardagna, 1998) that large fiscal contractions in the context of economic crises can have expansionary effects on the economy. (However, see Alesina *et al*., 2012 and Perotti, 2011, for responses).

A common finding in empirical studies is that the size of the effect on real GDP depends on the composition of fiscal adjustment. Alesina *et al*. (2012) conclude that expenditure-based adjustments (i.e., expenditure cuts) are less costly in terms of output losses than tax based adjustments (i.e., tax increases). Guajardo *et al*. (2011) find a similar result, but the difference disappears when they control for monetary policy responses. However, as a small country in a large monetary union, monetary policy should be effectively exogenous to changes in Irish fiscal policy. One reasonably robust result across studies that explore the effect of the composition of adjustment is that multipliers for government investment are larger than multipliers for government consumption (see, e.g., Bénétrix and Lane, 2009).

An important focus of the empirical literature that complements recent theoretical developments has been the examination of factors that affect the size of country- and time-specific multipliers. Ilzetzki *et al*. (2010) find that multipliers tend to be larger in richer economies, less open economies, economies operating under fixed exchange rates, and low-debt economies. Using the size of the output gap as a measure of the state of the economy, Baum *et al*. (2012) conclude that multipliers are larger in recessions than in expansions. Auerbach and Gorodnichenko (2012) find that multipliers are larger in recessions and for countries with low debt levels. They find that for an economy in recession the multiplier falls to near zero for a country with a debt to GDP ratio of 100 percent. Corsetti *et al*. (2012) find that multipliers are unusually high during times of financial crisis and usually low under high debt levels. In line with recent theoretical findings, they find that multipliers are larger under an independent interest rate regime than in a currency union in the context of a financial crisis. In general, the literature has tended to lead to upward revisions of the size of fiscal multipliers, while underlining that multipliers are highly contingent on economic conditions and the policy regime.

The literature provides somewhat mixed messages for the likely size of current Irish multipliers. In more normal circumstances, the significant openness of the Irish economy would suggest relatively

low multipliers.[102] However, multipliers are likely to be higher in the context of the financial crisis and recession, though the effect may be attenuated by Ireland's participation in a currency union. A relatively robust finding from the literature is that multipliers tend to be small for countries with high debt, especially in the context of a debt crisis.

[102] The effects of high openness should not be exaggerated, however, as a large fraction of Irish imports serve as inputs into the production of exports in Ireland's large multinational sector. The marginal propensity to import out of domestic demand is likely to be significantly lower than the aggregate import share of roughly 80 percent of GDP would suggest.

## GLOSSARY

**Automatic stabilisers**: An institutional feature of an economy that dampens its macroeconomic fluctuations, e.g., an income tax, which acts like a tax increase in a boom and a tax cut in a recession.

**Adjustment path condition:** The structural balance is required to improve by at least 0.5 percentage points of GDP per annum and converge towards the medium-term budgetary objective (MTO) (excluding in exceptional circumstances and if the failure to meet it does not endanger fiscal sustainability in the medium-term).

**Balance sheet recession**: A situation where a large portion of the private sector is reducing spending in order to repair balance sheets following the bursting of a nationwide asset price bubble.

**Budget balance**: The balance between total public expenditure and revenue in a specific year, with a positive balance indicating a surplus and a negative balance indicating a deficit.

**Cyclical adjustment**: The adjustment of figures such as GDP, government spending, tax revenues, or the budget deficit to show what they would be if total activity was at its trend or potential level.

**Cyclically adjusted budget balance (CABB)**: This is the actual budget balance net of the cyclical component. The CABB gives a measure of the underlying trend in the budget balance.

**Exchequer balance**: The difference between total receipts into and total expenditure out of the Exchequer account of the Central Fund of Government. It is the main component of the GGB. It is measured on a cash basis whereas the GGB is measured on an accruals basis.

**Fiscal rule**: A fixed constraint on fiscal policy which is usually defined in terms of an indicator of overall fiscal performance and is often expressed as a numerical ceiling or floor.

**Fiscal space**: The scope for further increases in public debt without undermining sustainability.

**Fiscal stance**: A measure of the intended impact of discretionary fiscal policy. It can be defined as the change in the primary structural budget balance relative to the preceding period. When the change is positive (negative) the fiscal stance is said to be expansionary (restrictive).

**General Government balance (GGB)**: The GGB measures the fiscal performance of all arms of government. This includes Central Government (the Exchequer), but also Local Authorities, non-commercial State sponsored bodies, Vocational Education Committees as well as the National Pension Reserve Fund and the Social Insurance Fund. The GGB does not reflect the position of commercial State sponsored bodies as these agencies are classified as being outside the General Government sector.

**MTO:** The Medium-Term Objective which sets a country-specific numerical benchmark for the structural budget balance of the General Government.

**Output Gap**: The output gap is the difference between actual output and estimated potential output at a particular point in time.

**Potential output**: The level of real output in a given year that is consistent with a stable rate of inflation. If actual output rises above its potential level, constraints on capacity begin to bind and inflationary pressures build; if output falls below potential, resources are lying idle and inflationary pressures abate.

**Primary balance**: General Government balance excluding interest payments.

**Structural balance:** The structural balance is the CABB excluding one-off items.

## BIBLIOGRAPHY

Alesina, Alberto, Carlo Favero and Franceso Giavazzi (2012). "The Output Effect of Fiscal Consolidations", Working Paper, Harvard University and IGIER-Bocconi.

Alesina, Alberto and Sylvia Ardagna (1998). "Tales of Fiscal Adjustment", *Economic Policy*, Vol 13, No 27, pp. 487-545.

Auerbach, Alan and Yuriy Gorodnichenko (2012). "Fiscal Multipliers in Recession and Expansion", Working Paper, Berkeley: University of California.

Barnes, Sebastian, David Davidsson and Łukasz Rawdanowicz (2012). "Europe's New Fiscal Rules", OECD Economics Department Working Papers, No. 972, Paris: OECD Publishing.

Barro, Robert and Charles Redlick (2011). "Macroeconomic Effects from Government Purchases and Taxes", *Quarterly Journal of Economics*, Vol 126, pp. 51-102.

Baum, Anja, Marcos Poplawski-Ribeiro and Anke Weber (2012). "Fiscal Multipliers and the State of the Economy", WP/12/286, Washington DC: International Monetary Fund.

Bénétrix, Agustin and Philip. R. Lane (2012). "The Cyclical Conduct of Irish Fiscal Policy", *The World Economy*, Vol 35, No 10.

Bénétrix, Agustin and Philip. R. Lane (2009). "The Impact of Fiscal Shocks on the Irish Economy", IIIS Discussion Paper No. 281, Dublin: Trinity College.

Bergin, Adele, Thomas Conefrey, John FitzGerald and Ide Kearney (2010). "The Behaviour of the Irish Economy: Insights from the *HERMES* macro-economic model", ESRI Research Series, No. 7. Available from: http://www.esri.ie/UserFiles/publications/20090513115638/RS007.pdf

Blanchard, Olivier and Daniel Leigh (2013). "Growth Forecast Errors and Fiscal Multipliers", WP/13/1, Washington DC: International Monetary Fund. Available from: http://www.imf.org/external/pubs/ft/wp/2013/wp1301.pdf

Blanchard, Olivier and Roberto Perotti (2002). "An Empirical Characterisation of the Dynamic Effects of Changes in Government Spending and Taxes on Output", *Quarterly Journal of Economics*, Vol 117, pp. 1329-1368.

Central Bank of Ireland (2012). *Quarterly Bulletin Q4 2012*. Available from: http://www.centralbank.ie/publications/documents/quarterly%20bulletin%20q4%202012.pdf

Central Statistics Office (2013a). *Live Register*, March 2013. Available from: http://www.cso.ie/en/media/csoie/releasespublications/documents/latestheadlinefigures/lreg_mar2013.pdf

Central Statistics Office (2013b). *Quarterly National Accounts*, Q4 2012 and Year 2012. Available from: http://www.cso.ie/en/media/csoie/releasespublications/documents/economy/2012/qna_q42012.pdf

Central Statistics Office (2013c). *Quarterly National Household Survey,* Q4 2012. Available from: http://www.cso.ie/en/media/csoie/releasespublications/documents/labourmarket/2012/qnhs_q42012.pdf

Central Statistics Office (2013d). *Residential Property Price Index,* February 2013. Available from: http://www.cso.ie/en/media/csoie/releasespublications/documents/prices/2013/rppi_feb2013.pdf

Central Statistics Office (2013e). *Retail Sales Index,* February 2013. Available from: http://www.cso.ie/en/releasesandpublications/er/rsi/retailsalesindexfebruary2013/#.UVw-BuZOO70

Corsetti, Giancarlo, Andre Meier and Gernot Muller (2012). "What Determines Government Spending Multipliers", WP/12/150, Washington D.C: International Monetary Fund.

Council of the European Union ( 2013). "Eurogroup statement on Portugal and Ireland". Available from: http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ecofin/136194.pdf

D'Agostino, Antonello, Kieran McQuinn and Derry O'Brien (2008). "Now-casting Irish GDP", Research Technical Paper 9/RT/2008, Dublin: Central Bank of Ireland.

D'Auria, Francesca, Cécile Denis, Karel Havik, Kieran Mc Morrow, Christophe Planas, Rafal Raciborski, Werner Röger and Alessandro Rossi (2010). "The production function methodology for calculating potential growth rates and output gaps", European Economy, Economic Papers. 420**.** Brussels: European Commission.

Delong, J. Bradford and Lawrence H. Summers (2012). "Fiscal Policy in a Depressed Economy". Available from: http://www.brookings.edu/~/media/Files/Programs/ES/BPEA/2012_spring_bpea_papers/2012_spring_BPEA_delongsummers.pdf

Denes, Matthew, Gaudi.B. Eggertsson and Sophia Gilbukh (2012). "Deficits, Public Debt Dynamics, and Tax and Spending Multipliers", Federal Reserve Bank of New York, Staff Report No. 551, Revised September 2012. Available from: http://www.newyorkfed.org/research/staff_reports/sr551.pdf

Department of Finance (2012a). *Budget 2013*. Available from: http://budget.gov.ie/Budgets/2013/2013.aspx

Department of Finance (2012b). *Stability Programme Update April 2012*. Available from: http://www.finance.gov.ie/documents/publications/other/spuapr2012.pdf

Department of Finance (2013a). "Monthly EBR Profiles 2013", Available from: http://www.finance.gov.ie/documents/exchequerstatements/2013/febBER.pdf

Department of Finance (2013b). *Pro Forma Transaction Impact Analysis – State Finances (Based on No Policy Change)*. Available from: http://www.finance.gov.ie/documents/publications/other/2013/pronotetransaction.pdf

Department of Finance (2013c). "Q&A - IBRC liquidation 6 Feb 2013", Available from: http://finance.gov.ie/documents/publications/other/2013/qaupdate.pdf

Department of Public Expenditure and Reform (2012). *Comprehensive Expenditure Report, 2012-2014*, Available from: http://www.budget.gov.ie/budgets/2012/Documents/CER%20-%20Estimates%20Final.pdf

Department of Public Expenditure and Reform (2013). *Expenditure Report 2013.* Available from: http://per.gov.ie/wp-content/uploads/Expenditure-Report-Final-Version-for-Print-04-Dec-2012-pdf-Adobe-Acrobat-Pro.pdf

Erceg, Christopher and Jesper Linde (2012). "Fiscal Consolidation in an Open Economy", International Finance Discussion Papers, No 1046, Washington D.C: Board of Governors of the Federal Reserve.

European Central Bank (2012a). "Press Release: Technical features of Outright Monetary Transactions". Available from: http://www.ecb.int/press/pr/date/2012/html/pr120906_1.en.html

European Central Bank (2012b). "The Role of Fiscal Multipliers in the Current Consolidation Debate", *ECB Monthly Bulletin*, Box 6, December 2012. Available from: http://www.ecb.int/pub/pdf/mobu/mb201212en.pdf

European Commission (2012a). "Forecast errors and multiplier uncertainty", *European Commission Autumn Economic Forecast*, Box 1.5. Available from: http://ec.europa.eu/economy_finance/eu/forecasts/2012_autumn/box_af12_-_multipliers_en.pdf

European Commission (2012b). *Specifications on the implementation of the Stability and Growth Pact and Guidelines on the format and content of Stability and Convergence Programmes*. Available from: http://ec.europa.eu/economy_finance/economic_governance/sgp/pdf/coc/code_of_conduct_en.pdf

European Commission (2012c). "The 2012 Ageing Report Economic and budgetary projections for the 27 EU Member States (2010-2060)", *European Economy,* Vol 2. Available from: http://ec.europa.eu/economy_finance/publications/european_economy/2012/pdf/ee-2012-2_en.pdf

Eyraud, Luc and Anke Weber (2013). "The Challenge of Debt Reduction During Fiscal Consolidation", WP/13/67, Washington DC: International Monetary Fund.

Farhi, Emmanuel and Iván Werning (2012). "Fiscal Multipliers: Liquidity Traps and Currency Unions", Working Papers 18381, Cambridge, MA: National Bureau of Economic Research.

Giavazzi, Francesco and Marco Pagano (1990). "Can Severe Fiscal Contractions be Expansionary? Tales of Two Small Open Economies", in Olivier Blanchard and Stanley Fischer, eds., *NBER Macroeconomics Annual*, pp.75-111.

Girouard, Nathalie and Christophe André (2005). "Measuring Cyclically-Adjusted Budget Balances for OECD Countries", Economics Department Working Papers, No. 434, Paris: OECD.

Guarjardo, Jaime, Daniel Leigh and Andrea Pescatori (2011). "Expansionary Austerity: New International Evidence", WP/11/158, Washington D.C: International Monetary Fund.

Health Service Executive (2013). *Health Service Executive National Service Plan 2013*, Available from: http://www.hse.ie/eng/services/Publications/corporate/NSP2013.pdf

Ilzetzki, Ethan, Enrique Mendoza and Carlos Vegh (2010). "How Big (Small?) are Fiscal Multipliers?", Working Paper 16479, Cambridge, MA: National Bureau of Economic Research.

International Monetary Fund (2013). *Ireland: Ninth Review Under the Extended Arrangement; Staff Report*. Available from: http://www.imf.org/external/pubs/ft/scr/2013/cr1393.pdf

International Monetary Fund (2012a). *Ireland: Sixth Review Under the Extended Arrangement; Staff Report*. Available from: http://www.imf.org/external/pubs/ft/scr/2012/cr12147.pdf

International Monetary Fund (2012b). "Are We Underestimating Short-Term Fiscal Multipliers?" *World Economic Outlook*, October, Box 1.1. Available from: http://www.imf.org/external/pubs/ft/weo/2012/02/pdf/text.pdf

International Monetary Fund (2012c). *Ireland: Eighth Review Under the Extended Arrangement; Staff Report*, Available from: http://www.imf.org/external/pubs/ft/scr/2012/cr12336.pdf

International Monetary Fund (2013). *World Economic Outlook Update*, Available from: http://www.imf.org/external/pubs/ft/weo/2013/update/01/pdf/0113.pdf

Irish Fiscal Advisory Council (2012a). *Fiscal Assessment Report, April 2012*. Dublin: Irish Fiscal Advisory Council. Available from: http://www.fiscalcouncil.ie/wp-content/uploads/2012/04/IFAC_April2012.pdf

Irish Fiscal Advisory Council (2012b). *Fiscal Assessment Report, September 2012*. Dublin: Irish Fiscal Advisory Council. Available from: http://www.fiscalcouncil.ie/fiscal-assessment-report-september-2012/

Irish Fiscal Advisory Council (2012c). *Strengthening Ireland's Fiscal Institutions*. Dublin: Irish Fiscal Advisory Council. Available from: http://www.fiscalcouncil.ie/wp-content/uploads/2012/08/SIFI_Jan12.pdf

Irish Statute Book (2012). *Fiscal Responsibility Act*. Available from: http://www.irishstatutebook.ie/2012/en/act/pub/0039/index.html

Johansson, Åsa, Yvan Guillemette and Fabrice Murtin (2012). "Long-Term Growth Scenarios", Economics Department Working Papers No. 1000, Paris: OCED. Available from: http://www.oecd.org/eco/outlook/2060%20policy%20paper%20FINAL.pdf

Kearney, Ide (2012). "Measuring Fiscal Stance", Special Article in *Quarterly Economic Commentary*, Autumn, pp.67-88.

Liebermann, Joëlle (2012) "Short-term forecasting of quarterly gross domestic product growth", Signed Article in *Central Bank Quarterly Bulletin* 01, pp. 74-84.

Mourre, Gilles, George-Marian Isbasoiu, Dario Paternonster, and Matteo Salto (2013). "The Cyclically-Adjusted Budget Balance in the EU Fiscal Framework: An Update," European Economy, Economic Papers 478, Brussels: European Commission.

National Asset Management Agency (2010). *NAMA Business Plan 30th June 2010*, Available from: http://www.nama.ie/publications/?wpfb_file_year=2010&wpfb_list_page=2

National Pension Reserve Fund (2012). *National Pensions Reserve Fund Quarterly Performance and Portfolio Update At 30 June 2012 and publication of the Annual Report for 2011*. Available from: http://www.nprf.ie/Publications/2012/Q2_2012_Performance_and_Portfolio_update.pdf

National Treasury Management Agency (2013). "NTMA Issues Eight new Floating Rate Treasury Bonds in exchange for Promissory Notes", Available from: http://www.ntma.ie/news/ntma-issues-eight-new-floating-rate-treasury-bonds-in-exchange-for-promissory-notes/

Perotti, Roberto (2011). "The 'Austerity Myth': Gain Without Pain?", Working Paper, Milan: Bocconi University.

Ramey, Valerie (2011). "Identifying Government Spending Shocks: It's All in the Timing", *Quarterly Journal of Economics*, Vol 126, No 1, pp. 1-50.

Romer, Christina and David Romer (2010). "The Macroeconomic Effects of Tax Changes: Estimates Based on a New Measure of Fiscal Shocks", *American Economic Review*, Vol, 100, pp. 763-801.

Woodford, Michael (2011). "Simple Analytics of the Government Expenditure Multiplier", *American Journal: Macroeconomics*, Vol 3, pp. 1-35.