

## 2. ASSESSMENT AND ENDORSEMENT OF MACROECONOMIC FORECASTS

### KEY MESSAGES

- The Council endorsed the *Budget 2015* macroeconomic forecasts to 2015. Taking into account the uncertainties and judgemental elements involved, it was satisfied that these forecasts were within an endorsable range.
- The macroeconomic forecasts endorsed by the Council were prepared on the basis of no budgetary adjustment, though final forecasts in the Budget Book take account of €1 billion of measures subsequently announced. While the Department's reconciliation section provides some information explaining the reasons for the forecast changes, additional detail would help to identify precisely the factors driving changes to the macroeconomic forecasts between Endorsement and Budget day, particularly on the implied marginal propensities to consume and import content related to any changes.
- Aggregate GDP forecasts in *Budget 2015* covering 2014 and 2015 appear plausible. However, as before with the *SPU 2014*, domestic demand is assumed to be stronger than in Benchmark projections prepared by the Council's Secretariat, with net exports weaker. Medium-term real GDP growth rates for 2016 to 2018 forecast at 3.4 per cent may be at the relatively optimistic end of the range and are slightly higher than in the April 2014 *SPU*.
- The underlying growth trajectory for the near term appears strong, with evidence that the recovery is beginning to broaden out across different sectors of the economy. However, the recent sharp acceleration in real GDP growth may be flattered by contract manufacturing activities. This activity is unlikely to be associated with any significant domestic employment and its contribution to the tax base is unclear. Its impact also increases the degree of uncertainty around projections for net exports.
- While the economy appears to have turned a corner of late, chances that growth may disappoint remain high. The discussion in *Budget 2015* is dominated by downside macroeconomic risks. Concerns over the health of the Euro Area economy intensified in recent months. A prolonged slump would threaten the prospects for an export-led recovery in Ireland. Domestically, the pace of labour market improvements also appeared to slow in early 2014. Budget documentation should provide an assessment of the Department's view on the balance of these risks as recommended by the Council and as included in some past Budgets.

## 2.1 INTRODUCTION

This third endorsement exercise undertaken by the Council covers *Budget 2015* and a shorter horizon of forecasts (2014-2015) than in the *SPU 2014*.<sup>1</sup> The timeline for the endorsement process is detailed in Appendix C. As with previous exercises, the Department of Finance provided high levels of cooperation in all of their interactions with the Council.

As part of the ongoing development of the “suite of models” approach, the Secretariat has continued to develop its set of tools for short-term forecasting. Since July, new models of consumption and incomes have been added and the Council has undertaken further work to improve its understanding of the volatility underlying quarterly releases of macroeconomic data.<sup>2</sup>

Section 2.2 discusses the *Budget 2015* forecasts and puts these in context relative to forecasts of other agencies, while Section 2.3 provides an assessment of the uncertainty and risks surrounding the economic outlook. Section 2.4 concludes by outlining the endorsement process as it applied to the *Budget 2015* projections. Three boxes are included: the first assesses data available on Irish household incomes; the second examines the prospects for private vehicle spending in the near term. A third box looks at the causes of weaknesses in 2013 GDP growth. *Analytical Note No. 6* provides further background to this Chapter in describing recent statistical revisions to Irish macroeconomic data.

## 2.2 AN ASSESSMENT OF THE MACROECONOMIC FORECASTS IN *BUDGET 2015*

### 2.2.1 SHORT-TERM FORECASTS, 2014-2015

*Budget 2015* envisages a considerable pick-up in economic activity after last year’s disappointing 0.2 per cent increase in real GDP. Strong growth of 4.7 per cent is anticipated for 2014 followed by a 3.9 per cent rise in 2015. There is evidence pointing to robust underlying growth for the short term, but specific trade developments magnify the usual forecast uncertainties.

The underlying increase in activity for 2014 may be flattered by highly concentrated increases in exports arising from offshore production activities, which are referred to as contract manufacturing.<sup>3</sup> It is uncertain whether these activities will continue to improve overall figures,

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<sup>1</sup> The endorsement function is outlined in detail in IFAC, (2013b) and in IFAC, (2014a).

<sup>2</sup> In addition to discussions with Council members, an important input into the preparation of the Benchmark projections involves a round of discussions with other external forecasters, coming from a wide variety of different perspectives. For this round of forecasts, the Secretariat held discussions with economists and forecasters at the EU Commission, the NTMA, Central Bank of Ireland, Investec and Bank of Ireland. The Secretariat also met with the CSO to gain further insights into recent changes in the *National Income and Expenditure Accounts* and *Balance of Payments* data.

<sup>3</sup> These activities are also referred to as ‘contracted production’ and are expanded on in Box 1 of *Budget 2015*. They can occur when an Irish-resident firm (not necessarily Irish-owned) contracts a manufacturer abroad to produce a good for

whether they will represent a once off boost to real GDP growth or whether they will actually unwind over coming quarters thereby weakening overall activity. As contract manufacturing appears to be related to only a small number of firms, sector- and product-specific developments may well have a disproportionate impact on subsequent GDP outturns. Given the unusual uncertainties related to this activity, forecasts of the outturns for 2014 and 2015 are subject to potentially greater margins of error.

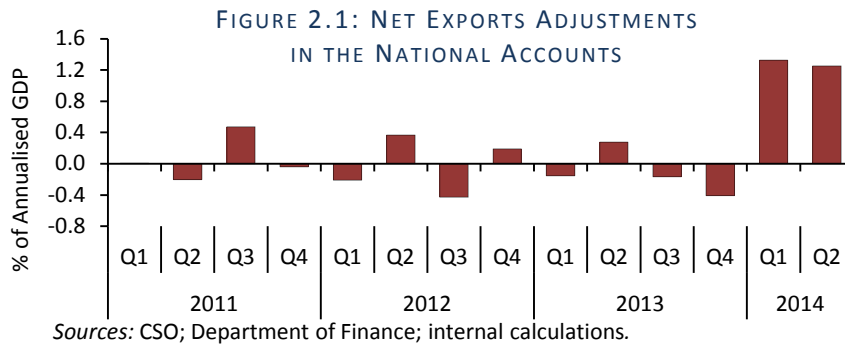
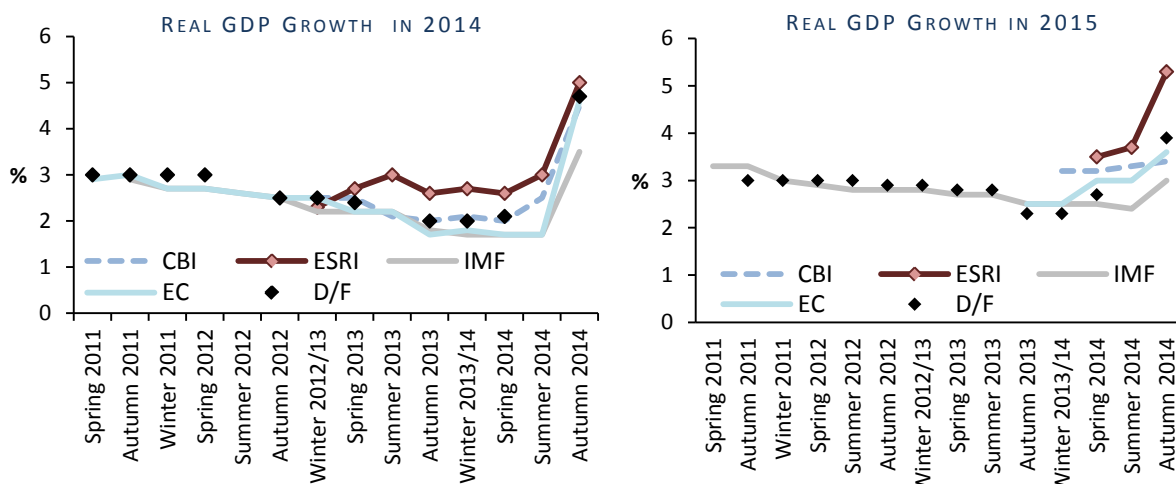


Figure 2.1. shows the adjustments related to contract manufacturing since 2011 that are made in the Irish *National Accounts*. The adjustments are made to trade data, which are based on physical movements of goods across the border. Having typically been negative or near balance in previous years, the adjustment became strongly positive in the first half of 2014, equating to some 2.5 per cent of GDP. *Budget 2015* contains a Box explaining the impact of this phenomenon on the *National Accounts*. It also importantly notes that this activity involves “...very little employment effect or second-round impact on the wider economy”.

**FIGURE 2.2: COMPARATIVE REAL GDP FORECAST VINTAGES (% CHANGE YEAR-ON-YEAR)**

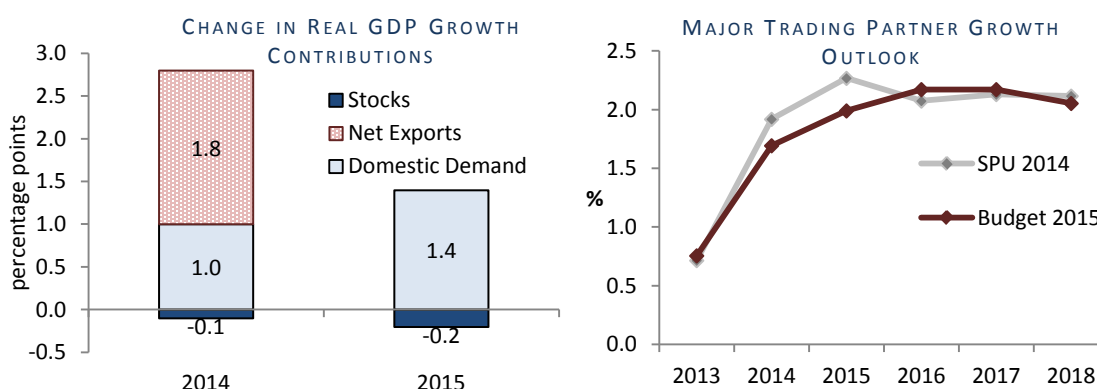


Sources: Department of Finance (D/F); European Commission; International Monetary Fund (IMF); Central Bank of Ireland (CBI) and the Economic and Social Research Institute (ESRI).

supply to an end-client abroad. The sale of the good is recorded as an Irish export of goods, while the contracted production is considered a service import.

The Department of Finance and other agencies have revised upwards their projections since the time of the *SPU 2014* (Figure 2.2). This is due in large part to the boost from contract manufacturing activities and the Department now expect net exports to contribute an additional 1.8 percentage points to the overall growth rate compared to *SPU 2014* projections. The contribution to growth in 2015 is unchanged. The improvement in 2014 is not matched by a pick-up in external demand. Indeed, near-term prospects for trading partners have worsened marginally in the interim (Figure 2.3).

FIGURE 2.3: *BUDGET 2015 COMPARED TO SPU 2014*



Sources: Department of Finance (D/F); internal calculations.

Note: Trading partner forecasts are trade-weighted OECD/IMF forecasts used by D/F for UK; US and Euro Area.

Stripping out the effects of contract manufacturing, the underlying trajectory for growth is still predicated on a solid recovery in domestic demand, with consumer spending and underlying investment (i.e., excluding planes) contributing to an expansion both this year and next. Exports are expected to grow more in line with export markets in 2015 and the drag on goods exports from patent expiries is expected to recede.

TABLE 2.1: *BUDGET 2015 MACROECONOMIC FORECASTS (TO 2015)*

% change unless otherwise stated	2012	2013	2014	2015
Real GDP	-0.3	0.2	4.7	3.9
GDP Deflator	1.3	1.0	0.4	1.3
Nominal GDP	1.0	1.2	5.2	5.3
Real GNP	1.9	3.3	4.1	3.6
Consumption	-1.2	-0.8	1.7	2.7
Investment	5.0	-2.4	14.6	12.7
Government	-2.1	1.4	4.8	2.3
Exports	4.7	1.1	8.3	4.8
Imports	6.9	0.6	8.8	5.3
Current Account (% of GDP)	1.6	4.4	4.9	4.4
Employment	-0.6	2.4	1.8	2.4
Unemployment Rate	14.7	13.1	11.4	10.2
Inflation (HICP)	2.0	0.5	0.5	1.1
Nominal GDP (€ billions)	172.8	174.8	183.8	193.5

Sources: CSO and Department of Finance (*Budget 2015*).

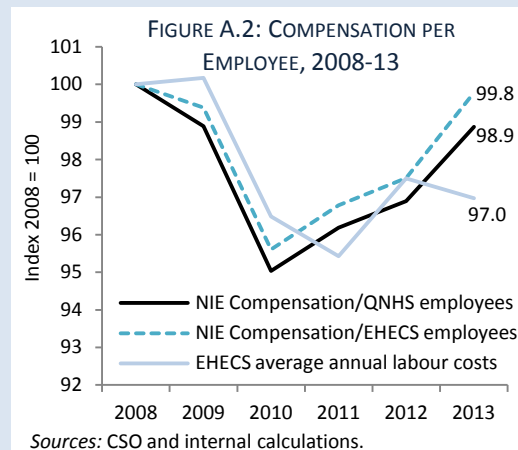
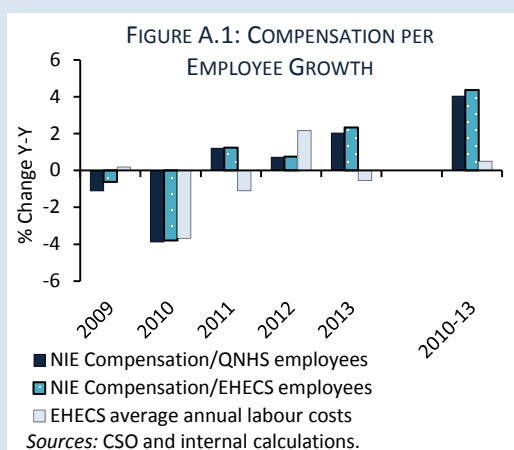
## BOX A: WHAT ARE INCOME DATA TELLING US?

Personal consumption, equating to roughly half of GDP, has an important bearing on growth projections. Previous FARs highlighted a tendency for Department of Finance forecasts to over-estimate consumption growth (IFAC, 2013a). A key problem arises from understanding income developments which are crucial variables when forecasting consumer spending. In this Box, we highlight some of the issues with available income data.

### IRISH INCOME DATA SOURCES COMPARED

The *National Income and Expenditure (NIE)* results published in the Summer following the most recent full year provide an official estimate of earnings growth. The latest release published in July 2014 covers 2013 and indicates that earnings rose by close to 2 per cent last year – better than the Department’s 1.5 per cent forecast. The Council had assumed much weaker wage developments in line with high frequency quarterly data releases, known as the *Earnings, Hours and Employment Costs Survey (EHECS)*. These indicated an average decline of some 0.5 per cent for 2013.

The divergence between the EHECS and the NIE is not a new issue, but it widened last year. Figure A.1 shows two NIE-based estimates alongside EHECS-based estimates.<sup>4</sup> Cumulatively, the EHECs data suggest that compensation per employee was relatively unchanged since 2010. The NIE data show that compensation per employee rose by roughly 4-4½ per cent depending on the estimates of employee numbers used.<sup>5</sup>



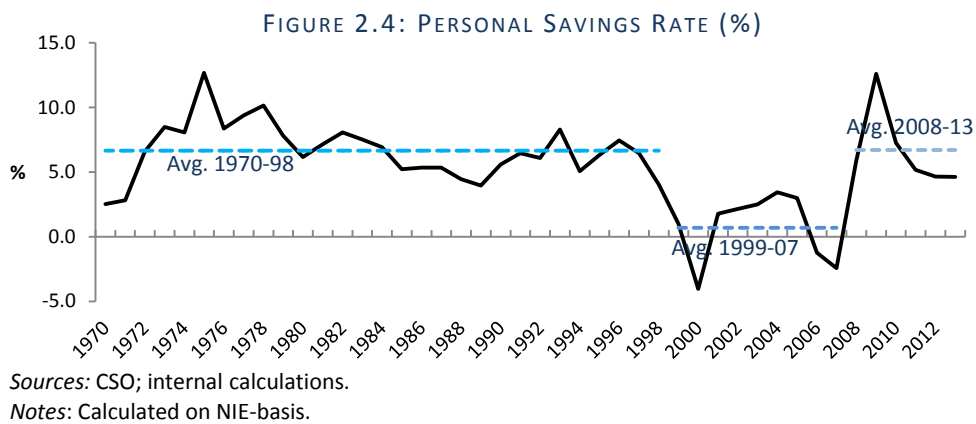
The profile for earnings developments in the NIE also looks quite different to that portrayed by the EHECS dataset. NIE-based estimates show a more pronounced fall in earnings in 2010 with a steadily increasing pattern since then. Having bottomed out in 2010, they have recovered to close to their 2008 levels by 2013. The EHECS, however, would appear to suggest that compensation has recovered little since 2010. This suggests some problems for forecasters as the only hard data available in between annual NIE estimates are those provided by the EHECS. The differing narratives around earnings can also give rise to very different forecasts of consumption as well as for projections of income-related tax revenues. It would, therefore, be helpful if high-frequency earnings data could be improved.

<sup>4</sup> The EHECS data here is the average hourly labour costs series which captures earnings data (regular earnings irregular earnings, bonuses, etc.) as well as non-labour costs (employers’ PRSI, other social costs, benefit in kind etc.).

<sup>5</sup> Employee estimates can be taken from the EHECs dataset or from the *Quarterly National Household Survey (QNHS)* dataset. The former is a survey of employers and excludes certain sectors covered in the *QNHS* such as “activities of households as employers of domestic personnel”; “...undifferentiated goods- & services-producing activities of private households for own use...”; and “...activities of extraterritorial organisations and bodies...”. It typically gives an estimate of employment that is ½-1½ per cent lower than the *QNHS* equivalent.

After three years of contraction, **personal consumption** is likely to show a rebound in 2014 (see Table 2.1 forecast summary). Income data present a mixed picture of recent trends in earnings. Annual data from the NIE showed strong income growth in 2013, but other CSO data suggest an annual decline in labour costs during 2013 and on into early 2014 (Box A).

Consumer spending growth is projected to accelerate in 2015, though headwinds remain. The pace of employment growth slowed during 2014 and a continuation of this trend could result in weaker earnings growth than projected. This could dampen consumer spending along with the ongoing negative drag from household deleveraging. In addition, CSO data on savings rates released after the endorsement suggest that savings rates have already descended from recent high levels.<sup>6</sup> Unless these converge on 1999-2007 levels (Figure 2.4), there may be limited space for reduced savings rates to further fuel consumption growth.



#### **BOX B: ESTIMATES OF CAR SALES**

Roughly 3 per cent of annual consumption relates to the purchase of private transport equipment. Having contracted for several years, newly licensed private cars expanded by 30 per cent in the first eight months of 2014. An analysis of the determinants of vehicle purchases can help to shed light on whether or not car sales are likely to continue to improve in the coming years.

#### **MODELLING THE STOCK OF CARS IN THE ECONOMY**

Hennessy and Tol (2011); FitzGerald *et al.* (2002) and DKM (1998) suggest that convergence to a “saturation rate” forms a central part of forecasting the stock of cars likely to be in the economy at a given point in time. This saturation rate can be crudely understood as the number of cars per 1,000 of the population at which point demand for new vehicles

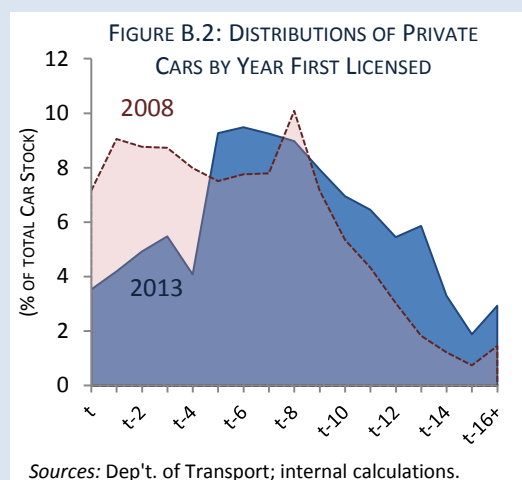
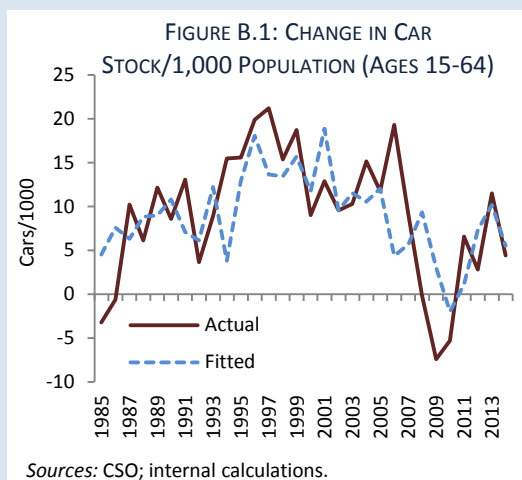
<sup>6</sup> The data on the savings rate were released on 9<sup>th</sup> October after the endorsement had taken place. Note that while NIE measured savings rates are shown here, the CSO’s *Institutional Sector Accounts* provide another measure of household saving that includes depreciation, CGT and net non-life insurance premiums/claims. The latter series is only available from 2002 onwards and hence the long-run average is distorted by the Celtic Tiger period.

stabilises. At this point, the increase in the total stock of cars is deemed to be directly proportional to the changes in the population or demographic components. FitzGerald *et al.*<sup>7</sup> (2002) estimate the following model of the Irish car stock for a given saturation rate of 0.80

$$\Delta \ln \frac{0.8}{Cars_t / Pop_t - 1} = 0.286 - 3.17E^{-05} \frac{Y_t}{Pop_t} - 0.155 \ln \frac{0.8}{Cars_{t-1} / Pop_{t-1} - 1} - 1.63E^{-05} \frac{Y_{t-1}}{Pop_{t-1}}$$

where  $Y$  is the level of disposable income and  $Pop$  is the population aged 15-64 years. The model adopts a logistic functional form<sup>8</sup> with an error correction procedure used to predict the car stock per member of the critical 15-64 age group at time  $t$  ( $Cars_t / Pop_t$ ). Using the approach in FitzGerald *et al.* (2002), we re-estimate the model for the period 1985-2013:

The coefficients we find (shown above) are similar to those on the lagged dependent variable, albeit are of a smaller order of magnitude for the income variables compared to previous studies. The signs are identical to previous studies and all coefficients are significant.



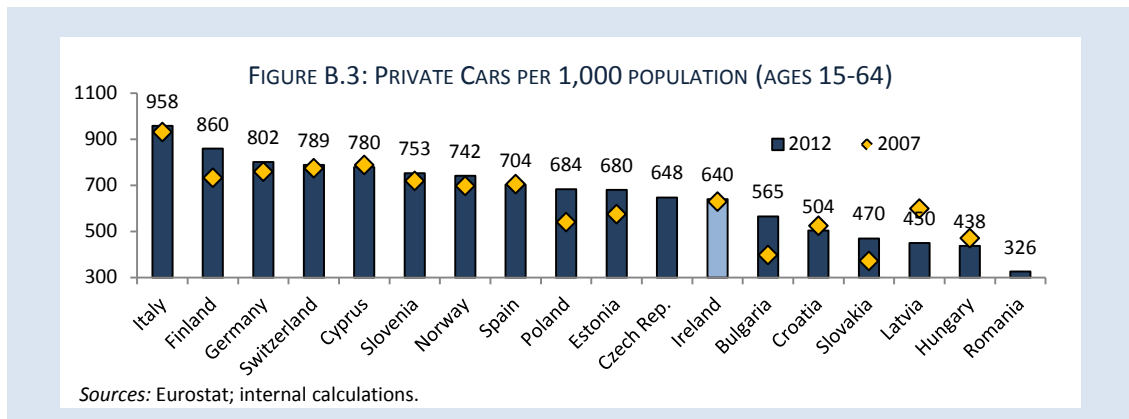
The model estimates fit the data reasonably well as can be seen in Figure B.1, with the change in the actual car stock per 1,000 of the population (aged 15-64) overshooting that estimated during the pre-bubble period and undershooting it in the early-crisis period 2008-2010. Since then, developments have been more aligned with the model's predictions. The stock bottomed out in 2011 in line with real incomes. Income growth in the last two years then contributed positively to the expansion in the car stock. Based on current income expectations, this should continue beyond 2015.

#### OTHER FACTORS: AGEING FLEET AND CONVERGENCE ON EU NORMS

There is further evidence to suggest that an expansion in car stocks could be expected to continue. In addition to support offered by models of car stocks and income expectations, the necessity of replacing an ageing car fleet and a likely convergence on international levels of ownership suggest further potential growth in 2015. The proportion of private cars aged over 10 years old is nearly twice as high as in 2008 (Figure B.2) – this will necessitate new purchases if the stock is to be maintained. Also, the share of cars per 1,000 persons in Ireland is below that of the assumed saturation level and below that of other European economies (Figure B.3).

<sup>7</sup> This saturation rate is determined based on a consideration of international experience.

<sup>8</sup> This functional form allows for an 'S-Shaped' curve where demand for vehicles slows as the saturation point is converged on.



Domestic demand is expected to be boosted by an increase in **government consumption** in 2014 and 2015. This is largely technical in nature, with the statistical treatment of longer public service hours worked under the Haddington Road Agreement having a greater measured impact than expected.<sup>9</sup> Measures introduced in *Budget 2015* contribute modestly to the increase next year as does a fall in offsetting receipts related to the banking system guarantee.<sup>10</sup>

**Investment** spending is expected to continue to expand robustly as a lagged response of the building and construction sector to supply shortages in certain areas provides further impetus. Underlying investment (i.e., excluding planes and intangibles) was running at a rate of 20 per cent year-on-year in the first half of 2014. A negative base effect is expected in the second half of the year following strong machinery and equipment investment in late 2013, but the strength of forward-indicators such as PMIs and commencements data augurs well for housing investment in the quarters ahead.

Aside from idiosyncratic developments related to contract manufacturing, **exports** are likely to benefit from recovering demand in the UK and US markets and an unwinding of the patent cliff (Figure 2.5). A recovery in exporting sectors that are less dominated by multinationals was apparent in 2013. This appears set to continue with “traditional sector” industry output also higher in 2014.<sup>11</sup> Services’ exports also remained strong in the first half of 2014. This was reflected on the output-side by solid expansions in distribution and software and other services, though data for this sector can be volatile.

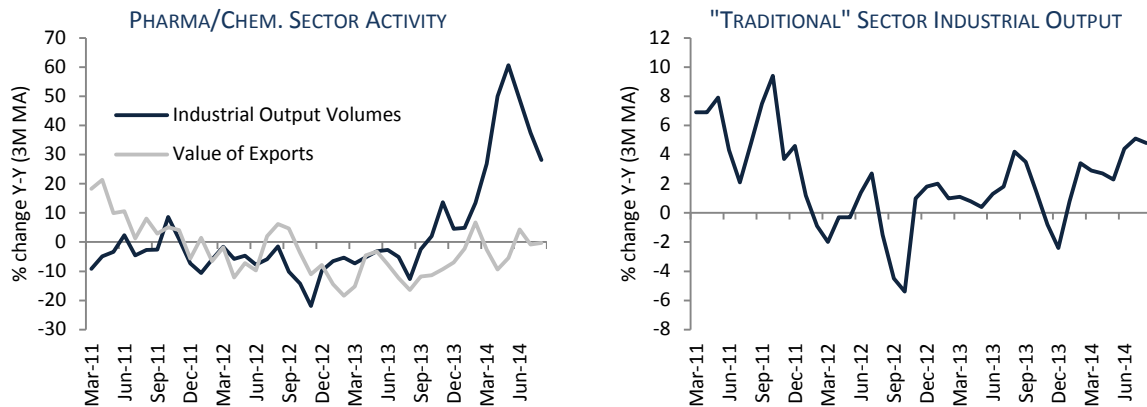
<sup>9</sup> The measured volume increase in government consumption is greater than before, but the price deflator registers a sharper decrease. These movements offset each other to some extent. The net impact of both entails an upward revision in nominal terms of the order of 0.2 percentage points of GDP excluding the impact of new measures in *Budget 2015* and revisions to the base year (2013).

<sup>10</sup> Receipts related to the Eligible Liability Guarantee scheme are netted against government consumption in the *National Accounts* treatment.

<sup>11</sup> The “traditional” sector classification includes some large multinationals also. It comprises all industries (NACE 05-35) aside from those sectors typically classified as “modern”, namely: pharma/chem. (NACE 20-21); computer, electronic, optical and electrical equipment; reproduction of recorded media; and medical and dental instruments and supplies.



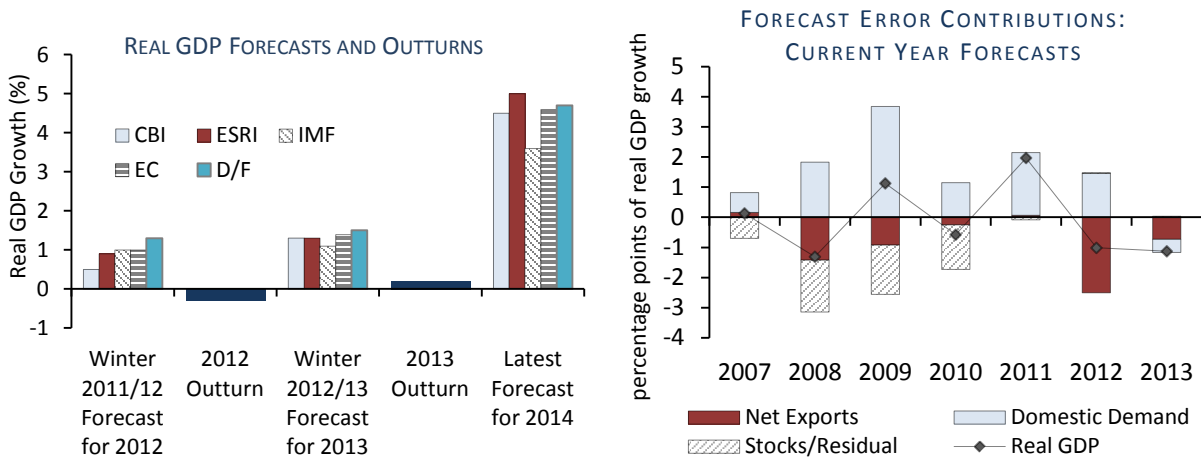
FIGURE 2.5: SECTORAL PERFORMANCE IN GOODS EXPORTS



Source: CSO.

Nominal GDP for 2014 is largely influenced by real growth given relatively subdued economy-wide inflation. The GDP deflator is expected to grow faster next year, particularly as a weaker euro vis-à-vis the dollar benefits Irish exports priced in US dollars. A substantial boost to historical nominal GDP results from the adoption of new international standards for economic statistics (Analytical Note No. 6).

FIGURE 2.6: REAL GDP GROWTH FORECASTS, OUTTURNS AND ERRORS



Sources: CBI; ESRI; IMF; EC and CSO.

Source: Department of Finance; CSO and internal calculations.

The bulk of the Department's recent forecast errors for real GDP growth came from over-optimistic projections with respect to the traded sector. In 2012 and 2013, net exports reduced growth by 2.5 and 0.7 percentage points, respectively, relative to early-year expectations. These revisions reflected in part similar downward revisions to trading partner growth from official IMF, OECD or European Commission forecasts and patent expiries in the volatile pharma/chemicals sector.<sup>12</sup> The

<sup>12</sup> Since forecasts for demand in Ireland's major trading partners are taken as exogenous inputs from other international forecasting agencies, any errors in these forecasts can translate into errors in trade forecasts for Ireland also.

outturn for consumer spending in 2013 was again weaker than had been projected by the Department although this was offset by stronger investment and government consumption. Up to recently, a pattern of downward revisions to official forecasts was observed. This should caution against complacency in interpreting the most recent projections. Official 2013 forecasts – having begun the year at close to 1½ per cent – were gradually revised down towards an outturn of just 0.2 per cent as the year progressed (Figure 2.6). Similarly, early forecasts for 2012 anticipated real GDP growth of roughly 1 per cent. The actual outturn ended up negative at -0.3 per cent. October's *NIE* tables suggest the weak 2013 outturn reflected, in part, developments in sectors dominated by multinationals (Box C).

### 2.2.2 RECONCILIATION TABLES

On Budget day, a set of reconciliation tables was provided to the Council outlining differences between the endorsed draft forecasts and the final projections in *Budget 2015*. The published reconciliation tables showed the difference between the endorsed macro forecasts and the final Budget figures but did not provide detailed information explaining how specific budgetary measures impacted the macroeconomic projections. The Council recommends improvements to the level of detail provided in the reconciliation table to make clear the rationale for and drivers of revisions to the macroeconomic projections resulting from Budget day measures. Specifically, useful additions would be the implied marginal propensities to consume that underpin any modifications as well as the import content related to any changes in expenditure components.<sup>13</sup>

The fiscal package announced in *Budget 2015* boosted overall real GDP for 2015 by an additional 0.3 percentage points compared to the draft forecasts. At an aggregate level, this increase – most of which comes through in the form of additional consumer spending – appears reasonable although the provision of greater detail on the precise impact of individual Budget measures would allow for a more thorough assessment.<sup>14</sup>

### 2.2.3 MEDIUM-TERM FORECASTS, 2016-2018

As in the *SPU 2014*, *Budget 2015* forecasts economic activity to be driven by domestic demand initially, with a more balanced composition in 2016 and 2017. By 2018, net exports are projected to take up the mantle from domestic activity. Although the focus of *Budget 2015* was on the short-term horizon, the medium-term outlook envisaged may be at the relatively optimistic end of the range. Estimates of potential real GDP growth rates were revised up further from *SPU 2014* by roughly ½ percentage point per annum to close to 4 per cent over 2017-18 (Table 2.2).

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<sup>13</sup> These will be discussed in the context of the review of the *Memorandum of Understanding* between IFAC and Department of Finance to be completed in 2014.

<sup>14</sup> An overall import elasticity of 0.47 was assumed.

TABLE 2.2: REAL GDP GROWTH RATE FORECASTS

	% change	2014	2015	2016	2017	2018
<i>Budget 2015</i>	Real GDP Growth	4.7	3.9	3.4	3.4	3.4
	Nominal GDP Growth	5.2	5.3	5.1	5.2	5.2
	Potential GDP Growth	2.1	2.7	3.4	3.8	3.9
SPU 2014	Real GDP Growth	2.1	2.7	3.0	3.5	3.5
	Nominal GDP Growth	2.6	3.6	4.3	4.7	4.7
	Potential GDP Growth	1.5	2.2	2.9	3.3	3.5

Source: Department of Finance.

A hand-over from domestic demand-driven growth to an environment in which the traded sector carries more weight is assumed in the Department's projections. While feasible, this may be difficult to achieve, especially if the recovery in the Euro Area does not gather pace.

Competitiveness gains needed to support export driven growth, in particular, will likely be challenging to bring about. *Budget 2015* forecasts consumer prices near those for the Euro Area; stronger labour market developments; and employee compensation growing more robustly than previously assumed (2.6 per cent per annum on average for 2015-18 compared to 2 per cent in *SPU 2014*). Furthermore, the assumed shift to net-exports-driven growth by 2017 may be difficult to realise given the possible drag on productivity growth arising from a compositional shift to relatively low-productivity sectors. A full analysis of the medium-term outlook will be provided as part of the Council's endorsement and assessment of the Department's *Stability Programme Update 2015* scheduled for release in April next year.

#### 2.2.4 FORECASTS OF OTHER AGENCIES

The consensus among other forecasting agencies is for real GDP growth to accelerate sharply in 2014, with growth rates pencilled in at close to 5 per cent for this year. However, there is some divergence of opinion as to the pace of growth that can be expected for 2015.

The Central Bank (2014b) is forecasting a deceleration to 3.4 per cent real GDP growth in 2015, but the ESRI (2014) expect a considerable portion of this year's momentum will carry through into next year. This appears to reflect an assumption of some reversion in net export growth on the part of the Central Bank and the EC, bringing it in line with external growth for 2015, whereas the ESRI appear to imply some continuation of the recent trade performance. The wider range around recent forecasts for next year likely reflects uncertainties tied to the traded sector and contract manufacturing in particular.<sup>15</sup>

<sup>15</sup> IMF forecasts were not updated at the time of writing to reflect the latest QNA data.

TABLE 2.3: MEDIUM-TERM MACROECONOMIC FORECASTS TO 2018

% change unless otherwise stated	2014	2015	2016	2017	2018
<b>Budget 2015</b>					
GDP	4.7	3.9	3.4	3.4	3.4
Employment	1.8	2.4	1.9	1.9	1.9
Productivity	2.8	1.4	1.4	1.4	1.4
<b>ESRI (MTR: Recovery Scenario)</b>					
GDP	3.0	4.0	4.1	4.2	3.7
Employment	0.9	2.3	2.9	1.9	2.2
Productivity (implied)*	2.1	1.7	1.2	2.3	1.5
<b>IMF (12th Review)</b>					
GDP	1.7	2.5	2.5	2.5	2.5
Employment	1.5	1.2	1.2	1.7	1.7
Productivity (implied)*	0.2	1.3	1.3	0.8	0.8
<b>OECD (May 2014)</b>					
GDP	1.9	2.2	3.3	3.3	3.0

Sources: SPU 2014; ESRI (Medium-Term Review 2013); IMF (12<sup>th</sup> Review); OECD (Economic Outlook, May 2014).

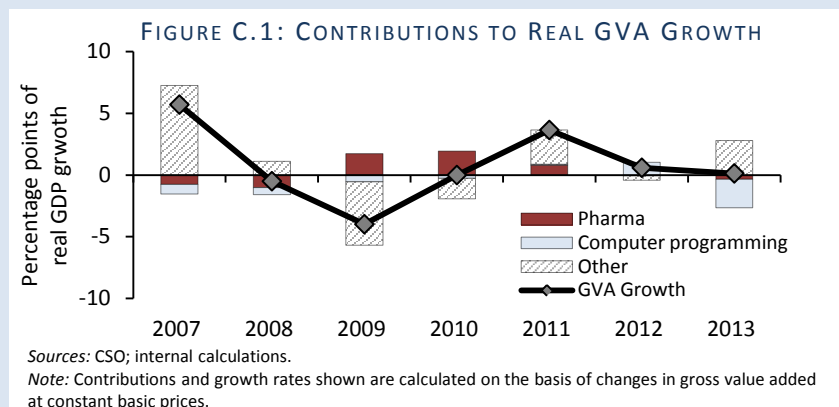
\* Implied productivity is simply GDP growth less employment growth.

As at the time of the last *FAR*, the Department's forecasts were weighted more towards domestic demand relative to other agencies. In 2015, growth is dominated by the contribution from the domestic economy in the Department's forecasts (contributing 3.6 percentage points to the 3.9 per cent growth rate), whereas other agencies envisage a broadly balanced contribution from the traded and domestic sectors.

In contrast to forecasts for potential GDP, real GDP forecasts for the medium term are essentially unchanged since the time of the last *Assessment Report*, with the latest *Budget 2015* projecting average real GDP growth of 3.4 per cent over 2016-18 (Table 2.3). This is still in excess of the IMF baseline averaging 2.5 per cent, yet close to the OECD average (3.2 per cent) and below that projected in the ESRI's "recovery" scenario for the medium term (4 per cent).

### BOX C: WEAKNESSES IN 2013 REAL GDP

New data from the CSO indicate that the overall weakness of real GDP in 2013 was due to developments in the multinational-dominated sectors.<sup>16</sup> Domestically-oriented sectors of the economy appear to have performed strongly in 2013. ‘Computer programming’ and ‘pharma’ activities exerted a combined drag on the volume of output last year of the order of 2½ percentage points.<sup>17</sup> The vast bulk of this related to a contraction in computer programming, though estimates for the latter could be subject to revision. Looking at Gross Value Added (GVA) rather than GDP (Figure C.1), we can see that a large negative contribution from the computer programming sector offset much of the improvement in other sectors last year.<sup>18</sup>



The weaknesses in 2013 real GDP growth appear to stem from Information Communication Technology (ICT)-related sectors rather than weaknesses related to the patent cliff as had been expected prior to the October NIE release. Two factors are relevant in this context: first, on the basis of current data – which may be revised – the pharma sector does not show as substantial a contraction in output volumes as had been expected.<sup>19</sup> Second, imports of a relatively larger number of patents among ICT sectors were recorded in 2013. This resulted in a large reduction in gross value added in the sector by raising intermediate consumption. The increase in the latter largely related to substantial rises in offsetting imports of royalties.<sup>20</sup>

## 2.3 RISKS

The substance of the *Budget 2015* discussion of risks is relatively unchanged from that presented in *SPU 2014*. In a written response to the concerns raised in the previous *FAR*, the Minister for Finance noted that “...a statement on the overall balance of risks can be provided in future”. The

<sup>16</sup> The new release published on 16 October provides data on Gross Value Added for Foreign-owned Multinational Enterprises and Other Sectors of the economy.

<sup>17</sup> The ‘computer programming’ sector is a broad sector comprising computer programming, consultancy and related activities as well as information service activities (NACE codes 62-63). Pharmaceuticals here specifically refer to basic pharmaceutical products and pharmaceutical preparations (NACE 21).

<sup>18</sup> A further breakdown from the CSO in the new ‘Gross Value Added for Foreign Multinational Enterprises and Other Sectors Annual Results’ release suggests this dynamic corresponds to a similar dynamic in the domestic/foreign split of GVA. In effect, the data show that a large positive contribution from more domestically-oriented sectors to GVA growth last year was offset by a contraction in sectors dominated by foreign-owned multinationals.

<sup>19</sup> This may be revised with the 2014 NIE release as annual Revenue data for 2013 become available.

<sup>20</sup> Note that while the fall in volume was substantial (-57 per cent), this was more than offset by an implied improvement in output prices compared to intermediation consumption prices. The relative price improvement was large enough to mean that the overall *value* of the sector actually expanded by some 20 per cent.

Council considers this to be a useful and important element of the analysis; however, no such balance of risks was included in *Budget 2015*, although it was included in some earlier Department of Finance publications.

TABLE 2.4: MACROECONOMIC RISKS COVERED IN *BUDGET 2015*

Risk	Direction	Details
Euro Area Growth	Downside	Increased probability of contraction in Euro Area could lead to weaker-than-expected export demand
Euro Area Deflation	Downside	Deflation could raise real interest rates and depress aggregate demand
Geopolitical Risks	Downside	Any acceleration in tensions could pose downside risks for growth
FDI-Dependence	Downside	Inward FDI is vulnerable over medium term to lost competitiveness gains; shifts in demand for products; changes in global tax regime
Household Debt	Downside	Unanticipated interest rate rises could dampen near-term private consumption growth
Debt Sustainability	Downside	Although peaking in 2013, government debt remains very high by historical standards
Investment	Upside	Any faster-than-anticipated pick-up in investment from current low levels could boost domestic demand

Source: *Budget 2015*.

Note: The direction of risk is inferred from but not specified in *Budget 2015*. Additional risks listed in *Budget 2015* – almost exclusively downside in nature – are extracted from the Draft *National Risk Assessment*, but are omitted here.

Downside risks dominate the discussion in *Budget 2015* (summarised in Table 2.4). There are six sources of primarily downside risks listed in the main risk discussion, with one upside risk. Added to the list of forecast risks and the sensitivity tables is a brief discussion of April’s Draft “*National Risk Assessment*” publication.<sup>21</sup> The main additions are risks relating to a re-emergence of the Euro Area sovereign debt crisis; vulnerabilities in the banking system; and ‘human capital’ risks (i.e., skills shortages in areas such as ICT).

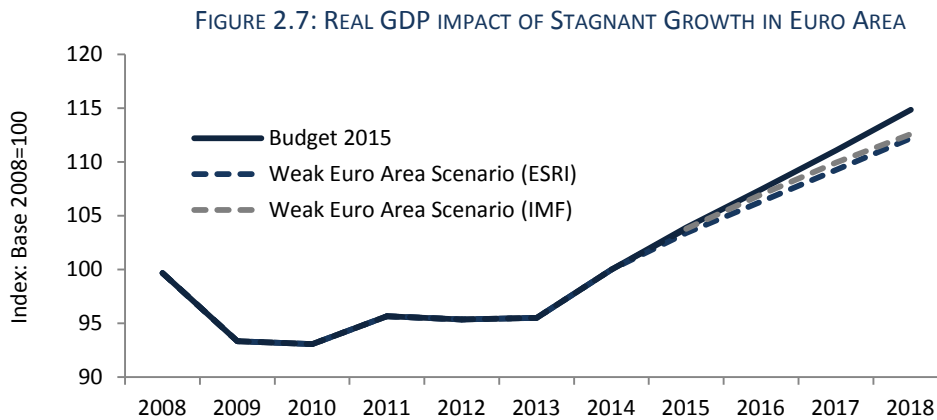
A welcome area of improvement is seen in the efforts made to bring together previously fragmented risk analyses.<sup>22</sup> Where relevant risks remain pertinent – such as those documented in the *National Risk Assessment* – it would be more useful to incorporate these into a single risk discussion that gives a more comprehensive sense of risk exposure.

The Council broadly agrees with the array of macroeconomic risks outlined in *Budget 2015*, but some areas are overlooked. The issue of contract manufacturing – while covered in Box 1 in *Budget 2015* – is absent from the risk discussion. There is an acknowledgment in *Budget 2015* that such activities could “...unwind or accelerate with potentially large impacts on measured GDP”. The net

<sup>21</sup> Available here: [http://www.taoiseach.gov.ie/eng/Publications/Draft\\_National\\_Risk\\_Assessment\\_2014.pdf](http://www.taoiseach.gov.ie/eng/Publications/Draft_National_Risk_Assessment_2014.pdf)

<sup>22</sup> This problem is highlighted in the IMF (2013) *Fiscal Transparency Assessment* and is in part addressed by the inclusion of a discussion of contingent liabilities and links to various reports in *Budget 2015*.

impact is shown to contribute in the region of 2½ percentage points to real GDP growth in the first half of 2014, which – if it were to unwind – would imply a sizeable impact on forecast assumptions.



Source: CSO; ESRI; IMF; Department of Finance; internal calculations.

Note: Low Euro Area growth scenario assumes real GDP growth or real import growth one standard deviation below baseline EC forecasts for 2015-18. Shock coefficients are taken from ESRI (2013) and Nkusu (2013).

A more substantive discussion of the external risks in the Budget would have been worthwhile. If fragilities related to the external recovery were to see demand in the Euro Area slow to one standard deviation below that assumed in *Budget 2015*, then yearly real GDP growth rates for Ireland would be expected to average around half a percentage point lower over 2015-2018 (Figure 2.7).<sup>23</sup> The IMF (2014) currently estimate a near 40 per cent probability of a recession in the Euro Area over the next twelve months, with the probability of deflation estimated at 30 per cent.<sup>24</sup> By contrast, upside risks could materialise if EU policy actions prove decisive in arresting weak activity levels.

A third risk that warrants further discussion is the slowdown in employment growth observed in early 2014 and the wider uncertainties surrounding the likely prospects for the labour market in the medium term.

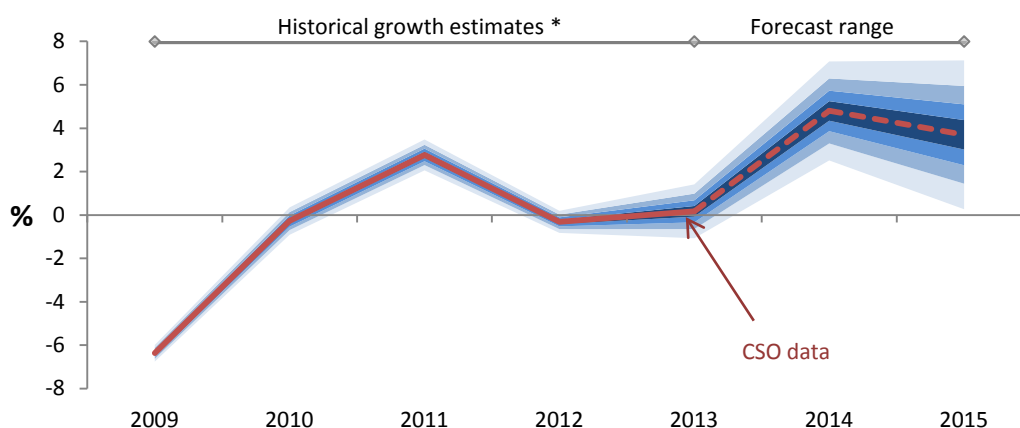
Other risks to be considered relate to possible cost pressures related to recent rapid house price increases (Appendix B) and the ability of credit institutions to support the recovery. Ongoing global demand shortfalls could also impede growth if policies designed to promote activity in major trading partners fail to overcome weak international demand conditions and sluggish productivity advancements.

<sup>23</sup> Based on VAR model elasticities.

<sup>24</sup> Deflation here is defined as two consecutive quarters of falling consumer prices over the next 12 months.

Irish economic developments are relatively volatile compared with other countries, having one of the largest absolute forecast errors for GDP in the EU (IMF, 2013b). In addition, Irish macroeconomic data are subject to some of the largest historical revisions in the OECD, contributing to the difficulties of making accurate forecasts.<sup>25</sup> Uncertainty surrounding current growth estimates related to contract manufacturing is likely to mean that uncertainty around GDP at present may be higher than represented in the fan chart. Figure 2.8 shows the fan chart surrounding the Department’s growth forecasts to 2016 based on past errors along with the range related to expected data revisions for the historical period.

FIGURE 2.8: REAL GDP FAN CHART BASED ON *BUDGET 2015* PROJECTIONS (TO 2015)



Sources: CSO, Department of Finance, internal calculations.

\* Distributions or 'fans' around historical growth estimates are based on previous revisions to real GDP data. Both forecast errors and revisions are based on 1999-05 sample.

## 2.4 ENDORSEMENT OF THE *BUDGET 2015* PROJECTIONS

This section details the third endorsement exercise undertaken by the Council covering *Budget 2015* and is intended to outline the Council’s considerations around the time of the endorsement (Appendix C details the timeline). Data available at the time may differ from that available for the purposes of the assessment documented in previous sections. The forecasts for the endorsement were predicated on a no policy change basis (i.e., a neutral *ex ante* discretionary budget adjustment).

The Council endorsed the *Budget 2015* macroeconomic forecasts to 2015. It was satisfied that these were within its endorsable range, taking into account the methodology and the plausibility of the judgements made.

<sup>25</sup> This is true even when relatively high historical growth rates in an international context are controlled for.



The endorsement process focuses on several key dimensions: the plausibility of the methodology used; the pattern of recent forecast errors; and comparisons with Benchmark and other projections.

First, focusing on the methodology used by the Department of Finance, the Council is satisfied that this is broadly in line with standards set by other forecasting agencies both internationally and domestically. The Department has made available the models used in the development of its forecasts for assessment by the Council and has explained in detail its approach in various meetings. The Council also welcomes the recent uptake by the Department of the Council's recommendations for carry-over analyses and the production of quarterly profiles. Quarterly data in Ireland are volatile and prone to revision, yet this volatility represents an integral aspect of the dynamics of the economy and understanding the nature of the volatility can yield important insights. Furthermore, an understanding of quarterly dynamics and any patterns to data revisions is necessary to make accurate predictions for annual *National Accounts* variables.<sup>26</sup>

The projected quarterly profile for net exports in 2014 and 2015 was examined as part of the endorsement. In light of the strong net export outturn for the first half of 2014, the expected profile of goods exports and services imports - particularly that relating to contract manufacturing - bears considerable influence over real GDP assumptions for the forecast period. Quarterly profiles produced by the Department suggested that net exports would weaken in the second half of this year, before rebounding in 2015. Another plausible scenario could see imports rise such that any gross value added arising from associated activities was less pronounced for the year as a whole. The absence of detailed information on what appeared to be largely firm-specific developments made it very difficult to determine the likely outcome for the traded sector.

Second, in terms of the pattern of errors in recent Department of Finance forecasts, the Council has previously highlighted forecast errors related to the domestic and external split of aggregate demand. This issue was raised in previous *Fiscal Assessment Reports* and it represented a key focus of the endorsement process.<sup>27</sup> The Council continues to monitor the Department's forecast errors. With respect to 2013, it was evident that forecast errors related to consumption were offset by other positive surprises in domestic activity, while specific issues related to multinational-dominated sectors resulted in weaker-than-forecast net exports. Examining the balance of domestic activity in the overall composition of the macroeconomic projections formed an

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<sup>26</sup> The relationship between annual growth rates and quarterly growth profiles is explored in more detail in Box C of the November 2013 *FAR*.

<sup>27</sup> See the Decomposition of Forecast Errors in Box A of the April 2013 *Fiscal Assessment Report* for more detail.

important part of the Council's endorsement, especially given that domestic activity is typically more tax-rich in nature.

Third, comparisons with the Benchmark projections and other forecasts drew further attention to the strength of consumer spending assumed in the Department's forecasts. These were less of a concern for 2014 given the strength of supporting high-frequency data even though the assumed growth was stronger relative to Benchmark projections (Appendix Table A.1) and some other agency projections.<sup>28</sup> Retail sales volume growth had been largely positive and, notwithstanding some tendency to overstate actual measured personal consumption outturns, the 2014 projection appeared attainable.

The plausibility of the assumed continuation of strong consumer spending into 2015 was less clear-cut. The forecasts were driven by much weaker growth in taxes and stronger pre-tax income growth such that nominal personal disposable incomes are expected to rise by 3.5 per cent. This forecast relied on the strength of income growth in 2013 as reported in the *National Accounts* data. Exchequer data – while not formally linked to wage growth – appeared consistent with some strengthening in incomes. Income growth could be reasonably expected to continue to recover into 2015 if supported by other factors: a continued – albeit potentially more gradual – recovery in employment, sustained low interest rates and additional improvements in consumer sentiment. These factors provided further grounds for additional momentum in earnings over coming quarters.

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<sup>28</sup> Benchmark projections form a key part of the endorsement process (see IFAC, 2013b and 2014a).