

# Quarterly Economic Commentary

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Kevin Timoney  
David Byrne

Spring 2014



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**Research Notes**

**Special Articles**

**Research Bulletins**

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### SPECIAL ARTICLES .....

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 – *David Duffy, David Byrne, John FitzGerald*

The Structural Balance for Ireland  
 – *Adele Bergin, John FitzGerald*

### RESEARCH NOTES .....

A Survey-based Analysis of Irish Savings Behaviour by Age  
 – *Kevin Timoney*

## Summary Table<sup>1</sup>

	2011	2012	2013	2014	2015
<b>Output (Real Annual Growth %)</b>					
Private Consumer Expenditure	-1.6	-0.3	-1.2	1.5	2.0
Public Net Current Expenditure	-2.8	-3.7	-0.5	-0.5	0.0
Investment	-9.5	-1.0	4.4	9.6	10.4
Exports	5.4	1.6	0.1	3.7	4.0
Imports	-0.4	0.0	1.0	3.6	3.9
Gross Domestic Product (GDP)	2.2	0.2	-0.4	2.6	3.5
Gross National Product (GNP)	-1.6	1.8	3.3	3.5	3.7

<b>Prices (Annual Growth %)</b>					
Consumer Price Index (CPI)	2.6	1.7	0.5	0.3	1.0
Growth in Average Hourly Earnings	0.4	0.9	0.0	0.0	1.0

<b>Labour Market</b>					
Employment Levels (ILO basis (000s))	1,849	1,838	1,881	1,933	1,985
Unemployment Levels (ILO basis (000s))	317	316	282	249	222
Unemployment Rate (as % of Labour Force)	14.6	14.7	13.1	11.4	10.1

<b>Public Finance</b>					
General Government Balance (€bn)	-21.3	-13.5	-11.5	-7.7	-5.0
General Government Balance (% of GDP)	-13.1	-8.2	-7.0	-4.5	-2.8
General Government Debt (% of GDP)	104.8	116.4	124.5	120.5	116.1

<b>External Trade</b>					
Balance of Payments Current Account (€bn)	2.0	7.3	10.9	13.3	15.0
Current Account (% of GNP)	1.5	5.5	7.9	9.3	9.9

<b>Demand</b>					
Final Demand	2.2	0.2	0.0	3.1	3.7
Domestic Demand	-1.8	-1.6	-0.1	2.3	3.2
Domestic Demand (excl. Stocks)	-3.0	-1.1	-0.3	2.3	2.9

Note: Detailed forecast tables are contained in an Appendix to this *Commentary*.

<sup>1</sup> There are some minor differences between the numbers for 2012 and 2013 in this *Commentary* and the latest CSO data for the same years. This arises because the CSO have just published some minor revisions to their data for a limited range of aggregates for 2012. We have to use a full set of national accounts in developing our forecast so we have to link the CSO data for 2013 to the data for 2012 from National Income and Expenditure 2012. This gives rise to some minor discrepancies. When the CSO publish a full set of revised figures for 2012 and 2013 in June we will be able to use the full set of data for the next *Commentary*.

## Summary

GNP, which provides the best measure of the standard of living (and output) of Irish residents, is estimated to have grown by 3.3 per cent<sup>2</sup> in 2013. This shows an economy that is recovering quite vigorously. The continuing improvement in the current account of the balance of payments, the rapid growth in employment and the signs of a pick-up in investment all point to a continuation of the recovery into 2014. As a result, on the basis of the information available to us today, we expect growth in GNP in 2014 of 3.5 per cent and that this pattern will continue into 2015, resulting in growth in GNP next year of 3.7 per cent.

A consequence of this significant growth in output and employment will be a further fall in unemployment. The unemployment rate should be down to an average of 10 per cent of the labour force in 2015. However, this would still be a long way short of the long-term equilibrium rate of unemployment.

The continuing increase in the surplus on the current account of the balance of payments is also a sign that the economy has not returned to long-run equilibrium; households and companies are continuing to deleverage at an exceptional rate. While this process continues growth in domestic demand will remain weak. However, there are signs of incipient growth in private investment and, as this trend develops, it will contribute to further growth in output and employment. Demand for accommodation in the Dublin area is now running ahead of supply and, until supply responds, this will put upward pressure on rents and prices.

The public finances are improving more rapidly than envisaged in the government's plan. If the forecast in this *Commentary* proves to be correct, government borrowing in 2015 is likely to come in below the target (3 per cent of GDP) once again, even without the substantial further cuts envisaged for the 2015 Budget. However, in formulating fiscal policy it is best to err on the side of caution to ensure that budgetary targets are met in 2015. Nonetheless, these developments suggest that, after a long period of attrition, we are approaching the end of the very painful period of fiscal adjustment. However, there still remains the possibility of new shocks to the economy.

Finally, there are major problems with the data available on trends in the Irish economy and there is a need to provide additional data that clarify the contribution to GNP of individual sectors of the economy.

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<sup>2</sup> Due to limited coverage in the CSO's preliminary 2013 national accounts, our numbers are based on data from *National Income and Expenditure 2012*, linked to the latest CSO data. As a result, some marginal differences in growth rates arise for 2013. While we are showing 2013 GNP growth as 3.3 per cent, the official CSO number is 3.4 per cent.

## National Accounts 2013

### A: Expenditure on Gross National Product

	2012	2013	% Change in 2013		
	€bn	€bn	Value	Price	Volume
Private Consumer Expenditure	82.6	83.0	0.5	1.7	-1.2
Public Net Current Expenditure	25.1	25.1	-0.2	0.4	-0.5
Gross Fixed Capital Formation	17.4	18.4	5.6	1.2	4.4
Exports of Goods and Services	176.7	177.1	0.2	0.1	0.1
Physical Changes in Stocks	0.4	0.5			
<b>Final Demand</b>	<b>302.3</b>	<b>304.1</b>	<b>0.6</b>	<b>0.6</b>	<b>0.0</b>
less:					
Imports of Goods and Services (M)	137.0	138.7	1.3	0.3	1.0
Statistical Discrepancy	-1.3	-1.4			
<b>GDP at Market Prices</b>	<b>163.9</b>	<b>163.9</b>	<b>0.0</b>	<b>0.4</b>	<b>-0.4</b>
Net Factor Payments (F)	-31.3	-26.1			
<b>GNP at Market Prices</b>	<b>132.6</b>	<b>137.9</b>	<b>3.9</b>	<b>0.6</b>	<b>3.3</b>

### B: Gross National Product by Origin

	2012	2013	Change in 2013	
	€bn	€bn	€bn	%
Agriculture	2.9	3.0	0.1	3.0
Non-Agriculture: Wages, etc.	68.4	69.3	0.9	1.3
Other	59.8	57.5	-2.3	-3.8
Adjustments: Stock Appreciation	-0.1	-0.1		
Statistical Discrepancy	1.3	1.4		
<b>Net Domestic Product</b>	<b>132.3</b>	<b>131.0</b>	<b>-1.2</b>	<b>-0.9</b>
Net Factor Payments	-31.3	-26.1	5.2	-16.6
<b>National Income</b>	<b>101.0</b>	<b>105.0</b>	<b>4.0</b>	<b>3.9</b>
Depreciation	16.4	16.7	0.3	2.0
<b>GNP at Factor Cost</b>	<b>117.4</b>	<b>121.7</b>	<b>4.3</b>	<b>3.7</b>
Taxes less Subsidies	15.3	16.2	0.9	5.9
<b>GNP at Market Prices</b>	<b>132.7</b>	<b>137.9</b>	<b>5.2</b>	<b>3.9</b>

### C: Balance of Payments on Current Account

	2012	2013	Change in 2013
	€bn	€bn	€bn
X – M	39.6	38.2	-1.3
F	-31.3	-26.1	5.2
Net Transfers	-1.2	-1.4	-0.2
<b>Balance on Current Account</b>	<b>7.3</b>	<b>10.9</b>	<b>3.7</b>
as % of GNP	5.5	7.9	

## National Accounts 2014

### A: Expenditure on Gross National Product

	2013	2014	% Change in 2014		
	€bn	€bn	Value	Price	Volume
Private Consumer Expenditure	83.0	84.7	2.0	0.5	1.5
Public Net Current Expenditure	25.1	24.7	-1.2	-0.7	-0.5
Gross Fixed Capital Formation	18.4	20.8	13.2	3.3	9.6
Exports of Goods and Services	177.1	185.7	4.9	1.1	3.7
Physical Changes in Stocks	0.5	0.5			
<b>Final Demand</b>	<b>304.1</b>	<b>316.5</b>	<b>4.1</b>	<b>1.0</b>	<b>3.1</b>
less:					
Imports of Goods and Services (M)	138.7	145.1	4.6	0.9	3.6
Statistical Discrepancy	-1.4	-1.4			
<b>GDP at Market Prices</b>	<b>163.9</b>	<b>170.0</b>	<b>3.7</b>	<b>1.0</b>	<b>2.6</b>
Net Factor Payments (F)	-26.1	-25.9			
<b>GNP at Market Prices</b>	<b>137.9</b>	<b>144.1</b>	<b>4.6</b>	<b>1.0</b>	<b>3.5</b>

### B: Gross National Product by Origin

	2013	2014	Change in 2014	
	€bn	€bn	€bn	%
Agriculture	3.0	3.0	0.1	2.5
Non-Agriculture: Wages, etc.	69.3	70.9	1.6	2.3
Other	57.5	60.6	3.1	5.5
Adjustments: Stock Appreciation	-0.1	-0.1		
Statistical Discrepancy	1.4	1.4		
<b>Net Domestic Product</b>	<b>131.0</b>	<b>135.9</b>	<b>4.8</b>	<b>3.7</b>
Net Factor Payments	-26.1	-25.9	0.2	-0.9
<b>National Income</b>	<b>105.0</b>	<b>110.0</b>	<b>5.0</b>	<b>4.8</b>
Depreciation	16.7	17.0	0.3	2.0
<b>GNP at Factor Cost</b>	<b>121.7</b>	<b>127.0</b>	<b>5.4</b>	<b>4.4</b>
Taxes less Subsidies	16.2	17.1	0.9	5.7
<b>GNP at Market Prices</b>	<b>137.9</b>	<b>144.1</b>	<b>6.3</b>	<b>4.6</b>

### C: Balance of Payments on Current Account

	2013	2014	Change in 2014
	€bn	€bn	€bn
X – M	38.2	40.5	2.2
F	-26.1	-25.9	0.2
Net Transfers	-1.4	-1.4	0.0
<b>Balance on Current Account</b>	<b>10.9</b>	<b>13.3</b>	<b>2.5</b>
as % of GNP	7.9	9.3	

## National Accounts 2015

### A: Expenditure on Gross National Product

	2014	2015	% Change in 2015		
	€bn	€bn	Value	Price	Volume
Private Consumer Expenditure	84.7	87.2	3.0	1.0	2.0
Public Net Current Expenditure	24.7	24.2	-2.0	-2.0	0.0
Gross Fixed Capital Formation	20.8	23.8	14.2	3.4	10.4
Exports of Goods and Services	185.7	195.3	5.2	1.1	4.0
Physical Changes in Stocks	0.5	1.0			
<b>Final Demand</b>	<b>316.5</b>	<b>331.6</b>	<b>4.8</b>	<b>1.1</b>	<b>3.7</b>
less:					
Imports of Goods and Services (M)	145.1	152.2	4.9	1.0	3.9
Statistical Discrepancy	-1.4	-1.4			
<b>GDP at Market Prices</b>	<b>170.0</b>	<b>178.0</b>	<b>4.7</b>	<b>1.2</b>	<b>3.5</b>
Net Factor Payments (F)	-25.9	-26.7			
<b>GNP at Market Prices</b>	<b>144.1</b>	<b>151.3</b>	<b>4.9</b>	<b>1.2</b>	<b>3.7</b>

### B: Gross National Product by Origin

	2014	2015	Change in 2015	
	€bn	€bn	€bn	%
Agriculture	3.0	3.1	0.1	2.5
Non-Agriculture: Wages, etc.	70.9	73.6	2.8	3.9
Other	60.6	64.7	4.0	6.8
Adjustments: Stock Appreciation	-0.1	-0.1		
Statistical Discrepancy	1.4	1.4		
<b>Net Domestic Product</b>	<b>135.9</b>	<b>142.7</b>	<b>6.0</b>	<b>5.0</b>
Net Factor Payments	-25.9	-26.7	-0.8	3.3
<b>National Income</b>	<b>110.0</b>	<b>116.0</b>	<b>6.0</b>	<b>5.4</b>
Depreciation	17.0	17.6	0.5	3.0
<b>GNP at Factor Cost</b>	<b>127.0</b>	<b>133.5</b>	<b>6.5</b>	<b>5.1</b>
Taxes less Subsidies	17.1	17.7	0.6	3.6
<b>GNP at Market Prices</b>	<b>144.1</b>	<b>151.3</b>	<b>7.1</b>	<b>4.9</b>

### C: Balance of Payments on Current Account

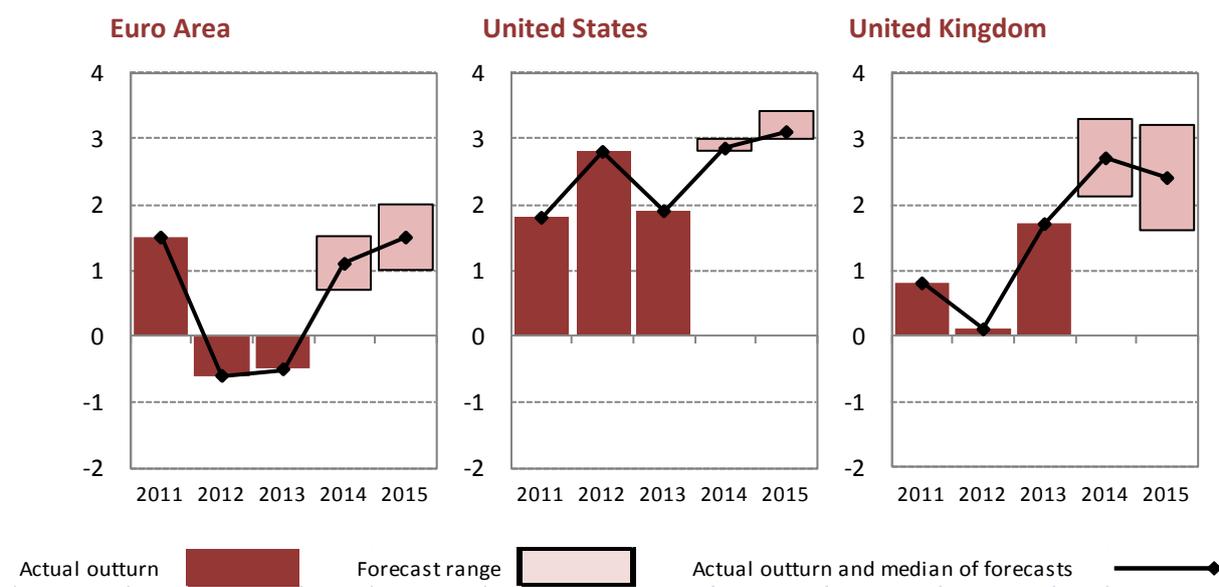
	2014	2015	Change in 2015
	€bn	€bn	€bn
X – M	40.5	42.9	2.5
F	-25.9	-26.7	-0.8
Net Transfers	-1.4	-1.4	0.0
<b>Balance on Current Account</b>	<b>13.3</b>	<b>15.0</b>	<b>1.6</b>
as % of GNP	9.3	9.9	

## 1

## The International Economy

The international economy in 2014 and 2015 is expected to be more favourable to Ireland than it was in 2013. Of particular relevance is growth in Ireland's main trading partners; the Euro Area, United Kingdom and United States. Following two consecutive years of contraction, Real GDP in the Euro Area is expected to grow by just over 1 per cent this year and 1.5 per cent in 2015. Prospects for the economies in the United States and the United Kingdom are more encouraging, with growth of approximately 2.5 to 3 per cent forecast for the coming two years. As shown in Figure 1, at present there is a wider distribution of forecasts for the Euro Area and the UK than there is for the US.

**FIGURE 1** Real GDP Growth (% change, year on year)



Sources: FocusEconomics, Eurostat, IMF, OECD, HM Treasury and Federal Reserve.

### The Euro Area Economy

The European Central Bank (ECB) has left its main refinancing rate, marginal lending rate and deposit rate unchanged at 0.25 per cent, 0.75 per cent and 0.00 per cent, respectively, since November 2013. In addition, no decision was taken in April on the implementation of a quantitative easing programme. The ECB currently sterilises bond purchases using bank deposits, ensuring that these purchases do not lead to inflation. As measured by the *Harmonised Index of Consumer Prices*, annual inflation in the Euro Area was 0.5 per cent in March, considerably below its target of just under 2 per cent. Furthermore, there was

weak growth in money supply in February, with annual growth of 1.3 per cent in the broad monetary aggregate M3. Loans to the private sector also fell by 2.2 per cent in February. The ECB therefore faces challenges in fulfilling its price stability mandate and in supporting recovery in Europe.

Decision was reached in March between the European Parliament and member states relating to the Single Resolution Mechanism (SRM) for dealing with failing banks. The SRM is intended to contribute to breaking the link between failing banks and sovereigns. Supervision by the ECB, rather than by national authorities, of some of Europe's largest banks plays another part in this. Whether the SRM will fulfil its intended role is an open question. The process needs to be swift to avoid the possibility of damaging bank runs, however the decision-making process outlined in the SRM remains lengthy and requires input from national governments. Since the last *Commentary*, negotiations have led to greater and quicker mutualisation of the contributions from member states into a single fund, although this will still take eight years to complete.

Euro Area GDP rose by 0.5 per cent year on year in the fourth quarter of 2013. Each of the previous three quarters had registered negative year-on-year growth. GDP grew by 1.1 per cent in the EU28 in the fourth quarter. Employment in the Euro Area rose 0.1 per cent quarter on quarter in Quarter 4, but fell by 0.5 per cent year on year.

### **The US Economy**

Since the last *Commentary*, the US labour market has displayed relatively weak growth. In the year to November, the Labor Department's Non-Farm Payrolls survey posted average monthly job creation of 205,000. Record-breaking cold weather in the United States in December and January contributed to lower jobs growth of 84,000 and 144,000, respectively. Stronger employment growth returned in February and March, with 197,000 and 192,000 jobs added in those months. The unemployment rate now stands at 6.7 per cent, down from annual averages of 8.1 per cent and 7.4 per cent for 2012 and 2013 respectively.

The Federal Reserve had included a reference to an unemployment rate threshold of 6.5 per in its monetary policy forward guidance, but this has since been removed. The Federal Open Market Committee has, like the Bank of England's Monetary Policy Committee, moved toward the consideration of a broader range of labour market indicators for policy. The Fed now emphasises long-term unemployment, under-employment and the participation rate in its policy decisions, with participation currently at the lowest rate seen since the 1970s. The Fed continued to taper its quantitative easing programme in March,

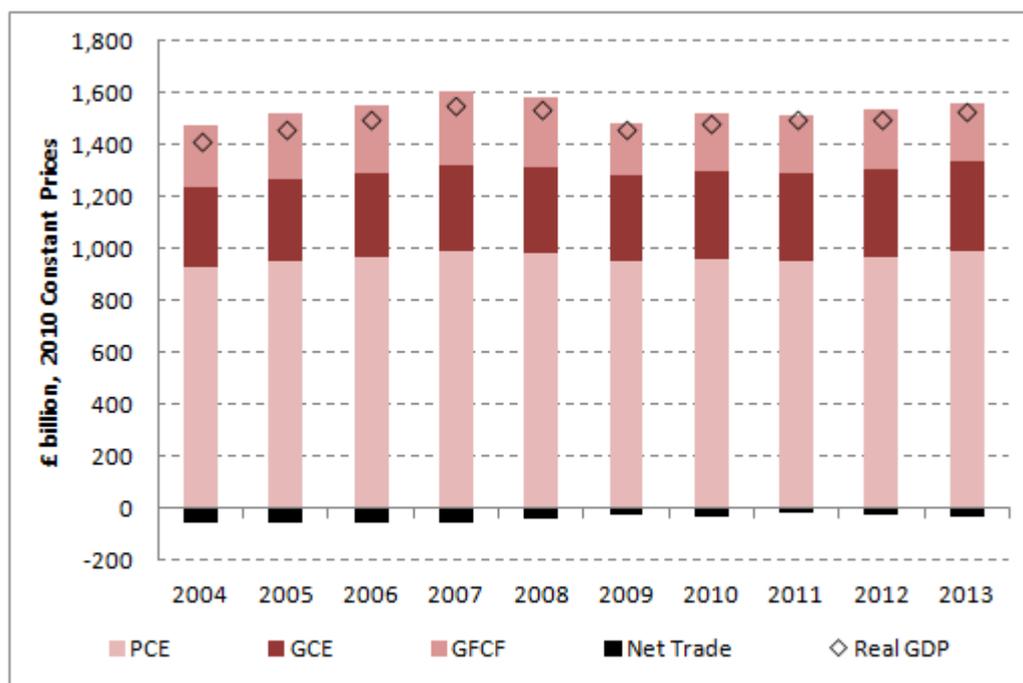
cutting its monthly asset purchases by \$10 billion to \$55 billion. At its height, the programme involved monthly purchases of \$85 billion.

GDP growth fell to an annual rate of 2.6 per cent in the fourth quarter, from 4.1 per cent in the previous quarter, despite the strongest growth in consumer spending for three years. The overall weaker performance in the fourth quarter has also been attributed to the severe weather. Performance continued to deteriorate in January but has showed signs of a rebound in February. Retail sales followed a 0.6 per cent fall with growth of 0.3 per cent in February and factory production grew by 0.8 per cent after January's fall of 0.9 per cent, the largest since May 2009.

### **The UK Economy**

The economy of the United Kingdom grew by 0.7 per cent in volume terms in the fourth quarter of 2013, contributing to GDP growth of 1.7 per cent for 2013. In addition, the Office for National Statistics has revised upward GDP growth rates from the first quarter of 2012 onward. Household consumption has been the biggest driver of the recent recovery in UK GDP growth, rising for the ninth consecutive quarter and by 2.4 per cent year-on-year in Quarter 4 2013. Gross Fixed Capital Formation also played an important role, increasing by 2.4 per cent in the fourth quarter, being driven predominantly by growth in business investment. Net trade provided less of a drag on the UK economy in 2013, with exports rising by 1 per cent and imports rising by 0.5 per cent.

However, 23 quarters from the start of the economic downturn, the output of the UK economy remains 1.4 per cent below the 2007 peak, with only the services sector having returned to 2008 output levels. This represents a significantly longer duration before recovery in output than seen in previous downturns. By contrast, the US economy exceeded its pre-downturn peak within 14 quarters. Real GDP for the UK over the past decade is shown in Figure 2.

**FIGURE 2** United Kingdom Real GDP, 2004-2013

Source: Office for National Statistics, Quarterly National Accounts.

Note: PCE includes expenditure by non-profit institutions, GFCF includes changes in stocks, net trade includes statistical discrepancy.

The labour market recovery in the UK has continued since the last *Commentary*; employment gains in the fourth quarter were 193,000, pushing the employment rate up 0.3 percentage points to 72.1 per cent. The unemployment rate fell by 0.4 percentage points from the previous quarter to 7.2 per cent in Quarter 4, with the number unemployed falling by 125,000 to 2.34 million. UK unemployment peaked at an annual average of 8.1 per cent in 2011. The labour force participation rate in the UK is currently 76.8 per cent, higher than the US (72.5 per cent) and Ireland (69.8 per cent).

In the year to February 2014, the inflation rate in the UK (as measured by the Consumer Price Index) was 1.7 per cent, down from an annual rate of 1.9 per cent in January 2013. January represented the first time in the previous four years that the inflation rate was below 2 per cent. Real wages have continued to decline despite an increase of 1.3% in average weekly earnings year-on-year between November 2013 and January 2014.

### The World Economy

In its Global Economic Forecast, the National Institute of Economic and Social Research (NIESR) expects world growth of 3.7 per cent in 2014 and 2015, increasing from 3.1 per cent in 2013. NIESR highlights the slow pace of this recovery by historical standards, and points to deteriorating growth prospects in

certain economies. While the economic prospects of advanced economies, particularly the US, have continued to improve, there is a weakening outlook for emerging markets such as Russia, India, Brazil, Turkey and China.

The Russian economy is likely to be affected by current international political tensions; following the annexation of Crimea, the Rouble fell to record lows versus the Dollar and Euro. This prompted the Bank of Russia to raise its main borrowing rate from 5.5 to 7 per cent, a move which will not be conducive to the growth of a currently weak economy. Russian stock market indices have also dropped since the start of the crisis, with foreign sanctions causing them to fall further. Fallout from the Ukraine crisis has been noted in the March edition of the Ifo Business Confidence Index, a monthly survey of 7,000 German businesses. The Index fell for the first time in five months, with the drop in business expectations being attributed to the Ukraine crisis in particular.

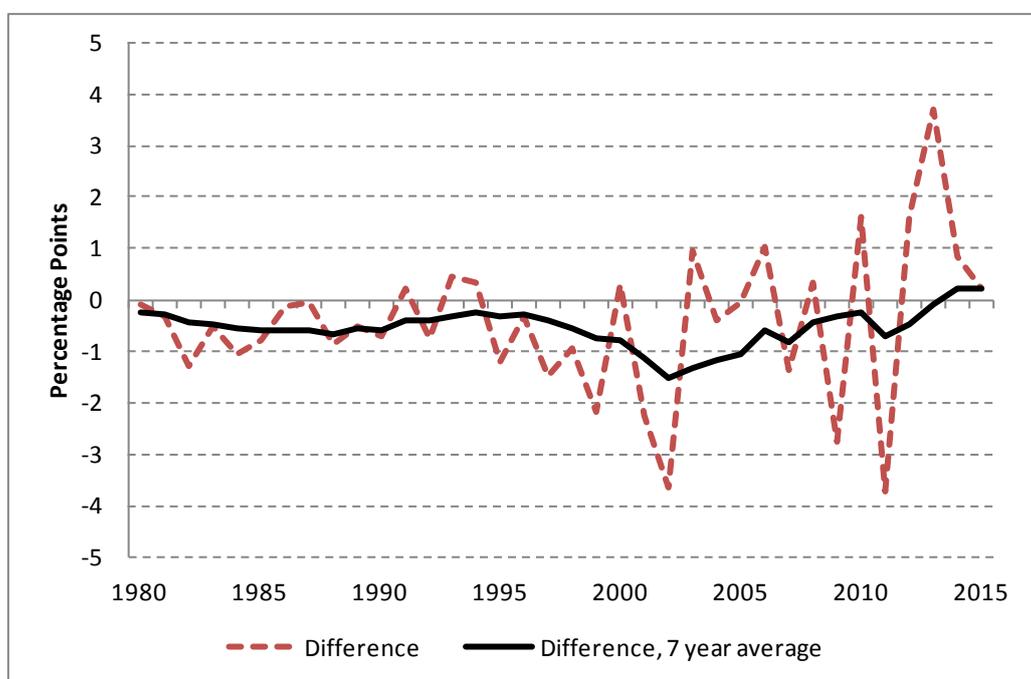
The gradual slowdown in Chinese activity appears to be on-going; consumer spending, industrial production and investment recently posted their worst results for three, five and 11 years respectively. This has prompted an expectation that the People's Bank of China may loosen monetary policy in an effort to stimulate the economy. Meanwhile, the Bank of Japan may also choose to ease monetary policy further by expanding asset purchases. Growth in the Japanese economy slowed in the second half of 2013, after posting relatively strong growth in the first half. Growth in exports proved disappointing in 2013, with Japan's current account deficit expanding to a record ¥1.6 trillion (\$15 billion).

## 2

## Growth and Output

Over the last two years it has become increasingly difficult to unravel recent trends in the economy, much less to forecast developments in the coming year. The release, in March of this year, of the National Accounts for 2013 raises more questions about what is happening in the economy than it answers. The most striking problem which these data pose for those watching the Irish economy is the dramatically different trajectory of real GDP and real GNP. The standard measure that is focused on internationally, GDP, fell by 0.3 per cent in 2013, while real GNP rose by 3.3 per cent. We know that GNP is the most appropriate measure of the standard of living in Ireland, as it leaves out the profits of multinationals that properly belong to their foreign owners rather than to those living in Ireland (as well as excluding national debt interest paid abroad). However, this is less easily explained to an international audience. The very wide divergence in the trends manifested by the two measures requires explanation.

**FIGURE 3** Gap between Growth Rate of Real GNP and Real GDP, Percentage Points



Source: Central Statistics Office and ESRI Forecasts.

Given the relatively large presence of the multi-national sector in the Irish economy, there has always been some difference between the movement of GNP and GDP. However, as Figure 3 reveals, in 2013 this gap was never larger.

Also, as shown by the seven year moving average, while for many years GDP grew more rapidly than GNP, this pattern has reversed. This reflects a change in behaviour by the multinational sector of the economy.

There are a number of factors giving rise to this very large difference between the two measures of output. As discussed in the Autumn 2013 *Commentary* (FitzGerald, 2013a) and in Enright and Dalton (2013)<sup>3</sup>, the ending of patents on some pharmaceuticals was a major reason for the difference in trend in GDP and GNP in 2012, and the effects of this change have also influenced the figures for 2013.

The so called “patent cliff” has affected the data through its effects on the value of sales and, hence, of exports. In turn this has led to a large drop in profits and value added arising in the pharmaceutical sector in Ireland, with concomitant knock-on effects on GDP.<sup>4</sup> However, when the reduced outflow of profits abroad is taken into account, there is little effect on GNP.<sup>5</sup> For 2014 it would appear that the effect of drugs dropping out of patent will be much smaller than in 2012 and 2013. Hence, we are forecasting a smaller gap between the growth rates in these two measures of output in 2014 and very little difference between the two measures in 2015.

However, at least one other factor has come into play in recent years, which is further adding to the difference between the two measures of growth. This is the behaviour of firms in the broad ICT sector<sup>6</sup>. In 2012 and 2013 there was significant growth in employment in this sector. However, there has also been a trend increase in the share of the total turnover going abroad to pay royalties on the intellectual property used in the sector, reducing the share of domestic value added in total turnover. Thus, while there has been very rapid growth in exports of IT services in recent years, value added has grown much more slowly. The national accounts data show that in 2012, while the wage bill increased by around 20 per cent, there was no increase in profits. Foreign firms operating in the sector, instead of earning profits in Ireland from the substantial increase in sales in 2012, chose to pay increased royalty payments abroad, reducing their

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<sup>3</sup> See FitzGerald, J., (2013a), “The Effect on Major Accounting Aggregates of the Ending of Pharmaceutical Patents”, ESRI Research Note 2013/2/1, published in *Quarterly Economic Commentary*, Autumn, Dublin: Economic and Social Research Institute, and Dalton, M. and S. Enright, (2013), “The Impact of The Patent Cliff on Pharma-Chem Output in Ireland”, Working Paper no. 1, 2013. Dublin: The Department of Finance.

<sup>4</sup> The evidence available suggests that the major impact of the loss of patents has been on profits arising in Ireland rather than on patent royalties paid abroad. This has maximised the impact on GDP.

<sup>5</sup> To the extent that corporation tax payments are reduced consequent on the reduction in profits there would be an effect on GNP as well. However, with a tax rate of 12.5 per cent, at a maximum the effect on GNP would be one-eighth of the effect on GDP.

<sup>6</sup> NACE sectors 58, 62 and 63.

profits in Ireland. By paying royalties to an affiliated company abroad they reduce their tax liabilities in Ireland.

In 2013 value added in the distribution and ICT sector<sup>7</sup> actually fell by over 2 per cent in real terms, having a significant negative effect on GDP. This was probably primarily due to the reduction in ICT profits earned in Ireland, as all the evidence would point to a simultaneous increase in employment in the sector. Because virtually all of the profits of these foreign owned IT firms flow back out of the country, the fall in value added has no effect on GNP. In fact, because of the rise in employment and the associated wage bill, the sector may have made a significant positive contribution to the rise in GNP in 2013. While the effects of the patent cliff may be wearing off in 2014, the changing behaviour of the IT sector may have a continuing negative effect on GDP this year. This is reflected in our forecast for GDP in 2014.

This analysis suggests that, when trying to understand underlying movements in real income in Ireland in 2012, 2013 and 2014, it is the trend in GNP rather than GDP which warrants greater attention. On this basis, 2013 marked a very successful return to growth in the Irish economy, something that is not apparent in the headline GDP figure. However, GDP is the measure conventionally used when comparing economic growth across countries. Thus, what is a domestic success story may appear to much of the outside world as continued economic stagnation. The arcane issues underlying developments in the economy are difficult to explain to an international audience.

These unusual developments have a major impact on sectoral GDP on the output side of the national accounts, and also on exports and factor flows on the expenditure side of the accounts. This means that while the short-term indicators used for forecasting may suggest that exports are falling or stagnant, the domestic value added from those exports may actually be rising. Similarly, what may look like a fall in the short-term indicators for manufacturing output may actually translate into an increase in GNP. This difficulty in interpreting key short-term data greatly hampers our ability to track what is happening in the economy in real time.

For these reasons, in developing our forecasts for the economy we place considerable reliance on the changes in the current account of the balance of payments and also on the growth in employment. In the period 2012-15 these

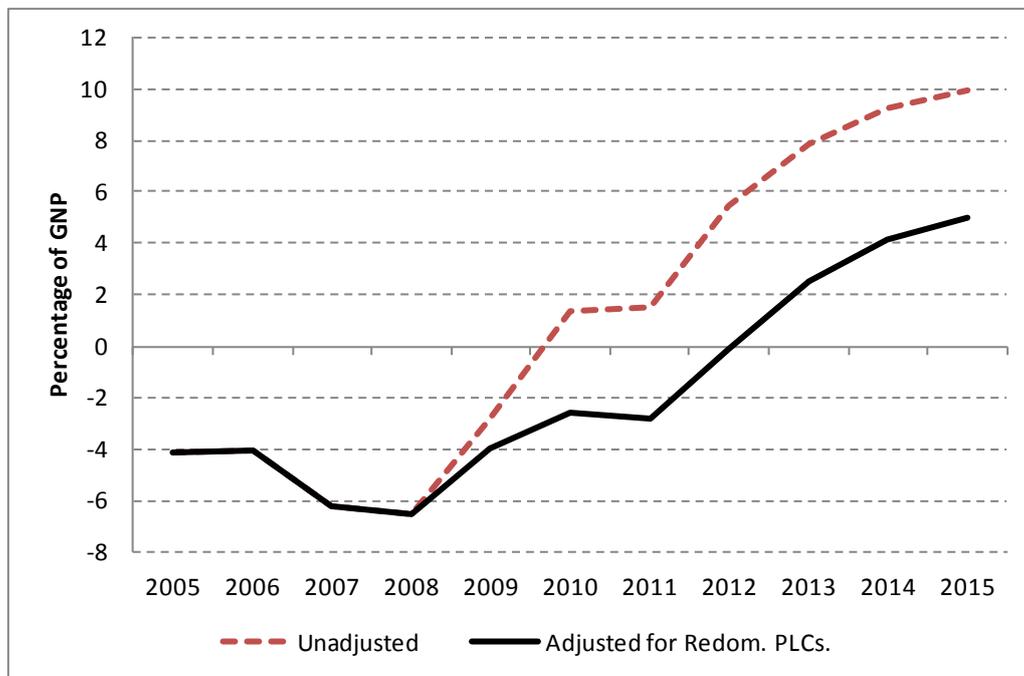
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<sup>7</sup> In the preliminary national accounts the CSO aggregate the distribution and the ICT sectors.

two key aggregates are not likely to be seriously affected by the unusual developments in the Irish economy set out above.

In the case of the current account surplus, it is well known that over the period 2009-12, the effect of redomiciled PLCs moving to Ireland served to artificially improve the balance on current account (FitzGerald, 2013b).<sup>8</sup> However, with the relocation of these firms to Ireland completed, this factor ceased to affect the trend in the current account surplus in 2012 and 2013. As a result, the big improvement in the current account in 2012 and 2013 represents a real increase in value added accruing to the tradable sector of the economy from its sales abroad. Figure 4 shows the trend in the current account with and without an adjustment to exclude the effects of the redomiciled PLCs<sup>9</sup>.

**FIGURE 4** Current Account of the Balance of Payments, Adjusting for Redomiciled PLCs



Source: Central Statistics Office and ESRI Forecasts.

The increase in the current account surplus in 2013 amounted to 2.4 percentage points of GNP, a large proportion of the total increase in real GNP of 3.3 per cent. Thus, sales of goods and services to the outside world by the Irish tradable sector accounted for much of the growth in GNP in 2013.

<sup>8</sup> See FitzGerald, J., (2013b), "The Effect of Re-domiciled PLCs on Irish Output Measures and the Balance of Payments," QEC Research Notes 2013/1/2, published in *Quarterly Economic Commentary*, Spring, Dublin: Economic and Social Research Institute.

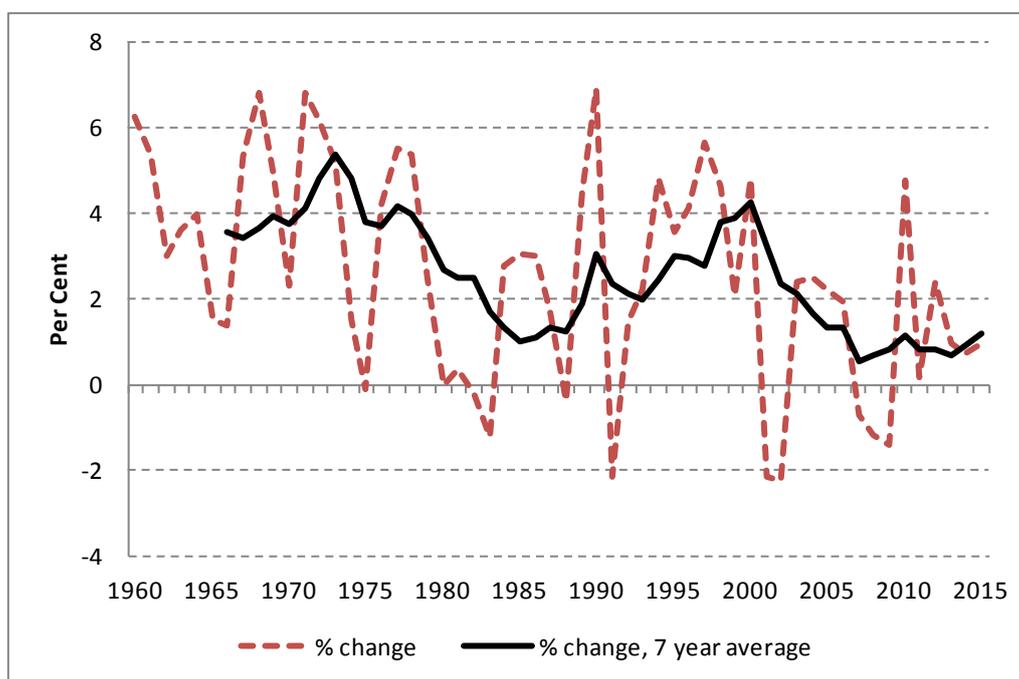
<sup>9</sup> It is assumed that the inflow of profits to these companies in 2013-2015 remains the same as in 2012.

However, with the data currently available it is not easy to allocate this growth in GNP to individual production sectors in the economy, given the major problems that exist with the traditional national accounting data.

The Irish economy remains very competitive and the external environment in 2014 and 2015 for firms in Ireland will be more favourable than it was in 2013. Hence we anticipate further significant demand from abroad this year and next year for the goods and services produced by the tradable sector. The effect on GNP arising in the tradable sector should be at least as high as it was in 2013.

In terms of the current account of the balance of payments, as discussed later in this *Commentary*, for 2014 and 2015, we anticipate a further improvement in the surplus. However, the improvement will not be as great as it was in 2013 as the return to growth in domestic demand will result in a substantially greater volume of imports which will, to some extent, offset the effect of growing world demand for Irish goods and services.

**FIGURE 5** Productivity Measured as the Growth in GNP less the Growth in Employment



Source: Central Statistics Office and ESRI Forecasts.

The other key factor in arriving at our forecast for GNP is the pattern of growth in employment. Total employment has been growing very vigorously since the last quarter of 2012. In the second half of 2013 the growth in employment was particularly strong and there is a substantial carryover effect into 2014. As

discussed later in this *Commentary*, we expect employment to grow by 2.7 per cent a year in both 2014 and 2015, following on growth of 2.4 per cent in 2013. As discussed in a Box 1 in the Winter 2013 *Commentary*, the bulk of the employment growth is for those with third level qualifications. This reflects the pattern of growth in the economy to date; much of the growth has been in high skilled sectors with little employment growth in the building and construction and related sectors.

In arriving at our forecast for GNP we take account of our projections for employment and add to that an estimate of the likely growth in productivity, measured in terms of GNP. Figure 5 shows the pattern of growth over the last forty years in productivity measured in this way. It also shows a seven year moving average of the growth rate in this aggregate. By this measure, productivity grew by over 3 per cent a year during the 1960s and the 1970s and again in the 1990s and the early years of the last decade. However, it had fallen back to around one per cent a year before the recession hit. Since 2005 it has stabilised at around that level. As a result, we are assuming in this *Commentary* a similar rate of growth in productivity to that experienced in recent years: one per cent a year in 2014 and 2015. This results in a forecast for GNP growth of 3.5 per cent in 2014 and 3.7 per cent in 2015.

Because of the complications affecting the national accounts, outlined above, it is much more difficult to forecast the growth of GDP. We anticipate that while the effects of the patent cliff on the national accounts will be more muted in 2014 than in 2012 or 2013, the continuing changes in behaviour in the ICT sector will have some negative effect on measured GDP in 2014. Hence, we are forecasting that GDP in 2014 will rise by only 2.6 per cent. In 2015 we anticipate that these special factors will have fully played out and the growth in GDP of 3.5 per cent will be close to the forecast growth in GNP.

However, the particular uncertainty associated with the GDP forecast must be emphasised. Depending on the accounting behaviour of relatively few multinational firms the growth in GDP could prove to be much lower than we are forecasting. By contrast a reasonable margin of error around our GNP forecast for 2014 and 2015 would be  $\pm 0.75$  percentage points.

### **Output**

As discussed above allocating the growth in output across sectors of the economy is very difficult under current circumstances. This problem particularly affects the tradable sector of the economy – manufacturing and distribution and software.

Agriculture saw very rapid growth in output in 2013 (Table 1). However, this was a recovery after a very bad year in 2012. Our forecast for 2014 and 2015 is for a return to relatively low growth of just over 1 per cent a year.

**TABLE 1** Industry and Output

	2012	2012	2013	2014	2015
	Value	Volume Change			
	€ billion	%	%	%	%
Agriculture	3.6	-12.6	7.1	1.2	1.2
Industry	38.1	-0.4	-3.8	-1.0	0.0
Distribution, Transport, Software and Communications	36.2	-0.6	-2.7	1.0	3.0
Public Administration and Defence	6.0	-6.3	-3.3	-2.0	-2.0
Other Services	61.1	2.7	2.1	5.1	5.8
<b>GVA at Factor Cost</b>	<b>148.7</b>	<b>0.3</b>	<b>-1.0</b>	<b>2.4</b>	<b>3.6</b>

Source: Central Statistics Office and ESRI Forecasts.

Because of the legacy effects of the patent cliff, we anticipate a small further fall in industrial output this year, with no change next year. However, if firms adopt different accounting practices, there could be more rapid growth in measured output than we are assuming.

The fall in output in distribution and software in 2013 appears to have been primarily due to changing accounting practises by some key multinationals in the IT sector. Once again, we anticipate some legacy effects pulling down growth in 2014 to only one per cent. However, for 2015, with the effects of the “patent cliff” coming to an end, we are assuming that these accounting effects will have played out and that the output of the sector will grow by around 3 per cent.

The fall in public administration output is a function of falling numbers arising from a further tough Budget for 2014, with carryover effects into 2015. The Other Services sector, which is large in size, is expected to show vigorous growth both this year and next year, making an important contribution to the growth in economy-wide GVA at factor cost.

## 3

## Exports of Goods and Services

The value of goods exports fell in 2013 by 4.6 per cent. To a considerable extent the fall was due to the impact of the pharmaceutical patent cliff, as discussed in previous *Commentaries*.<sup>10</sup> Detailed trade statistics show that the decline was concentrated in exports of organic chemicals and medical pharmaceutical products. With annual average merchandise export prices showing a small decline of 0.8 per cent the volume of visible exports fell by 3.9 per cent in 2013. Data in the National Accounts release show that service exports exceeded goods exports again in 2013, growing by 3.9 per cent. Thus, total exports of goods and services were broadly unchanged from their 2012 level, showing a marginal increase of 0.1 per cent in volume and 0.2 per cent in value last year.

With the international environment expected to show continued recovery in 2014 and 2015 we are forecasting an improvement in the volume growth of merchandise exports, although it is important to note that these growth rates remain quite moderate. The main driver of export growth will continue to be the service sector, again aided by recovering economic growth and by increased capacity suggested by the number of service sector FDI projects announced by the IDA in recent years. Thus, service sector exports are forecast to grow by 7 per cent this year. While there may be some moderation in the growth level next year it is likely to remain strong at approximately 5.7 per cent. On the basis of these forecasts we are projecting an increase in the volume of total exports of 3.7 per cent in 2014 and 4 per cent in 2015. While the export price deflator is projected to increase to approximately 1 per cent over the forecast period we are, therefore, forecasting that the value of exports of goods and services will grow by 4.2 per cent in 2014 and by 5.2 per cent in 2015.

**TABLE 2** Exports of Goods and Services

	2012	2012	2013	2014	2015
	Value	Volume Change			
	€ billion	%	%	%	%
Merchandise	85.8	-3.6	-3.9	0.0	1.9
Services:					
Tourism	3.0	-3.3	9.4	4.0	4.0
Other Services	87.3	7.2	3.7	7.0	5.7
Total Services	90.3	6.9	3.9	6.9	5.6
<b>Exports of Goods and Services</b>	<b>176.7</b>	<b>1.6</b>	<b>0.1</b>	<b>3.7</b>	<b>4.0</b>

Sources: Central Statistics Office and ESRI Forecasts.

<sup>10</sup> See FitzGerald, J., (2013), "The Effect on Major Accounting Aggregates of the Ending of Pharmaceutical Patents", ESRI Research Note 2013/2/1, published in *Quarterly Economic Commentary*, Autumn, Dublin: Economic and Social Research Institute, and Dalton, M. and S. Enright, (2013), "The Impact of The Patent Cliff on Pharma-Chem Output in Ireland", Working Paper no. 1, 2013. Dublin: The Department of Finance.

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## Investment

The outlook for investment plays an important role in our forecast for domestic growth in 2014 and 2015. National accounts data show that overall investment grew by 4.4 per cent in volume and by 5.6 per cent in value in 2013, implying an investment deflator of 1.2 per cent. There was some variation across components, with building and construction growing by 11.6 per cent, due to growth in non-residential construction. Investment in machinery and equipment declined by 4.8 per cent. Purchase of aeroplanes can cause some volatility in this component and, once account is taken of these purchases, underlying growth in machinery and equipment investment amounted to 16.3 per cent.

It seems likely that there will be a further increase in the volume of building and construction investment growth in 2014. Although, new house completions fell by 2.2 per cent in 2013, employment growth, economic recovery and low interest rates coupled with demographic factors are all contributing to housing demand at present. As outlined in the accompanying Special Article, (Duffy, Byrne and FitzGerald) demographic factors mean that approximately 25,000 new households, on average, will be formed each year between now and 2030. While the number of dwelling units required will ultimately depend on obsolescence and the vacancy rate, the analysis suggests the number of units required is well in excess of current building levels. Indeed, this supply shortage, at a time when we are seeing growth in employment and continued household formation, has contributed to strong growth in Dublin house prices. The shortage of supply is also contributing to a similar picture with regard to private rents, with rental levels in the Dublin area showing strong growth in contrast to more subdued increases in the rest of the country.

On the assumption that either private or banking finance is available, we anticipate that rising house prices, and the expectation of further price increases, will result in higher house completions in 2014 and again in 2015. Growth is expected to be higher this year and next, at 44.6 per cent and 25.0 per cent respectively. Despite these strong growth rates the level to which new house building has declined since 2007 means these growth rates will only result in approximately 12,000 new house completions in 2014 and 15,000 completions in 2015.

CSO data show non-residential construction grew by 17.7 per cent in 2013, while the volume of civil engineering production grew by 4.4 per cent. The improving economic situation, continued FDI flows, and employment growth should result in a higher level of investment in other building and construction both this year and next.

With a more limited set of leading indicators it is more difficult to monitor investment in machinery and equipment. Registrations of new goods vehicles grew by 1.6 per cent in 2013, while imports of capital goods were 12.9 per cent lower in value terms. With machinery and equipment investment responding to some of the same factors as investment in building and construction, such as economic and employment growth, we are forecasting that this component of investment will increase by 2.5 per cent in 2014 and by 2.7 per cent in 2015. The overall volume of investment is forecast to grow by 9.6 per cent this year and by 10.4 per cent in 2015. With activity levels anticipated to grow, we are forecasting an investment price deflator of approximately 3 per cent in each year. In value terms total investment is forecast to increase by 13.2 per cent in 2014 and by 14.2 per cent in 2015.

**TABLE 3** Gross Fixed Capital Formation, % Change in Volume

	2012	2012	2013	2014	2015
	Value	Volume Change			
	€ billion	%	%	%	%
Housing	3.1	-21.4	8.9	28.4	25.0
Other Building	5.6	7.2	16.2	8.5	10.3
<b>Total Building and Construction</b>	<b>9.0</b>	<b>-4.0</b>	<b>13.0</b>	<b>15.2</b>	<b>15.8</b>
Machinery and Equipment	8.4	2.6	-4.8	2.5	2.7
<b>Total</b>	<b>17.4</b>	<b>-1.0</b>	<b>4.4</b>	<b>9.6</b>	<b>10.4</b>

Source: Central Statistics Office and ESRI Forecasts.

## 5

## Prices, Consumption and Incomes

### Prices

As measured by the *Harmonised Index of Consumer Prices* (HICP), the annual rate of inflation in the Euro Area was 0.5 per cent in March. This compares with a rate of 0.7 per cent in the previous month and a rate of 1.7 per cent in March 2013. Falling energy prices have contributed to the low rates of inflation in Europe; annual inflation in energy prices stood at -2.3 per cent in February. The US Energy Information Administration (EIA) forecasts the price per barrel of crude oil to continue to fall over the medium term, suggesting falling energy prices will continue to affect inflation rates worldwide.

In February, annual inflation in Ireland stood at -0.1 per cent as measured by the *Consumer Price Index* (CPI) and 0.1 per cent by the HICP. Falls in price were registered in the transport and housing, water, electricity, gas and other fuels divisions; two of the largest contributors to the *Consumer Price Index*. In particular, petrol, diesel, motor vehicles, mortgage interest and home heating oil showed falls in price. In addition, both food and non-alcoholic beverages declined in price over the 12 months to February. Table 4 provides our forecasts for the CPI, HICP and personal consumption deflator for 2014 and 2015.

The European Central Bank (ECB) forecasts that inflation in the Euro Area will not rise to its target of just-under 2 per cent until 2017. While the ECB has not altered its monetary policy stance since the previous *Commentary*, it remains possible that the ECB will cut its main refinancing rate further, impose negative deposit rates or embark on a quantitative easing programme to ensure that it meets its inflation target.

**TABLE 4** Inflation Measures

	2012	2013	2014	2015
	Annual Change			
	%	%	%	%
Consumer Price Index	1.7	0.5	0.3	1.0
Personal Consumption Deflator	0.6	1.7	0.5	1.0
HICP	1.9	0.5	0.4	1.2

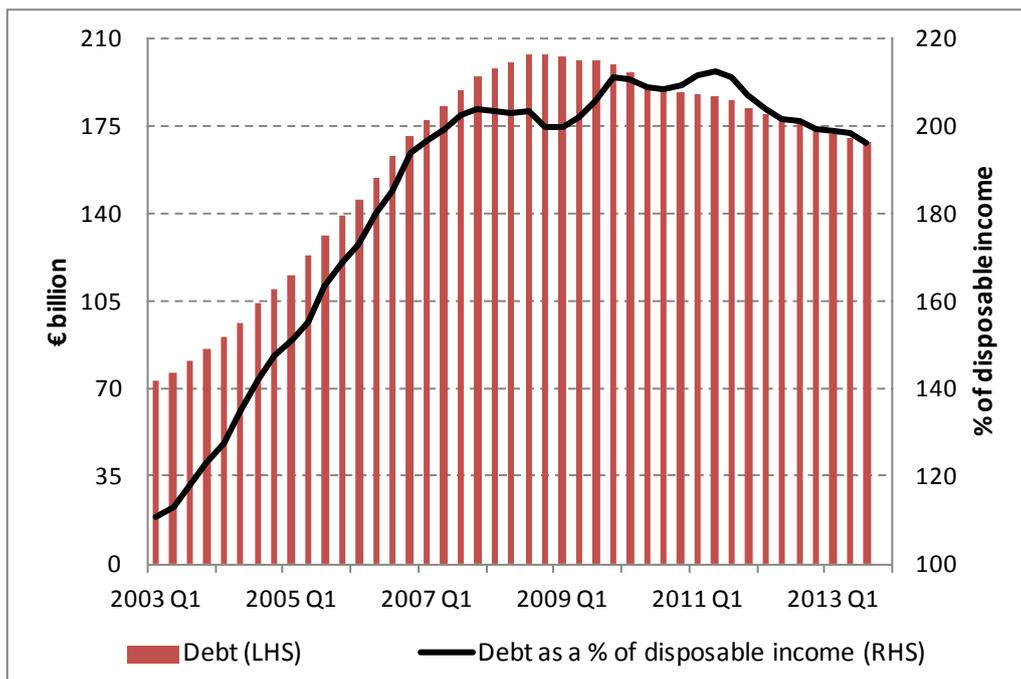
Sources: Central Statistics Office and ESRI Forecasts.

The Central Bank of Ireland’s *Quarterly Financial Accounts* for the third quarter of 2013 show that household debt declined by €1.6bn to €168bn during the quarter. This continues a deleveraging trend that began in the fourth quarter of 2008, as shown in Figure 6. A measure of sustainability of this household debt can be derived by expressing the debt as a percentage of gross disposable income. This fell for the ninth consecutive quarter and now lies at 196.1 per cent. Both household debt and its percentage of Gross Disposable Income are at their lowest levels since the fourth quarter of 2006. Household debt to gross disposable income remains high by international standards, with the ratios for the United Kingdom and United States approximately 140 per cent and 110 per cent, respectively.

### Consumption

The KBC Ireland/ESRI *Consumer Sentiment Index* fell slightly to 83.1 in March, from 85.5 in February. February’s value was the highest for the index since May 2007. The 3-month moving average, a representation of the trend in the index, has now risen for 11 consecutive months. The *Consumer Sentiment Index* series also produces sub-indices which focus on respondents’ views of current economic conditions and their expectations for the future. Topics covered by the sub-indices include how consumers feel about their current financial circumstance compared to 12 months ago, the current buying environment for large household purchases, consumers’ views of their future financial situation, the path of unemployment and the economic outlook for the country as a whole. All of the sub-indices have displayed increases in the last year.

FIGURE 6 Household Debt



Source: Central Statistics Office and Central Bank of Ireland.

The Nationwide UK (Ireland)/ESRI *Savings Index* examines savings behaviour and attitudes among Irish consumers. Recent editions of the Index have shown increases in regular saving, decreases in precautionary saving, and increases in the proportion saving to buy or renovate a home. Furthermore, there have been improving assessments of current economic conditions. However, there were also increases in the proportion of respondents who do not save at all, who thought now was a bad time to save and who thought government policy was detrimental to saving, likely reflecting the impact of changes to DIRT in the most recent Budget. In an accompanying Research Note in this *Commentary*, Timoney (2014) examines data on savings behaviour by age and shows the age group with the highest tendency to save is those aged 21-35. This finding is linked to the housing market and net emigration, whereas a possible explanation for the reduced tendency of older age groups to save is a fall in precautionary savings and the effects of deleveraging and negative equity.

The *Retail Sales Index* for 2013 rose 0.7 per cent in volume with respect to 2012. There was a value fall of 0.2 per cent, however, reflecting the impact of price changes. Retail sales growth improved significantly during the second half of 2013 and in 2014 to-date, following a weak first half of 2013. The Index showed year-on-year volume increases of 3.5, 9.4 and 5.0 per cent in December, January and February, respectively. The January and February increases were particularly buoyed by the motor trades; there were 3.1 and 2.3 per cent increases with these removed.

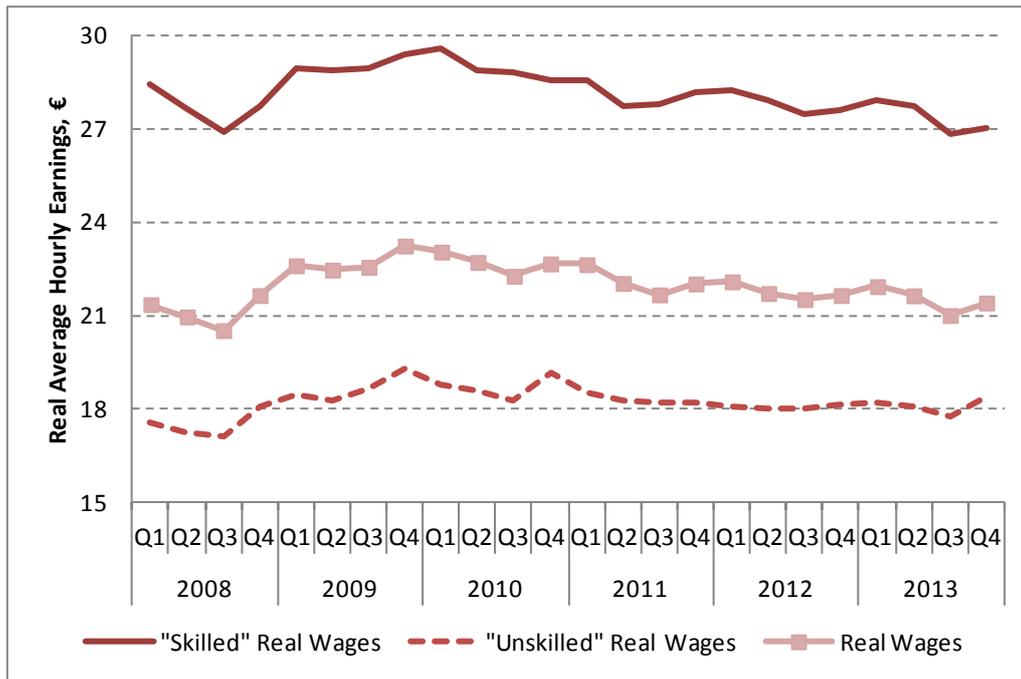
Registrations of new private vehicles for the first three months of 2014 were 27 per cent higher than the same period in 2013, with an increase of 51 per cent in new goods vehicles. While 2013 was weak in terms of new vehicles, with a 6 per cent fall, there was growth in the registration of second-hand private and goods vehicles. The growth in goods vehicles in 2013 amounted to 59 per cent and similar growth has been observed thus far in 2014. In January 2013, imports to Ireland from Japan totalled €80 million in value. This increased in January 2014 to €243 million, with imports of Japanese cars likely to have been a contributing factor.

### **Incomes**

The *Earnings, Hours and Employment Costs Survey* (EHECS) produced by the CSO shows that Average Weekly Earnings rose by 1.5 per cent quarter on quarter in Quarter 4 but fell by 0.6 per cent on an annual basis. Annual earnings rose in nine of 13 economic sectors, including Professional, scientific and technical, transportation and storage and construction. Sectors such as education and human health and social work registered earnings decreases. Private sector

earnings were unchanged in the year to the fourth quarter, while public sector earnings fell by 1.5 per cent. Average weekly paid hours increased by 0.3 per cent for the economy as a whole, reflecting a 1.6 per cent increase in hours worked in the public sector with no change in private sector hours. Average hourly earnings fell by 0.9 per cent over the year; from €21.89 in the fourth quarter of 2012 to €21.69 in the fourth quarter of 2013.

**FIGURE 7** Real Wages, “Skilled” Real Wages and “Unskilled” Real Wages



Source: Central Statistics Office, own calculations.

The *EHECS* provides nominal wage data which can be used in conjunction with measure of inflation to determine the path of real wages, as depicted in Figure 7. Using the 2011 CPI as a deflator, real wages fell annually in each year since 2009, with a fall of 1.1 per cent in 2013. Broadly grouping NACE sectors into “skilled” and “unskilled”, it appears that “skilled” real wage growth of -1.6 per cent in 2013 drove this decline. The *Quarterly National Household Survey* for the fourth quarter of 2013 showed annual employment growth of 3.3 per cent. As discussed in the last *Commentary*, the recent employment growth has been predominantly among those with third-level education. This may suggest that while many jobs being created are highly educated or “skilled”, the wage rates involved are lower than in the past. However, negative growth in real public-sector wages over this period is also a possible contributing factor.

Table 5 shows our forecasts for incomes and consumption. The continuing improvement in the labour market will contribute to falling transfers and to growth in total income received. As mentioned above, it is the growth in

employment rather than particularly strong growth in earnings which will drive the increase in income. Personal disposable income, which is income net of direct personal taxes, is forecast to grow by €1.2 billion to €91.2 billion in 2014, and further to €94.7 billion in 2015. The volume of consumption is thus forecast to grow by 1.5 per cent in 2014 and by 2 per cent in 2015, underscored by the improvement in sentiment and retail sales discussed above.

**TABLE 5** Personal Disposable Income

	2012	2013	2014	2015
	€bn	€bn	€bn	€bn
Agriculture etc.	2.9	3.0	3.0	3.1
Non-Agricultural Wages	68.4	69.3	70.9	73.6
Other Non-Agricultural Income	15.9	17.9	19.7	21.1
<b>Total Income Received</b>	<b>87.1</b>	<b>90.1</b>	<b>93.6</b>	<b>97.9</b>
Current Transfers	25.0	24.2	23.7	23.8
<b>Gross Personal Income</b>	<b>112.2</b>	<b>114.3</b>	<b>117.3</b>	<b>121.6</b>
Direct Personal Taxes	23.1	24.3	26.2	27.2
<b>Personal Disposable Income</b>	<b>89.1</b>	<b>90.0</b>	<b>91.2</b>	<b>94.4</b>
<b>Consumption</b>	<b>82.6</b>	<b>83.0</b>	<b>84.7</b>	<b>87.2</b>
Personal Savings	6.5	7.0	6.5	7.2
<b>Savings Ratio</b>	<b>7.3</b>	<b>7.8</b>	<b>7.1</b>	<b>7.6</b>
<b>Average Tax Rate (%)</b>	<b>20.6</b>	<b>21.2</b>	<b>22.2</b>	<b>22.3</b>

Source: Central Statistics Office and ESRI Forecasts.

# 6

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## Public Finances

Since the then government put in place a medium-term adjustment programme in November 2010 the public finances each year have come in ahead of target. This has happened in spite of the fact that the rate of growth in the economy in 2011 and 2012 was lower than had been anticipated at the time the plan was drawn up. The ability to outperform on the public finances, while the economy was underperforming, reflected the conservative nature of the public finance assumptions in the original plan and in subsequent Budgets. As a result of the outperformance, credibility has been rebuilt, both domestically and externally. Following on the crucial statement by ECB President Mario Draghi in the summer of 2012, that the ECB would “do whatever it takes” to preserve the euro, the gain in credibility of Irish policy has also seen the risk premium on Irish borrowing fall dramatically so that it is well below the levels anticipated even a year ago. This has had knock-on benefits, enabling the sovereign to successfully return to financial markets for funding purposes, following on the end of the EU/IMF programme, and also reducing the cost of the new borrowing. Thus, in planning for 2015 it would be wise to maintain this policy and to allow for unpleasant surprises along the way.

Our estimate for 2013 is that general government borrowing was around 7 per cent of GDP. Based on our forecast for the economy in 2014 and on the assumptions set out in the Budget for this year, we anticipate that government borrowing will come in slightly below target in 2014 at 4.5 per cent of GDP (see Table 6).

Our detailed estimates for revenue and expenditure for 2014 have not changed significantly since the *Winter 2013 Commentary*. The exchequer returns for the first two months of 2014 were significantly affected by changes in the national payment system, which meant that revenue, normally received within the month, was delayed until the beginning of the following month. However, for the latest month, March, the exchequer returns seem to be back to their normal pattern. They show revenue running significantly ahead of schedule, reflecting the pick-up in domestic demand. The rise in income tax receipts reflects the growth in employment and the higher than anticipated indirect tax receipts, inter alia, reflecting the big increase in car sales in January of this year. We have slightly reduced our forecast of corporation tax revenue for 2014, reflecting changing behaviour in the ICT sector and also the legacy effects of the patent

cliff on the profits of the pharmaceutical sector. If the progress seen in the March exchequer returns was to be maintained throughout the year our current forecast fall in borrowing could prove unduly conservative.

**TABLE 6** Public Finances

	2013	2014	2014	2015	2015
	€bn	€bn	% change	€bn	% change
<b>Income</b>					
Taxes on income incl. Social insurance	28.7	30.4	5.9	31.6	4.1
Taxes on expenditure	18.7	19.6	4.8	20.2	2.9
Gross trading and investment income	3.4	3.0	-11.5	3.2	7.7
Other Income	3.4	3.3	-0.9	3.8	15.0
Total receipts : Current	54.1	56.3	4.0	58.9	4.5
Total receipts : Capital	1.1	1.1	-0.9	1.3	12.6
<b>Total receipts - Current and Capital</b>	<b>55.3</b>	<b>57.4</b>	<b>3.9</b>	<b>60.1</b>	<b>4.7</b>
<b>Expenditure</b>					
Subsidies	1.3	1.3	-1.5	1.3	-3.8
National debt interest	7.6	7.8	3.6	8.0	1.8
Transfer payments	26.9	26.4	-2.0	26.4	0.2
Expenditure on Goods and Services	26.4	26.0	-1.3	26.0	0.0
Total expenditure - Current	62.1	61.5	-1.0	61.7	0.2
Total expenditure - Capital	4.7	3.6	-22.6	3.4	-4.7
<b>Total expenditure - Current and Capital</b>	<b>66.8</b>	<b>65.1</b>	<b>-2.5</b>	<b>65.1</b>	<b>0.0</b>
General Govt. Balance	-11.5	-7.7		-5.0	
As % of GDP	-7.0	-4.5		-2.8	

Source: Department of Finance and ESRI Forecasts.

This *Commentary* sets out our first forecast for 2015. With two exceptions, we have assumed indexation of the main tax and expenditure aggregates.<sup>11</sup>

The first exception involves an assumption that new water charges will bring in an additional €500 million from households and companies in 2015. Until Irish Water is set up as a fully capitalised self-financing entity these charges are included under government miscellaneous revenue in the national accounts. For national accounting purposes they are then netted off government consumption on the expenditure side of the national accounts. In turn, this is reflected in a fall in the price deflator for this aggregate.<sup>12</sup>

The second exception to the indexation rule is that we have assumed that, under the Haddington Road Agreement, there is no increase in public service pay rates in 2015, in spite of the fact that private sector pay rates are forecast to

<sup>11</sup> The details of the indexation assumptions are set out in an Appendix to the Special Article in this *Commentary* on the structural deficit.

<sup>12</sup> An increase in revenue serves to reduce the net expenditure – hence the negative effect on the price deflator.

rise by 1 per cent. We have also assumed a small volume fall in this aggregate, due to carryover effects from the cuts implemented this year.

The forecast for national debt interest in 2014 and 2015 is taken from our model of the dynamics of the national debt.

The indexation assumption is applied to government transfers so that all rates of transfer payment are assumed to be increased by 1 per cent in 2015. In estimating total expenditure on transfers we use our Demographic Model (Byrne, FitzGerald and Žnuderl, 2012) to take into account the effects of rising numbers of children and older people in increasing demand. However, the fall in the numbers unemployed in 2015 will more than offset these demographic pressures. The net result of these different assumptions is a forecast that transfers will increase by around 0.2 per cent in 2015.

In the case of tax revenue we assume that the average tax rate on all personal income remains unchanged in 2015, due to indexation of tax allowances and bands. We use the equations for indirect taxes from the *HERMES* model (Bergin *et al.*, 2013) to forecast VAT and excise taxes. The significant increase in new dwellings forecast to be constructed in 2015 will also add to revenue from VAT.

When taken together, these assumptions result in a forecast decline in general government borrowing to 2.8 per cent of GDP in 2015. This would be comfortably within the government's target, in spite of the fact that the *ex ante* cuts we have assumed in the Budget for 2015 are significantly less than the government had previously planned (€2 billion). This reflects the forecast improved performance of the economy in 2014 and 2015. The result of such an outturn would be that the gross debt to GDP ratio would fall to around 116 per cent in 2015.

## 7

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## The Labour Market

For the first quarter of 2014 the Irish labour market has continued to improve. Monthly reductions have continued for the *Live Register*, while current indicators point to a broad-based expansion across many sectors and regions<sup>13</sup>. Annual employment growth has been positive for the past five quarters, while unemployment has been reducing for the past six. The standardised unemployment rate has fallen by over three percentage points from its latest peak of 15.1 per cent in the first quarter of 2012. Employment grew by 2.4 per cent for the full year in 2013, representing the strongest annual growth rate since 2007.

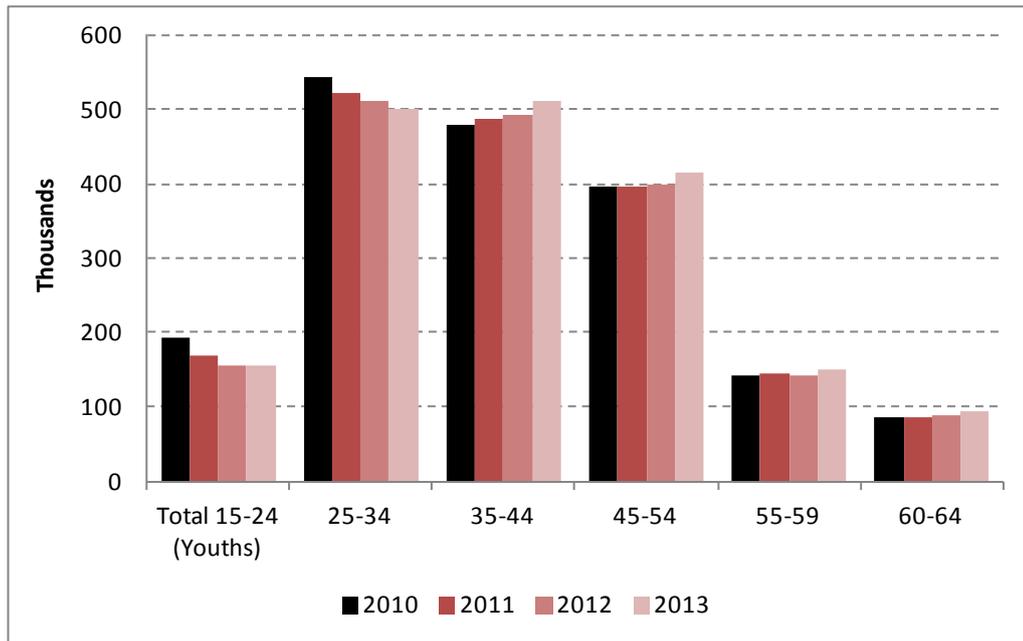
For the past three quarters, the *Quarterly National Household Survey* (QNHS) has shown a larger increase in employment than the fall in unemployment. The labour force participation rate has been rising over the same period. Encouragingly, the vast majority of employment gains have been in full-time positions, and the number of underemployed part-time workers has decreased. The gains to employment have taken place despite an ongoing reduction in public-sector employment. For the full year in 2013, public-sector employment fell by 1.3 per cent, more than compensated by 3.2 per cent growth in positions for the private sector.

Analysis of annual data by age shows that the unemployment rate fell across all groups of the working-age population in 2013, with the exception of those aged 60-64 (as shown in Figure 8). However, the reduction in the unemployment rate for those aged 15-34 is accompanied by falling employment and participation rates. Large net emigration and increased educational participation may be important factors for this cohort. As discussed in a Box 1 in the previous *Commentary*, the highest educational attainment of individuals who are employed and in the labour force has been steadily increasing since the onset of the crisis. Despite a modest increase of just 9,400 in the overall labour force for the full year in 2013, the number with at least a third-level qualification increased by approximately 40,000. Given the recent trend, this year will see as many people in the labour market with third-level education as with Leaving Cert/PLCs.

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<sup>13</sup> A recent report by IrishJobs.ie reports 5 per cent annual growth of job advertisements for Quarter 1, 2014: <http://www.irishjobs.ie/careeradvice/wp-content/uploads/IrishJobs.ie-Jobs-Index-Q1-2014.pdf>

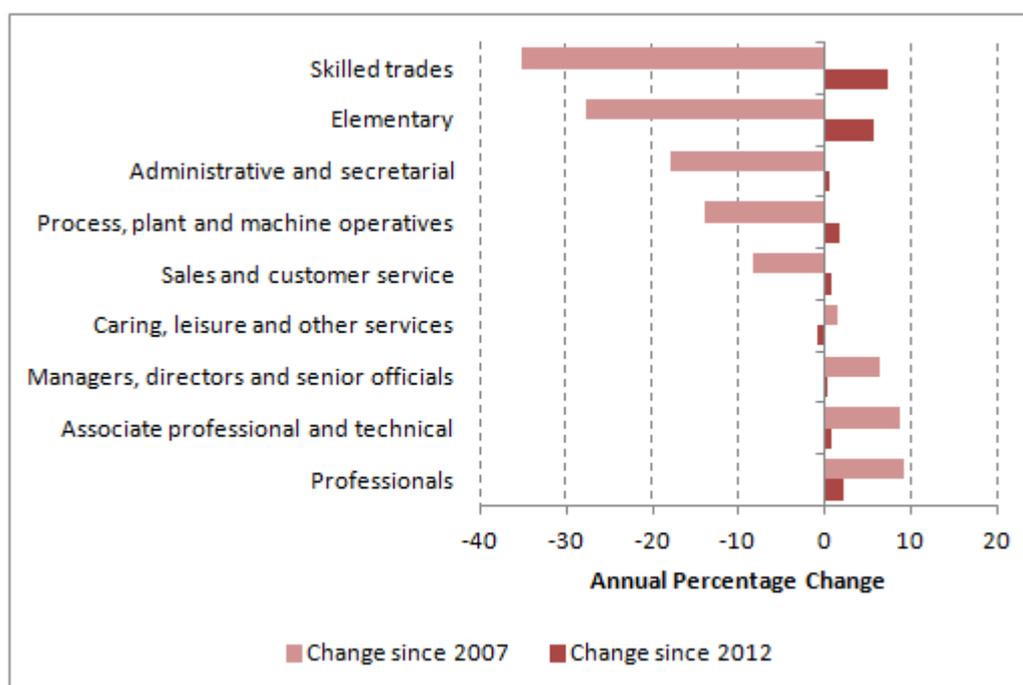
**FIGURE 8** Unemployment Rates by Age



Source: Central Statistics Office, Quarterly National Household Survey.

Employment grew in 10 out of 14 NACE sectors in 2013. However, as discussed in the Winter 2013 *Commentary*, a caveat applies to the statistics for employment by sector due to adjustments to the sample of the *QNHS*. These adjustments were completed in the fourth quarter of 2013. The large growth in agriculture, forestry and fishing is thought to be particularly affected by this adjustments process, implying that the employment growth in other sectors is likely to be higher than what has been officially published. Accommodation and food services, and professional, scientific and technical activities also showed large increases. Taken together, these sectors added 41,000 jobs for 2013 compared to 2012. The four NACE sectors with declines were public administration and defence, administrative and support service activities, transportation and storage, and financial, insurance and real estate activities. These sectors combined accounted for a loss of 10,000 positions.

The occupational groups that have been most severely affected since 2007 have begun to recover in terms of employment levels. As shown in Figure 9, the largest growth in employment in 2013 was in skilled trades, where there was 7.2 per cent growth in employment (19,300 jobs). However, there are still 155,600 fewer people employed in skilled trades than in 2007. Elementary occupations (i.e., low-skill requirement positions) increased by 11,100 last year (5.6 per cent) and professional employment grew by 7,600 (2.2 per cent). The only group that did not experience an increase in employment was caring, leisure and other services. Employment in this occupation group has seen little change since 2007.

**FIGURE 9** Employment by Broad Occupation Group

Source: Central Statistics Office, Quarterly National Household Survey.

Table 7 shows labour-market forecasts for this year and next year. Employment growth will accelerate in 2014 to 2.7 per cent, with similar growth expected in 2015. Industrial employment is expected to grow in response to an expansion in construction and building activity. Further gains to services employment will arise due to higher economic growth in Ireland's main trading partners, as discussed in Chapter 1. Unemployment will continue to decrease; the unemployment rate is expected to average 10.1 per cent in 2015, while the labour force and participation rate will rise. Net emigration will be lower at 18,000 this year, and while gross flows will remain large, this effect is expected to reduce for 2015.

**TABLE 7** Employment, Unemployment and Net Migration

	Annual Averages, 000s			
	2012	2013	2014	2015
Agriculture	86	107	117	117
Industry	336	343	354	372
of which: Construction	102	102	109	119
Services	1,415	1,431	1,462	1,496
Total at work	1,839	1,881	1,933	1,985
Employment Growth Rate, %	-0.5	2.4	2.7	2.7
Unemployed	316	282	249	222
Labour Force	2,154	2,163	2,182	2,207
Unemployment Rate, %	14.7	13.1	11.4	10.1
Participation Rate, %	59.9	60.2	60.5	60.7
Net Migration	-34.4	-33.1	-18.0	-1.0

Source: Central Statistics Office and ESRI Forecasts.

# 8

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## Imports and the Balance of Payments

### Imports

In 2013 there was a small volume increase in both imports of goods and of services. This was broadly in line with the pattern of growth in 2011 and 2012. However, there was some compositional change as imports of aircraft were quite high in 2012, whereas they were much lower in 2013. Nonetheless, a recovery in imports of other types of goods, partly driven by a return to growth in investment, saw a growth in the volume of imports of around 1 per cent. Tourism imports (spending abroad by Irish consumers) once again showed a small fall.

Trends in imports in the trade statistics have become hard to interpret, not only because of fluctuations in the imports of aircraft, but also due to another relatively new phenomenon affecting trade in pharmaceuticals. From time to time the trade statistics show a major import of pharmaceuticals in powder form. This powder is then pressed into tablets in Ireland and re-exported. This appears as both imports and then exports in the trade statistics. However, for national accounting purposes, because the powder remains the property of a foreign firm even while it is processed in Ireland, it is treated as never having entered the country – it is excluded from the national accounts measure of imports and exports. Instead the relatively small payment to the Irish firm for pressing the powdered pharmaceuticals into tablets is counted as a service export. These flows of pharmaceuticals have been quite large in some quarters over the last two years, distorting the normal pattern of activity in the trade statistics.

In 2014 we are anticipating a return to significant growth in domestic demand. A consequence of this will be an increase in the volume of imports. In particular, the forecast growth in investment will require significant imports. Looking at the latest months in the trade statistics, it would appear that there has been a significant pick-up in imports of machinery, consequent on higher levels of investment in machinery and equipment.

For 2014 we forecast a rise in the volume of imports of 3.6 per cent increasing to 3.9 per cent in 2015. This growth in imports will be spread across both goods and services. Tourism imports by contrast, will show only a small increase of

around 1 per cent a year, reflecting the relatively weak growth in consumer demand.

### Balance of Payments

As discussed earlier in the *Commentary*, the current account of the balance of payments showed significant improvement last year, rising from 5.5 per cent of GNP in 2012 to 7.9 per cent of GNP in 2013. The recovery, albeit mild, in the EU economy in 2014 should provide a more favourable environment for Irish exporters than that which prevailed in 2013. However, when taken together with the likely increase in imports triggered by the growth in domestic demand, the growth in the surplus in 2014 and 2015 should moderate. As shown in Table A5 in the Appendix, we expect the current account surplus to rise to 9.3 per cent of GNP in 2013 and to 9.9 per cent of GNP in 2015. If allowance is made for the earnings of redomiciled PLCs, this would still result in a surplus in 2015 of 5 per cent of GNP. While the trade data may be difficult to interpret, for reasons already explained, the increase in the current account surplus in 2013-15 shows how important is the stimulus to the economy from selling goods and services abroad.

Such a continuing current account surplus would exceed the threshold for an alert under the EU Macroeconomic Imbalances Procedure. In the case of Germany, the result of such an excess was that the EU Commission launched an inquiry under the excessive macro-economic imbalances rules. However, in the Irish case, if appropriate allowance is made for the effects of the redomiciled PLCs on the current account, Ireland would still be below the relevant threshold in 2015.

The improvement in the current account surplus in 2013 was fully accounted for by the drop in net factor income paid abroad. This reflected, inter alia, the effects of the patent cliff. In 2014 we expect a further small fall in this item. However, in 2015 it should begin to rise again, reflecting the rising profitability of the multinational sector located in Ireland.

As well as the flows of profits to and from companies in Ireland, net factor income also includes the outflow of national debt interest payments. However, as discussed elsewhere in this *Commentary*, following on a very big rise in this item in 2013 there is expected to be relatively little further increase in 2014 and 2015.

The large current account surplus forecast for 2014 and 2015 is not an equilibrium outcome for the economy. It reflects the massive continuing deleveraging by the Irish private sector. At some stage households and companies will go back to investing and consuming at a level commensurate with their income. This change in behaviour would see an escalation in the growth rate of domestic demand and of GNP. Provided the current account remained in surplus, such an increase in demand would be fully sustainable. This possible outcome was considered as part of the *Recovery* scenario in the *ESRI Medium-Term Review*, published in July 2013.

**TABLE 8** Imports of Goods and Services

	2012	2012	2013	2014	2015
	Value	Volume Change			
	€ billion	%	%	%	%
Merchandise	49.5	-2.9	1.0	4.0	4.0
Services					
Tourism	4.6	-7.1	-0.9	1.1	1.1
Other Services	82.5	2.2	1.0	3.5	4.0
Total Services	87.5	1.8	0.9	3.4	3.9
<b>Imports of Goods and Services</b>	<b>137.0</b>	<b>0.0</b>	<b>1.0</b>	<b>3.6</b>	<b>3.9</b>

Source: Central Statistics Office and ESRI Forecasts.

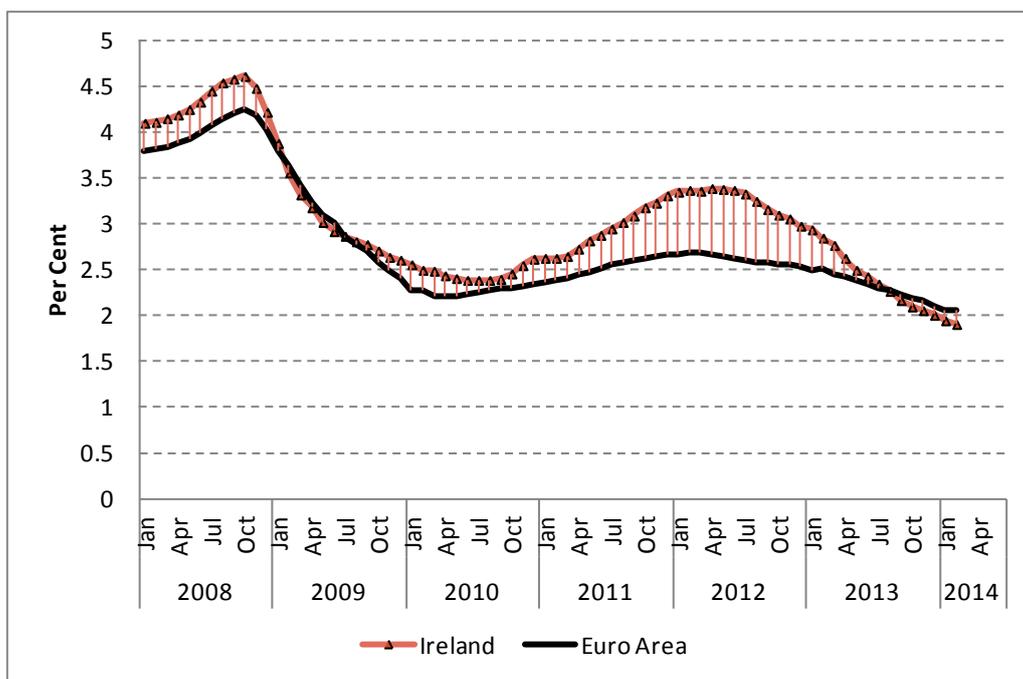
# 9

## Monetary Sector Developments

### Bank Funding

The continued scrutiny of the Irish banking sector was intensified in recent months with the publication of the preliminary asset quality review undertaken by the Central Bank of Ireland (CBI). Based on the first half of 2013, the review indicated that no additional capital was required, but each of the banks were obliged to make additional provisions for loan losses. These provisions were reflected in the banks’ annual returns for 2013. Irish credit institutions face ongoing difficulties in returning to profitability. In particular, the continuing presence of a large proportion of tracker mortgages poses a significant challenge. Although after-tax losses were still made for the full year, some improvement towards profitability is nonetheless evident. Progress towards bank profitability has been helped by the decline in interest rates offered to prospective deposit holders. Since August 2013, the weighted average term-deposit interest rate for Irish banks has fallen below that of the Euro Area, with the spread at minus 16 basis points by February (Figure 10). This trend remains supportive for improvement to banks’ net interest margins.

**FIGURE 10** Average Households and Non-Financial Corporation Deposit Rates\*

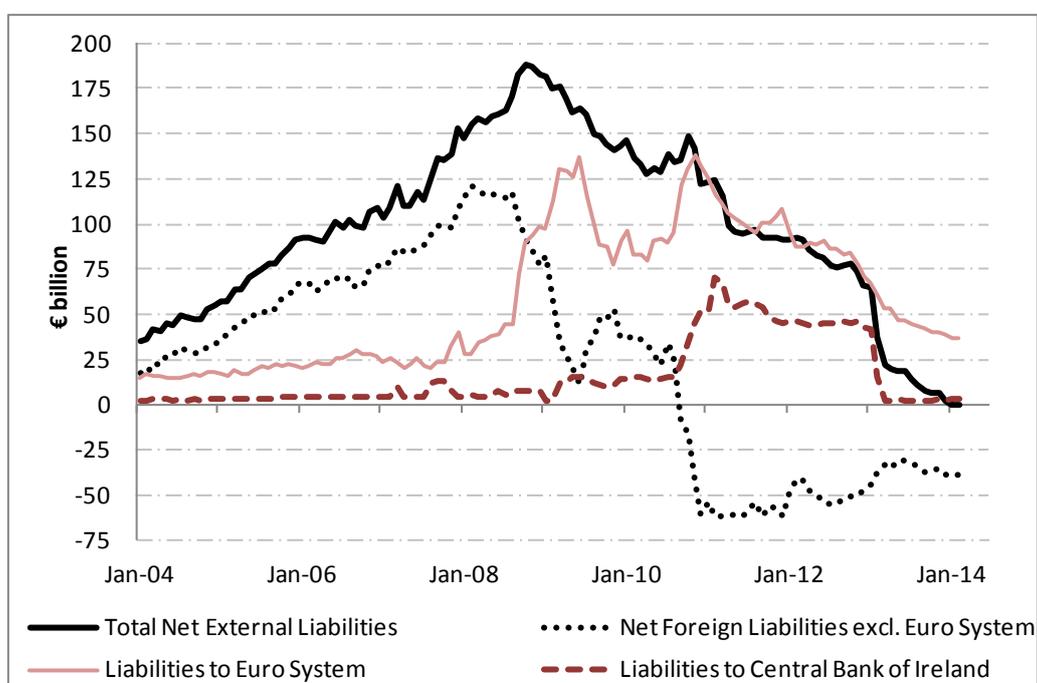


\* Average for deposits with outstanding maturity.

Source: European Central Bank, Bank Lending Survey 2014.

There have been important developments in recent months regarding plans for banking union in the Euro Area. Regulations forming the new Single Resolution Mechanism (SRM) have now been enacted for the resolution of banks that run into solvency difficulties. Initially, the SRM will entail individual-country bank levies funding a national reserve for domestic-bank resolution, which over time would be mutualised across countries in the Euro Area. Recent amendments require that 70 per cent of all funding set aside for Euro Area bank resolution be mutually pooled within three years, and 100 per cent within eight years. The European Central Bank (ECB) will carry out a stress test and asset quality review exercise on 128 large banks in the Euro Area. Results of this exercise will be available in October, ahead of the ECB assuming its new supervisory functions in November.

**FIGURE 11** Net Foreign Liabilities of the Banking System, January 2003 - February 2014



*Source:* Central Bank of Ireland, Money and Bank Statistics.

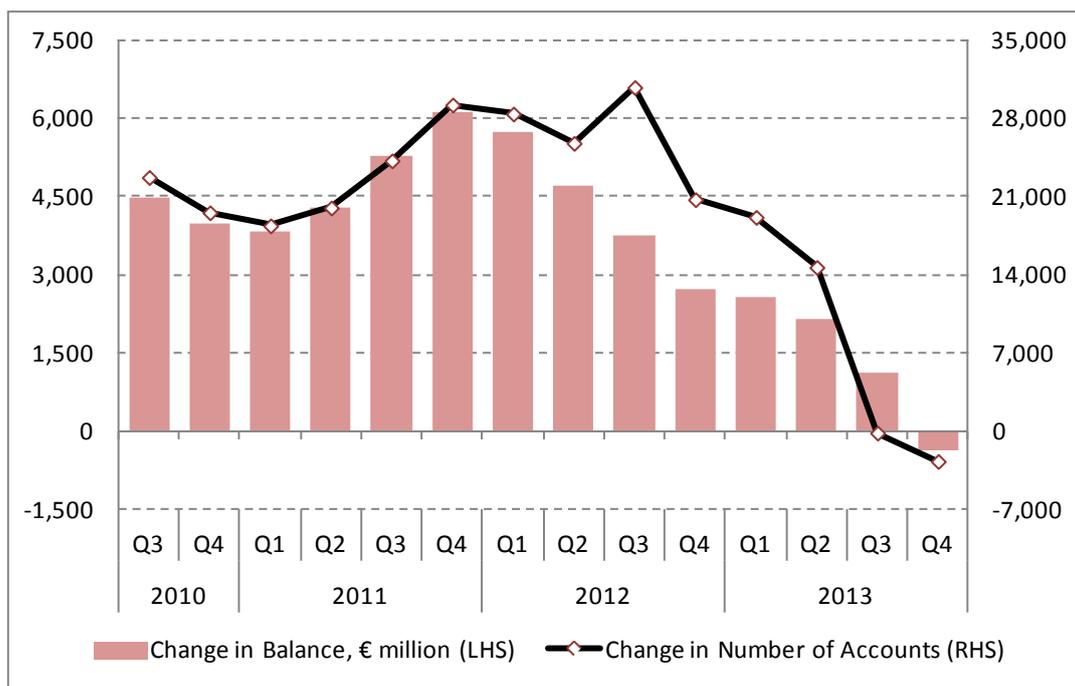
*Note:* Exceptional Liquidity Assistance relating to the promissory notes was withdrawn following the restructuring transaction in February 2013.

Further progress has been evident in the external funding position of the banking sector. As shown in Figure 11, the ongoing reduction in liabilities to the Euro System has resulted in total net external liabilities of the banking system returning to a balanced position. The reliance liabilities to the Euro System stand at €36.6 billion, which is the lowest amount since April 2008. This constitutes a 75.5 per cent fall from a peak of €138.2 billion in November 2010.

### Bank Lending

Lending to households and non-financial corporations (NFCs) has fallen further in recent months, continuing a long-established trend beginning in 2009. Adjusted for non-transaction related effects (such as revaluations and exchange-rate movements), the supply of new credit to the private sector was outpaced by loan repayments in February by an annualised €4.2 billion for households and €4.7 billion for NFCs. As households and NFCs repair balance sheets and service large outstanding loans, there is a danger that banks as currently configured will be unable to meet a growth in demand for credit that may be necessary for a firm economic recovery to occur (as discussed in the June 2013 *Medium-Term Review*). The withdrawal of competition in the lending sector has likely reinforced the falling demand for credit availability. This poses a challenge in an Irish context, as the real economy, particularly when compared with other countries, is heavily dependent on the traditional banking sector for finance.

**FIGURE 12** Annual Change in PDH Mortgage Arrears: Overall Balance and Accounts



Source: Central Bank of Ireland, Money and Bank Statistics.

In Figure 12, the most recent mortgage arrears data are shown, with the fourth quarter registering the first annual reduction in overall arrears balance and accounts since the series began. While a significant challenge remains for banks to minimise their eventual loss exposure to existing arrears, the annual fall is nonetheless encouraging.

**Box 1: Additional Data Needed to Understand Developments in the Economy**

by John FitzGerald

Normally, when the Central Statistics Office (CSO) publish the first set of annual accounts for the previous year there are some surprises but the basic picture of what happened the previous year is clearer as a result of the CSO data. However, this year, when the CSO published its first estimate of GDP and GNP for 2013 in March, the picture of events in 2013 portrayed in the national accounts was thoroughly opaque. It could legitimately be asked whether the figures were “really good news” or “really bad news”, as the answer was not clear from the figures presented. However, with the help of the CSO’s commentary it became clear that the results were good news and that, because of arcane accounting issues, attention should be focused on the figure for growth in GNP rather than GDP.

GNP, which provides the best measure of the standard of living (and output) of Irish residents, is estimated to have grown by 3.3 per cent in 2013. While it will probably be revised when a fuller range of data become available to the CSO in June (and again in subsequent years when the full range of historical data are available to the CSO), GNP shows an economy that is recovering quite vigorously. This conclusion is consistent with the data published simultaneously by the CSO on the current account of the balance of payments and, even more importantly, with the recently published figures for employment.

What the experience of the last two years shows is that the standard EU harmonised national accounts are not a satisfactory framework for understanding what is happening in the Irish economy. Instead we have to rely on extensive commentary by the CSO on the figures that are published. Without this assistance it would not be easy to detect the very big effects on the published figures of issues such as the “patent cliff”, redomiciled PLCs, and changes in ICT sector accounting. These problems with the standard national accounts presentation arise from the exceptional openness of the Irish economy and the related globalisation of the tradable sector of the EU economy. To better understand what is happening in Ireland today significant additional data are needed, supplementary to the national accounts, which would show the contribution of each sector of the economy to GNP. The November 2012 release by the CSO, showing the data on GVA broken down by multi-national firms and the rest of the economy, would provide a good conceptual framework for these additional data.

This lack of transparency poses particular problems for observers outside Ireland such as the EU Commission, the IMF, ratings agencies etc. The constant need to explain “special factors” affecting the Irish accounts could raise suspicion that

things are being covered up whereas, in fact, tremendous efforts are being made to be as transparent as possible within the confines of the harmonised EU accounts.

Because Ireland is a pioneer in this field, there is no great enthusiasm at the EU level to develop rapidly the necessary ancillary accounts which would be more transparent. For most other countries in the EU these problems of accounting are much smaller, because multinational firms play a more limited role in their economies. For this reason we will have to act as pioneers in this field if we are to produce a fully transparent set of accounts for Ireland that explain what is happening in different sectors of the economy.

# 10

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## General Assessment of the Irish Economy

It has long been recognised that GNP provides the best measure of the standard of living (and output) of Irish residents. While, for international comparisons, the focus is normally on GDP, because of the problems with the national accounts (see Box 1), in developing our forecast for the Irish economy in 2014 and 2015 we have adopted a top down approach and concentrated on the prospects for GNP. Instead of using the latest data on trade, industrial output etc. to build up a picture of GNP, we have relied on the current account of the balance of payments, the employment data, and indicators of what is happening to domestic demand as a basis for our forecast. We have then tried to “allocate” the aggregate level of economic activity across different sectors, using the published data and the CSO’s guidance on exceptional items.

In the case of the employment data we are also handicapped by the very unfortunate timing of the rebasing of the *Quarterly National Household Survey* (to take account of *Census 2011*). This means that, while we have reliable information on the trend in total employment, we do not have good information at this point on the trend in employment in individual sectors. This is the first time in sixty years that reliable sectoral employment figures are not available and, unfortunately, this is happening just when we are experiencing major problems with a range of other data. This makes it particularly urgent that the CSO produces consistent sectoral employment data for the last decade, taking account of the rebasing that it has recently undertaken.

A key feature of our forecast is the recovery in domestic demand. In our view this will be primarily due to an upturn in investment, including building and construction investment, both residential and non-residential. However, this recovery is at an early stage and so growth will only result in moderate increases in output levels (from a very low base). At the same time, there has been stronger growth in demand for dwellings. Having fallen for the past number of years, improving economic growth and continuing foreign direct investment flows have also resulted in an increase in investment in commercial construction.

On the basis of the information available to us today, it seems likely that the Irish economy will grow slightly more rapidly in 2014 than in 2013. The rest of

Europe seems to be returning slowly to growth, which should enhance the external environment for Irish exporters. In addition, as noted here, there are clear signs of a pick-up in domestic investment. Thus our forecast for growth in GNP in 2014 is 3.5 per cent. These positive factors are expected to continue into 2015 resulting in growth in GNP next year of 3.7 per cent.

In a Special Article in this *Commentary*, Duffy, Byrne and FitzGerald show that, under a variety of scenarios, population growth and higher headship rates will result in 20,000 or more new households being formed each year in Ireland. This is much greater than the current level of new residential building; hence there is significant upward pressure on prices and rents in areas of high demand. It seems likely that house price increases will encourage some increase in residential construction, although we are still forecasting only a limited increase in 2014 and 2015 because of a slow response of the building and construction sector. Thus, demand will tend to run ahead of supply for the immediate future, resulting in continued price growth.

As indicated in the Article, these demand pressures are likely to continue to grow beyond 2015, so that measures aimed at tackling supply constraints will be an important priority for the forthcoming strategy for the construction industry. Attention should be focused on any regulatory constraints that may impede a rapid supply response. The availability of finance for working capital for firms in the building and construction sector remains to be tested. Also, while mortgage finance has been available for the limited number of purchases of dwellings so far, it is not certain that it will be adequate to finance a significant expansion. New channels for funding may make some contribution to enhancing capital availability, but it will also be important that the banking system is able to respond to the changing economic environment. In the ESRI *Medium-Term Review* we considered a scenario where the recovery in the Irish economy was delayed, inert alia, because of a lack of availability of credit. If this were to happen it would be a significant policy failure delaying the return to sustainable growth.

In another Special Article accompanying this *Commentary*, Bergin and FitzGerald discuss the problems with the EU concept of the structural deficit and we suggest a better measure of this key concept. The structural deficit is the deficit that would remain when the economy is at its potential level of output; it is the deficit that must be eliminated by raising taxes or cutting expenditure. The problem with the EU methodology has long been understood; for example, the Irish Department of Finance commented on the unrealistic nature of the EU approach a decade ago. However, in the absence of an agreed superior measure of the structural deficit, the current methodology is still used by the EU to

estimate the stance of fiscal policy as a basis for recommendations on the appropriate fiscal stance in individual countries.

The *HERMES* model of the economy is used to develop an alternative more satisfactory measure of the structural deficit in the Article. The model is used to estimate the deficit that would remain when the economy has returned to long-term equilibrium. On this basis, using the *Medium-Term Review* “Recovery” scenario, we estimate that, with a neutral fiscal policy from 2015 onwards, the public finances would move into long-term surplus by 2017. In other words, all of the forecast deficit for 2014 is accounted for by the fact that the economy is below its long-term potential level of output. Economic recovery alone would be enough to eliminate the remaining deficit over the following three years.

However, this conclusion is based on the “Recovery” scenario proving correct. If Europe does not return to growth over the rest of the decade, or if policy mistakes made in Ireland delay a recovery, the conclusion on fiscal policy will be less benign. Thus it is too early to reach a firm conclusion on whether further cuts in public expenditure or increases in tax revenue will be needed in the Budget for 2015. It is only at the end of September, when more information will be available, that such a decision should be made. On the basis of the current forecast, the fiscal assumptions developed here, which are illustrative rather than normative, would ensure that Ireland would reach its target for reducing the deficit next year. The package of measures that we have assumed falls far short of the €2 billion in cuts originally pencilled in by the government for the 2015 Budget. This suggests that, after a long period of attrition, we are approaching the end of the very painful period of fiscal adjustment.

# Detailed Forecast Tables

**FORECAST TABLE A1** Exports of Goods and Services

	2012	% change in 2013		2013	% change in 2014		2014	% change in 2015		2015
	€ bn	Value	Volume	€ bn	Value	Volume	€ bn	Value	Volume	€ bn
Merchandise	85.8	-4.6	-3.9	81.9	0.8	0.0	82.5	2.8	1.9	84.8
Tourism	3.0	10.4	9.4	3.3	4.5	4.0	3.5	5.0	4.0	3.7
Other Services	87.3	4.6	3.7	91.3	8.5	7.0	99.1	7.2	5.7	106.2
Exports Of Goods and Services	176.1	0.2	0.1	176.6	4.9	3.7	185.1	5.2	4.0	194.7
FISM Adjustment	0.6			0.5			0.6			0.6
Adjusted Exports	176.7	0.2	0.1	177.1	4.9	3.7	185.7	5.2	4.0	195.3

**FORECAST TABLE A2** Investment

	2012	% change in 2013		2013	% change in 2014		2014	% change in 2015		2015
	€ bn	Value	Volume	€ bn	Value	Volume	€ bn	Value	Volume	€ bn
Housing	3.1	11.1	8.9	3.4	32.5	28.4	4.5	29.0	25.0	5.9
Other Building	5.6	16.9	16.2	6.5	13.6	8.5	7.4	15.7	10.3	8.6
Transfer Costs	0.3	2.5	1.2	0.4	18.7	12.0	0.4	18.7	12.0	0.5
Building and Construction	9.0	14.4	13.0	10.3	20.1	15.2	12.4	20.7	15.8	15.0
Machinery and Equipment	8.4	-3.8	-4.8	8.1	4.4	2.5	8.5	4.7	2.7	8.8
Total Investment	17.4	5.6	4.4	18.4	13.2	9.6	20.8	14.2	10.4	23.8

**FORECAST TABLE A3** Personal Income

	2012	% change in 2013		2013	% change in 2014			2014	% change in 2015			2015
	€ bn	%	€bn	€ bn	%	€bn	€ bn	%	€bn	€ bn		
Agriculture, etc	2.9	3.0	0.1	3.0	2.5	0.1	3.0	2.5	0.1	3.1		
Non-Agricultural Wages	68.4	1.3	0.9	69.3	2.3	1.6	70.9	3.9	2.8	73.6		
Other Non-Agricultural Income	15.9	12.6	2.0	17.9	10.3	1.8	19.7	7.2	1.4	21.1		
Total Income Received	87.1	3.4	3.0	90.1	3.9	3.5	93.6	4.5	4.2	97.9		
Current Transfers	25.0	-3.2	-0.8	24.2	-2.2	-0.5	23.7	0.2	0.1	23.8		
Gross Personal Income	112.2	1.9	2.2	114.3	2.6	3.0	117.3	3.7	4.3	121.6		
Direct Personal Taxes	23.1	5.4	1.3	24.3	7.7	1.9	26.2	3.9	1.0	27.2		
Personal Disposable Income	89.1	1.0	0.9	90.0	1.2	1.1	91.2	3.6	3.3	94.4		
Consumption	82.6	0.5	0.4	83.0	2.0	1.7	84.7	3.0	2.6	87.2		
Personal Savings	6.5	8.1	0.5	7.0	-7.7	-0.5	6.5	11.3	0.7	7.2		
Savings Ratio	7.3			7.8			7.1			7.6		
Average Personal Tax Rate	20.6			21.2			22.2			22.3		

**FORECAST TABLE A4** Imports of Goods and Services

	2011	% change in 2012		2012	% change in 2013		2013	% change in 2014		2014
	€ bn	Value	Volume	€ bn	Value	Volume	€ bn	Value	Volume	€ bn
Merchandise	49.5	0.4	1.0	49.7	4.7	4.0	52.1	4.7	4.0	54.5
Tourism	4.6	-0.1	-0.9	4.6	3.6	1.1	4.8	4.6	1.1	5.0
Other Services	82.5	1.8	1.0	84.0	4.5	3.5	87.8	5.0	4.0	92.2
Imports of Goods and Services	136.6	1.3	0.0	138.3	4.6	0.0	144.6	4.9	0.0	151.7
FISM Adjustment	0.4			0.4			0.4			0.4
Adjusted Imports	137.0	1.3	1.0	138.7	4.6	3.6	145.1	4.9	3.9	152.2

**FORECAST TABLE A5** Balance of Payments

	2012	2013	2014	2015
	€ bn	€ bn	€ bn	€ bn
Exports of Goods and Services	176.1	176.6	185.1	194.7
Imports of Goods and Services	136.6	138.3	144.6	151.7
Net Factor Payments	-31.1	-26.0	-25.7	-26.5
Net Transfers	-1.2	-1.4	-1.4	-1.4
Balance on Current Account	7.3	10.9	13.3	15.0
As a % of GNP	5.5	7.9	9.3	9.9

**FORECAST TABLE A6** Employment and Unemployment, Annual Average

	2012	2013	2014	2014
	000s	000s	000s	000s
Agriculture	86	107	117	117
Industry	336	343	354	372
Of which: Construction	102	102	109	119
Services	1,415	1,431	1,462	1,496
Total at Work	1,839	1,881	1,933	1,985
Unemployed	316	282	249	222
Labour Force	2,154	2,163	2,182	2,207
Unemployment Rate, %	14.7	13.1	11.4	10.1

# Special Articles



# Alternative Scenarios for New Household Formation in Ireland<sup>1</sup>

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\* David Duffy, David Byrne, John Fitzgerald

## Introduction

Over the period 1995 to 2007 it is estimated that the Irish economy, as measured by real GDP, more than doubled. Accompanying the economic boom over the period 1997 to 2007 the Irish housing market grew significantly. This growth, apart from a short interruption in 2001, is reflected not only in house prices but also in other indicators which show a huge expansion of activity levels within the market. The rapid growth in the housing market was driven by strong economic growth, accompanied by employment growth and increases in disposable income. Demographic trends also contributed to housing demand, with strong population growth, particularly in the main household formation age groups, a fall in average household size and a large net inflow of returning emigrants and immigrants, (OECD, 2006). Despite rapid price growth the demand for dwellings remained high. Although houses have been highly priced to purchase, homeowners benefited due to low interest rates and high capital gains.

The current situation is now very different to the experience of the boom, with housing market activity adversely affected by income cuts, higher taxation and higher unemployment. Despite the severe impact of the housing market crash and Great Recession in Ireland, data from *Census 2011* show that the number of households in the country increased by 187,112 from the previous Census. Much of this new household formation was among households which rent, of which there was an increase of 152,000. The distribution of household types and patterns of household formation have changed greatly over time in Ireland, so that Ireland today more closely resembles the behaviour observed internationally, although headship rates are still lower than those experienced in many other economies. This paper seeks to provide some insights into these changes.

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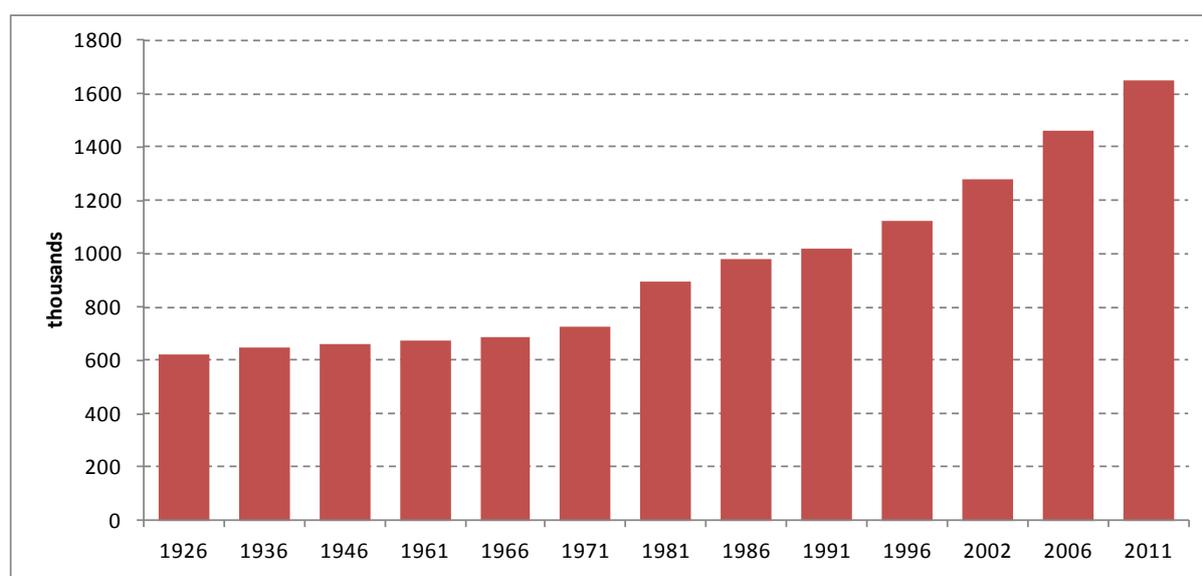
<sup>1</sup> This paper was prepared as part of a research programme funded jointly by the National Asset Management Agency (NAMA) and the Irish Banking Federation (IBF).

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## Demographics and Household Formation

As shown in Figure 1, the number of private households in Ireland at the time of *Census 1966* was just over 687,000. Around the time of the start of the Celtic Tiger phase of recent economic growth, the number of households had increased to 1.1 million (*Census 1996*). The number of private households in Ireland grew from 1.12 million in 1996 to 1.65 million in 2011. This includes an increase of 12.6 per cent, or 187,000 households, between *Census 2006* and *2011*.

**FIGURE 1** Number of Private Households, 1926-2011



Source: Central Statistics Office.

## Population Trends

Before looking at the changes in household composition we first examine changes in the population structure. Table 1 shows the population level and the change in population from the four most recent Censuses. Between 2006 and 2011 the population grew by 8.2 per cent, an annual average increase of 1.6 per cent.

A comparison of the population in 2011 with 2006 shows that the number of people in Ireland increased across all age groups, except those aged 15-29 years which showed a slight decline. This decrease reflects, in part, the decline in births in the late 1980s and early 1990s, as well as the impact of migration.

The data also point to increasing longevity. The share of the population aged over 65 years increased by 14.4 per cent between 2006 and 2011. This increase among older age groups is particularly evident in the male population, which grew by

17.5 per cent, compared to growth of 12 per cent in the female population. These changes likely reflect the impact of improving health on the longevity of the Irish male population, which is traditionally shorter lived than the female population.

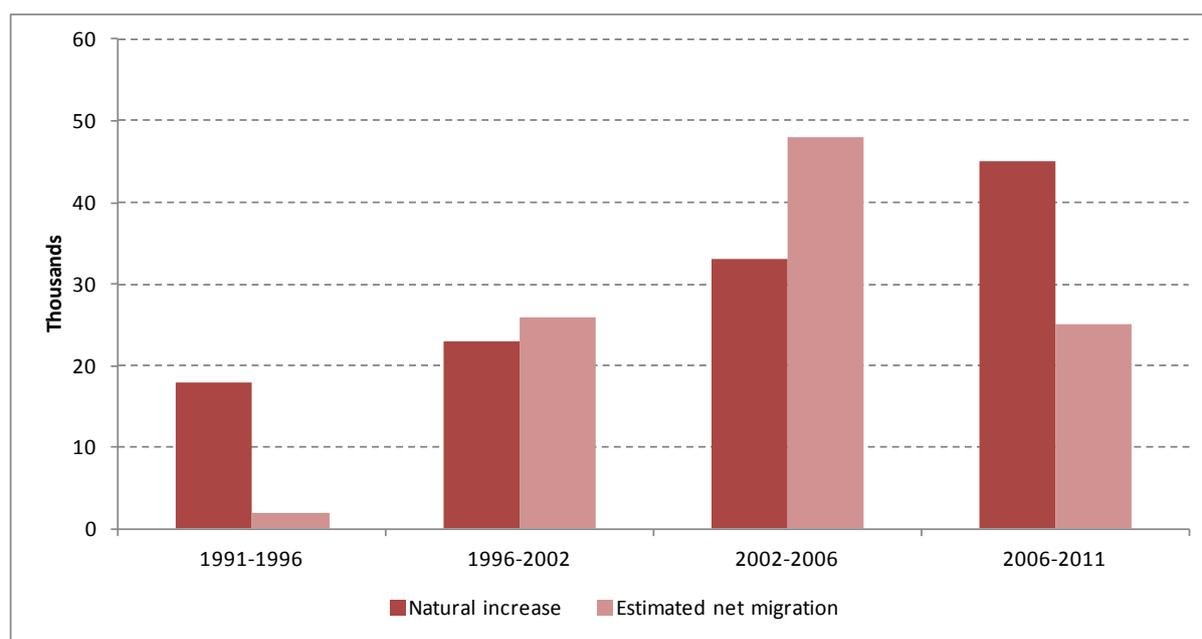
**TABLE 1** Population by Age Group, 1996-2011

Age Group	Population, '000s				% Change from Previous Census			
	1996	2002	2006	2011	1996	2002	2006	2011
<25	1,492.3	1,469.0	1,497.2	1,559.8	-3.2	-1.6	1.9	4.2
25-29	259.0	312.7	373.1	361.1	5.2	20.7	19.3	-3.2
30 - 34	260.9	304.7	349.4	393.9	4.7	16.8	14.7	12.8
35 - 39	255.7	290.9	322.1	364.3	7.5	13.8	10.7	13.1
40 - 44	240.4	272.0	301.3	330.8	6.5	13.1	10.8	9.8
45 - 49	225.4	249.6	274.7	305.2	20.0	10.7	10.1	11.1
50 - 54	186.6	230.8	247.1	274.4	19.0	23.7	7.0	11.1
55 - 59	153.8	197.3	225.3	244.5	7.9	28.3	14.2	8.5
60 - 64	137.9	154.3	181.7	218.8	2.5	11.8	17.8	20.4
65+	413.9	436.0	467.9	535.4	2.7	5.3	7.3	14.4
All Ages	3,626.1	3,917.2	4,239.8	4,588.3	2.8	8.0	8.2	8.2

Source: Central Statistics Office, *Census of Population*.

### Factors Affecting Population Change

The natural rate of population change, the difference in the birth rate and death rate, and migration are the drivers of population change. The natural increase in the population (births less deaths) reached an annual average of 45,000 in the period 2006-2011. The impact of net migration is also evident from Figure 2; there was a net annual average inflow of 48,000 persons between the Census in 2002 and in 2006. The inflow fell back to an annual average of 25,000 in the most recent intercensal period. Data from the CSO's annual *Population and Migration Estimates* show that net migration flows have been negative since 2011, reducing the rate of population growth.

**FIGURE 2** Components of Population Change

Source: Central Statistics Office, Census of Population.

### Marital Status and Living Arrangements

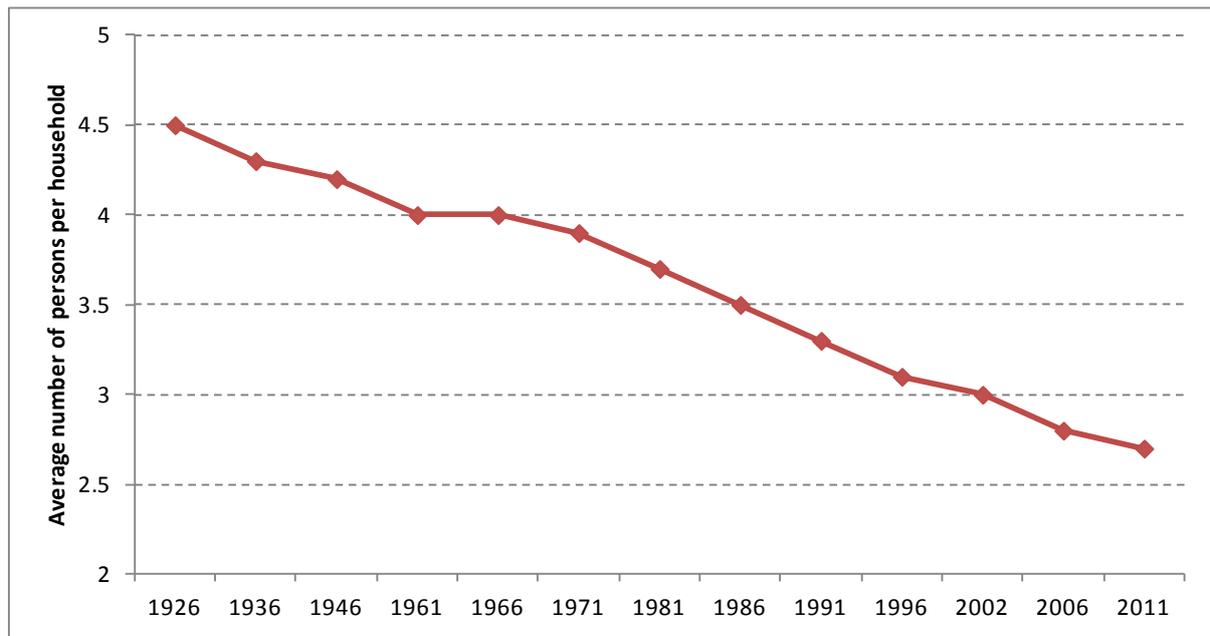
New households may form in a variety of structures and for a number of reasons. This process is closely linked to an individual's age and life stage, for instance setting up or joining a household independent of the parental household. This may involve living alone, cohabiting with a partner or sharing a residence with a number of individuals. Larger households may also split, forming a number of smaller ones. This may happen, for instance, in the case of marriage break-up or separation. Trends in the size and structure of households in Ireland thus affect the total number of households in existence and the type and size of housing appropriate to match demand. Ireland has typically seen lower household formation among young people than is seen in the UK and the rest of Northern and Western Europe (Mandic, 2008). The number of occupants per household has also traditionally been large in Ireland relative to its neighbours, particularly because of the higher birth rate and younger age of the population.<sup>2</sup>

The proportion of the population aged 15 years and over whose marital status is classed as single has fallen to 41.7 per cent in *Census 2011*, from 43.1 per cent in 2006. The married/cohabiting proportion increased to 47.3 per cent from 46.1 per cent in 2006, while the proportion separated or divorced grew from 4.9 per cent in 2006 to 5.7 per cent in 2011.

<sup>2</sup> In older populations children are more likely to have grown-up and left home leaving more "empty nest" households.

The number of people living in private households grew to 4.5 million in 2011, an increase of 9.4 per cent on *Census 2006*. The average number of persons per household at the time of *Census 2011* was 2.73 persons, falling from 2.81 in 2006. This represents a continuation of a long-run trend of decreasing household sizes in Ireland, as depicted in Figure 3.

**FIGURE 3** Average Number of Persons per Household, 1926-2011



Source: Central Statistics Office.

Although average household size in Ireland has fallen it remains above that of many other economies. Office for National Statistics data for the United Kingdom show that average household size fell from 3.01 persons in 1961 to 2.36 persons in 2011. For the United States, the average number of persons per household has fallen from 3.29 persons in 1960 to 2.58 persons in 2010. Data for Germany show a lower number of persons per household, 2.27 in 1991, declining to 2.02 persons by 2011, (Federal Statistics Office, 2013).

Couples with children remain the most common household type in Ireland, numbering 608,329 in 2011. Their share in all households has fallen from 44.5 to 36.8 per cent between the 1996 and 2011 Censuses, however. Couples without children increased in proportion from 18.9 to 20.2 per cent over the same period, while one-person households have also risen from 21.5 to 23.7 per cent.

### Household Composition – International Comparison

We use data from the national statistics institutes of the United Kingdom, France and Germany to compare their distributions of household types with that of Ireland. The types of household considered are those consisting of one person, couples (with or without children), single-parent families and “other types”, typically unrelated persons or multiple families living together in one household.

**TABLE 2** Household Type by Country, Per Cent of Households

Type of Household	Ireland	UK	France	Germany
Couple	57.0	56.1	52.7	50.6
with children	36.8	28.4	26.8	21.9
without children	20.2	27.7	25.9	28.7
Single-parent family	12.0	10.5	8.3	6.5
Other Households:	31.0	33.5	39.0	42.8
Of which:				
Single person	23.7	29.0	33.8	
Other types	7.3	4.4	5.2	
Of which:				
Unrelated persons	6.2	3.5		
Multi-family	1.1	1.0		
Total	100.0	100.0	100.0	100.0

Source: CSO, ONS, INSEE, Destatis, own calculations.

Table 2 describes the distribution of household types across these countries. It is notable that Ireland has the highest proportion of married/cohabiting couples. The result is even more striking among those couples with children. At 36.8 per cent, the proportion of couples with children in Ireland exceeds those of the UK, the country with the second-greatest proportion, by 7.4 percentage points. Ireland also has the greatest proportion of single-parent families, while having the lowest proportion of couples without children. These results are likely attributable to the differing age structures and trends in the Total Fertility Rate between these countries.<sup>3</sup> Ireland has both a younger population and a higher birth rate than the other countries examined.

There exist methodological differences between the countries in the reporting of single person household and “other types” of households. Destatis (Germany) does not report “other” households, such as those consisting of multiple families

<sup>3</sup> The proportion of single-parent families may also be affected by social welfare rules which provide for assistance to single-parent families, assistance which might not be paid to couples.

or non-family households such as those made up of unrelated persons, instead distributing these households to the “single person”. The CSO (Ireland) and ONS (UK) report “other types” of households, broken down by their constituent parts. INSEE (France) reports the aggregate proportion of “other” households.

The proportion of single-person households is particularly elevated in Germany due to the measurement methodology, although it is also likely to be high given that it has the greatest proportions of widowed or divorced individuals of these countries. The total proportion of other households (excluding couples and lone parents) is also higher in Germany than in Ireland. Comparing Ireland, the UK and France, we see that Ireland has the lowest proportion of single-person households. Contributing to this is the smaller proportions of widowed individuals and of divorced/separated individuals, reflecting again Ireland’s younger population and the relatively recent legalisation of divorce. The smaller proportion of single-person households matches with other data which suggest that the average size of a household in Ireland is higher than in the UK, for instance. Ireland also has the highest observed proportion of “other types” of households. The difference with respect to the United Kingdom is mainly in the proportion of households made up of unrelated persons, with the proportion of multi-family households similar between the two countries. This higher share in Ireland of households of unrelated persons sharing the same dwelling may reflect a higher cost of establishing an independent household.

### Headship Rates

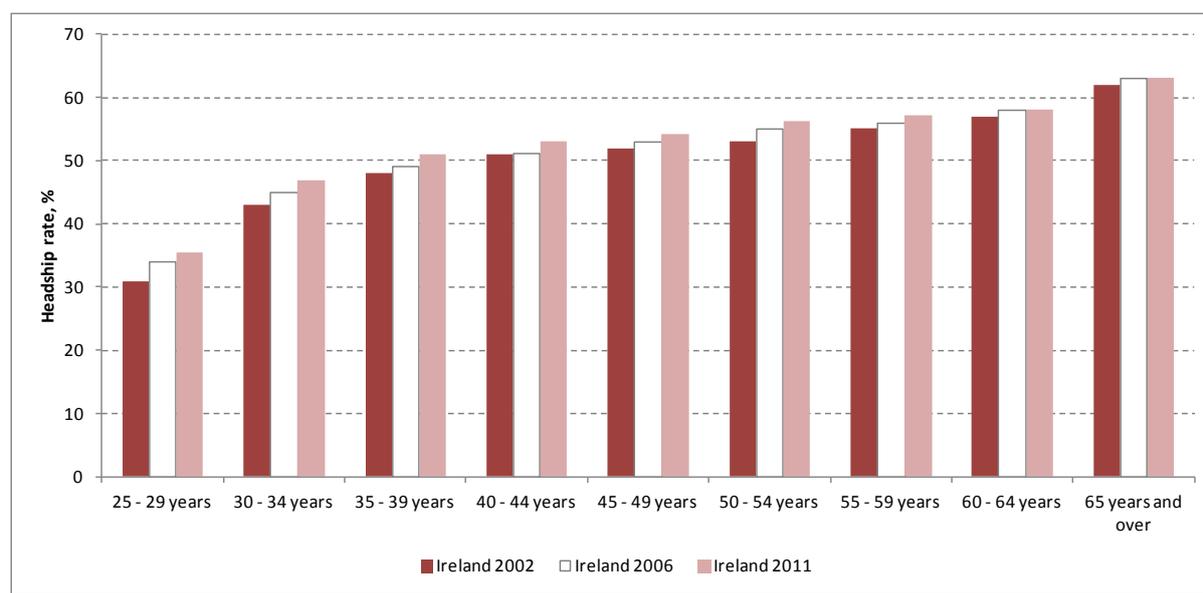
The headship rate provides one measure of the rate of household formation. The headship rate is the proportion of individuals in an age cohort that list themselves as “head of household” or “principal reference person” in the Census or in the *Quarterly National Household Survey (QNHS)*. Each household provides one reference person, thus an increase in the headship rate reveals an increase in the number of households. In recent years Ireland has seen increases in headship rates and household formation at earlier ages. The headship rate for the total population rose from 29 per cent in 1991 to 36 per cent in 2011.

Appendix Table A1 shows the headship rate for Ireland by gender and age group from *Census 1991* to *Census 2011*. The data point to increasing headship rates, particularly in the younger age groups. The data show a particularly strong increase in the female headship rate. While this may in part be driven by an increasing proportion of females being responsible for completing the Census questionnaire for the household, it is also due to an increasing number of households being formed by females.

Using Census data may introduce an element of response bias along gender lines. The process by which a household decides on the reference person may not be random; culture or tradition may play an important role in the decision. Patterns in the formation of partnerships are also likely to be important. As these factors may vary from country to country, comparison across countries requires care. In comparing headship rates across countries and time, we thus use the headship rates for the total population, male and female, to avoid issues of gender bias.

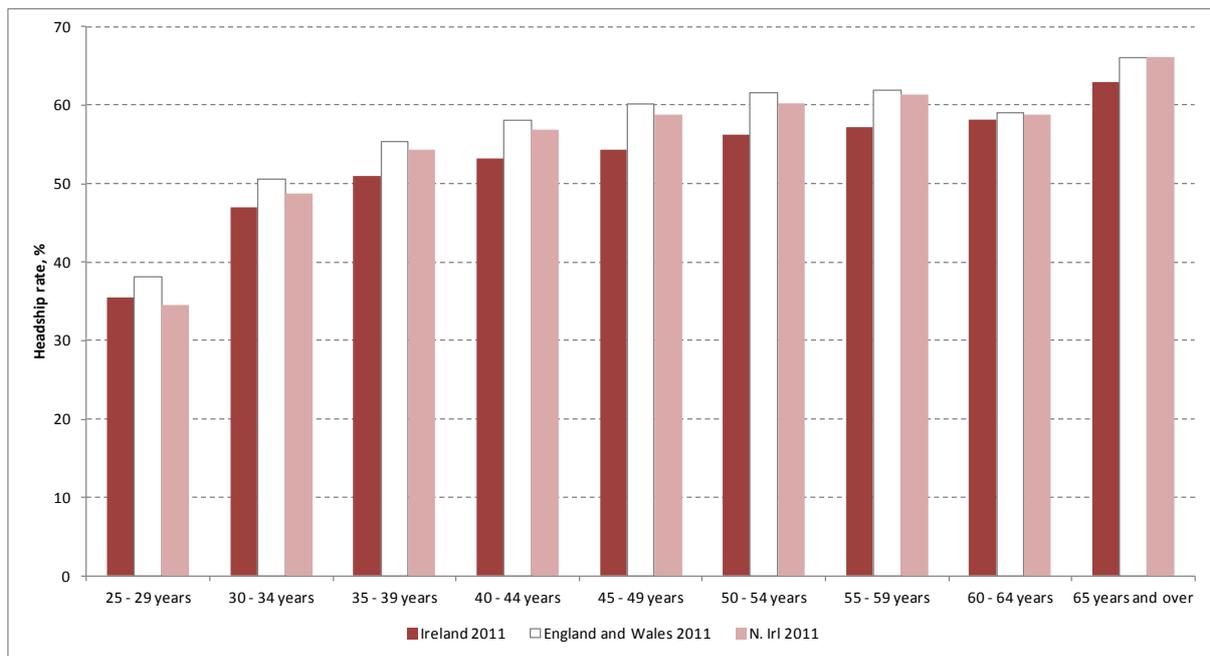
Figure 4 shows the increase in headship rates in Ireland across age groups between the *Censuses 2002, 2006 and 2011*. Ireland has traditionally had lower headship rates than the United Kingdom. This remains true in 2011, as depicted in Figure 5. Across all age-groups, however, headship rates in Ireland grew closer to those of the UK over the period. This is largely down to growth in the Irish rates, although Northern Ireland, England and Wales showed falls in the headship rates of their younger cohorts (less than 39 in age) over the decade. The change in behaviour over time and across countries may reflect differences in culture, differences in the relative cost of establishing an independent household, and different patterns of attendance by students at third level colleges.<sup>4</sup>

**FIGURE 4** Headship Rates, Ireland 2002-2011



Source: Own Estimates based on data from Central Statistics Office, Census of Population.

<sup>4</sup> In the UK it is more normal for students to live in university accommodation whereas in Ireland students, wherever possible, tend to live at home with their parents.

**FIGURE 5** Headship Rates, Ireland, Northern Ireland, England and Wales, 2011

Source: CSO, Northern Ireland Statistical and Research Agency and Office for National Statistics.

We also examine data from the French *Census 2010* to compare French household formation with that of Ireland. We use data on the population and on household reference persons by age and sex to derive headship rates which are comparable to Irish data. These headship rates are reported in Table 3, aggregated to the total population to avoid the gender bias problem mentioned above. This bias exists in all age groups in the French data. For example, among those aged 25 to 39, the headship rates are 83 per cent for males and 22 per cent for females. By contrast, the Irish rates are 47 per cent and 42 per cent for men and women respectively.

Table 3 shows that France has greater headship rates than Ireland across all age groups. Equivalently, this means that there is a greater proportion of independent households in France than in Ireland. The difference between the two countries is particularly striking among those aged under 39. For those aged 15 to 24, the French headship rate for the total population is 17 per cent; eight percentage points higher than in Ireland. Among those aged 25 to 39 the difference in favour of France also stands at eight percentage points. As with the UK, this difference in behaviour may reflect differences in relative cost, differences in preferences or differences in the pattern of attendance at third level institutions.

**TABLE 3** Headship Rate for the Total Population, Ireland and France.

Age Group	Country		
	Ireland	France	Difference
15-24	0.10	0.17	-0.08
25-39	0.45	0.52	-0.08
40-54	0.54	0.59	-0.05
55-64	0.58	0.61	-0.03
65+	0.63	0.66	-0.03

Source: CSO and INSEE, own calculations.

These data show that while headship rates in Ireland have grown, they still lie below those observed in the other countries considered in this note.

### Future Headship Rates

The analysis above outlines Ireland's increasing headship rates. However, until further research into the factors driving these changes is complete it is difficult to forecast how headship rates will change over the rest of the decade. Instead, using the ESRI's *Demographic Model* we consider a series of scenarios for the future. These scenarios consider how the number of households might be affected by a range of alternative assumptions on headship rates ranging from unchanging headship rates compared to 2011 up to full convergence of Irish behaviour to that currently observed in the other countries considered.

There are a number of alternative approaches, which allows us to test the sensitivity of our estimates. In each case the assumptions on headship rates are applied to the ESRI demographic model and estimates of the number of households are made out to 2030. The model is calibrated to the *Recovery Scenario* in FitzGerald and Kearney, 2013.

In the "Recovery" scenario, the EU economy is assumed to return to a reasonable rate of growth over the rest of the decade. It is also assumed that the continuing problems in the Irish financial sector are tackled effectively. Under these circumstances, the export sector of the economy would see its markets grow, resulting in increases in output and employment. In turn, growth in foreign demand would help produce a turnaround in domestic demand. As firms increase their sales and their profitability they would need to invest to continue growing. With rising real personal incomes and growth in employment, consumption would also begin growing again. Overall, this scenario would see growth in GNP of around 3.5 per cent a year in the second half of the decade. While the economy would not be likely to reach full employment by 2020, the

level of unemployment could be more than halved to around 6 per cent. The recovery itself would play a major role in restoring the public finances to a sustainable path. This would allow a shift to a more neutral fiscal stance from 2015 onwards that would be much more supportive of growth.

The forecast of the number of independent households is calculated as the product of the population forecasts and headship rate forecasts, again by age and by sex. Four different approaches are used to project future household formation:

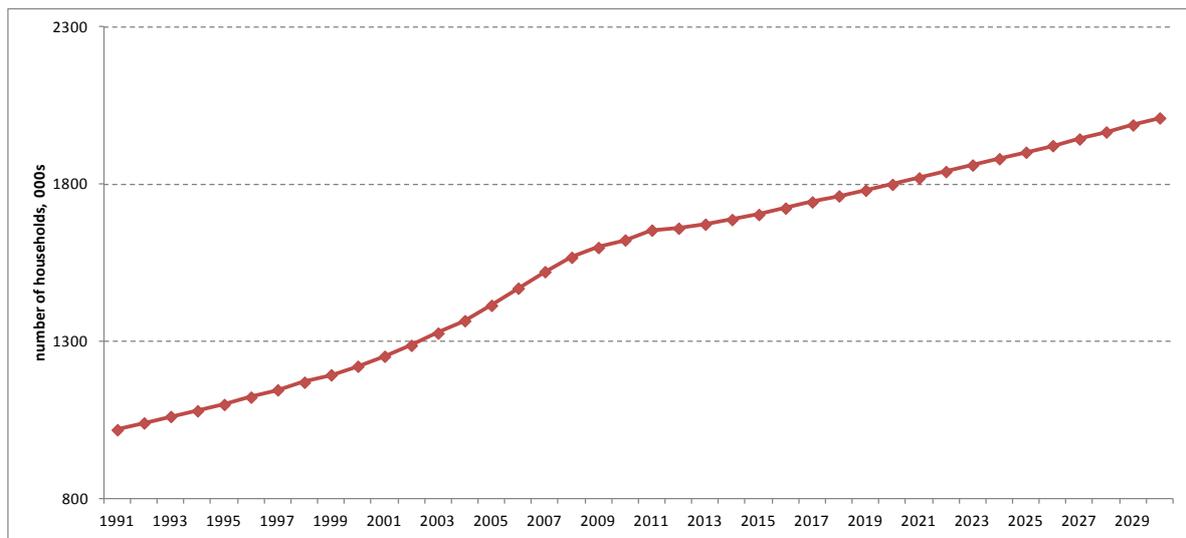
- The first approach is to assume unchanging headship rates from 2011.
- The second approach which we employ follows the methodology outlined in the United Kingdom's Department for Communities and Local Government (2013). This methodology fits an exponential trend between the headship data from a pair of Census years. This trend is then used to project forward the rates, which are produced by sex and five-year cohort. We first use the headship data of *Censuses 2002* and *2011* to estimate the trend.
- A third scenario uses *Censuses 2006* and *2011* for comparison. Using the pre- and post-boom Censuses allows us to construct scenarios on future headship based on the trend over a longer period, avoiding short-term impacts of Ireland's property bubble.
- The fourth approach assumes that Irish headship rates converge to those of the UK by 2030.

### **Scenario 1: Unchanging Headship Rates**

Although headship rates in Ireland have been rising, for our base scenario we assume that headship rates remain at their 2011 level. Although this is a simplifying assumption it provides a base against which the alternative scenarios can be compared.

If there is no change in headship rates the number of households increases to just over 2 million by 2030. Thus, in the absence of any change in headship, population change would result in annual average new household formation of 19,400 households per annum. By 2030, the number of households would be 356,000 higher than in 2011.

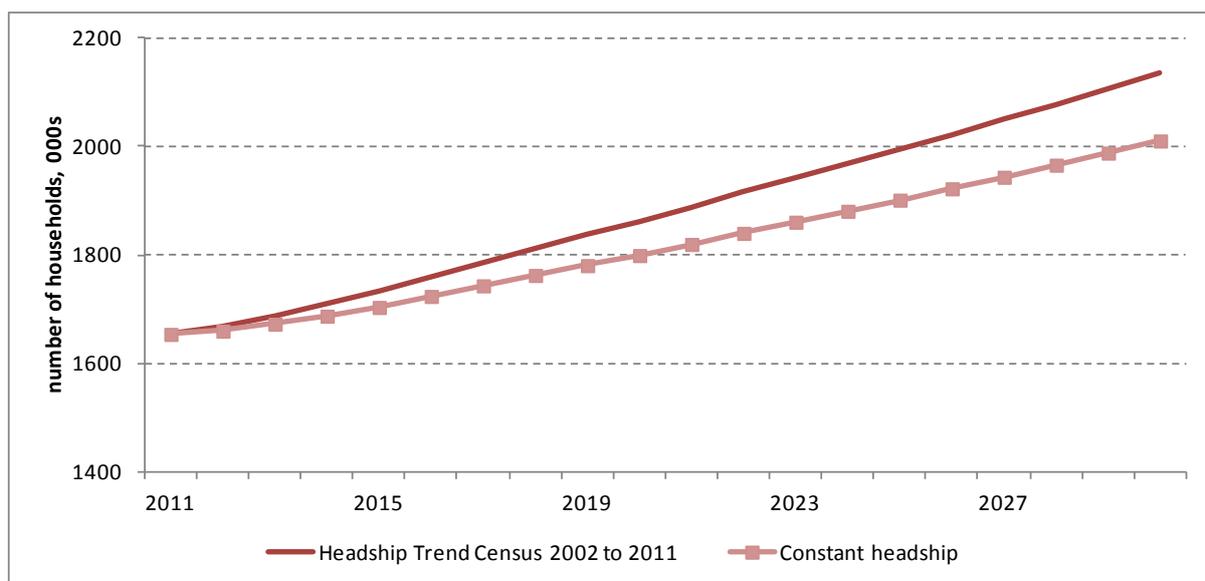
**FIGURE 6** Scenario 1 – Number of Households, Ireland, Constant Headship



**Scenario 2: Headship Trend: Census 2002 – Census 2011**

In this approach we make the simplifying assumption that the trend rise in headship rates between *Census 2002* and *2011* continues out to 2031. On this basis we estimate that the number of households would reach 2.14 million in 2030, from 1.65 million in 2011, as depicted in Figure 7. By 2020, the expected number of households would be 207,000 higher than in 2011, in 2025 this would have reached 340,000 and by 2030 the difference would be 480,000.

**FIGURE 7** Scenario 2 – Number of Households, Ireland, Headship Trend: *Census 2002 – Census 2011*

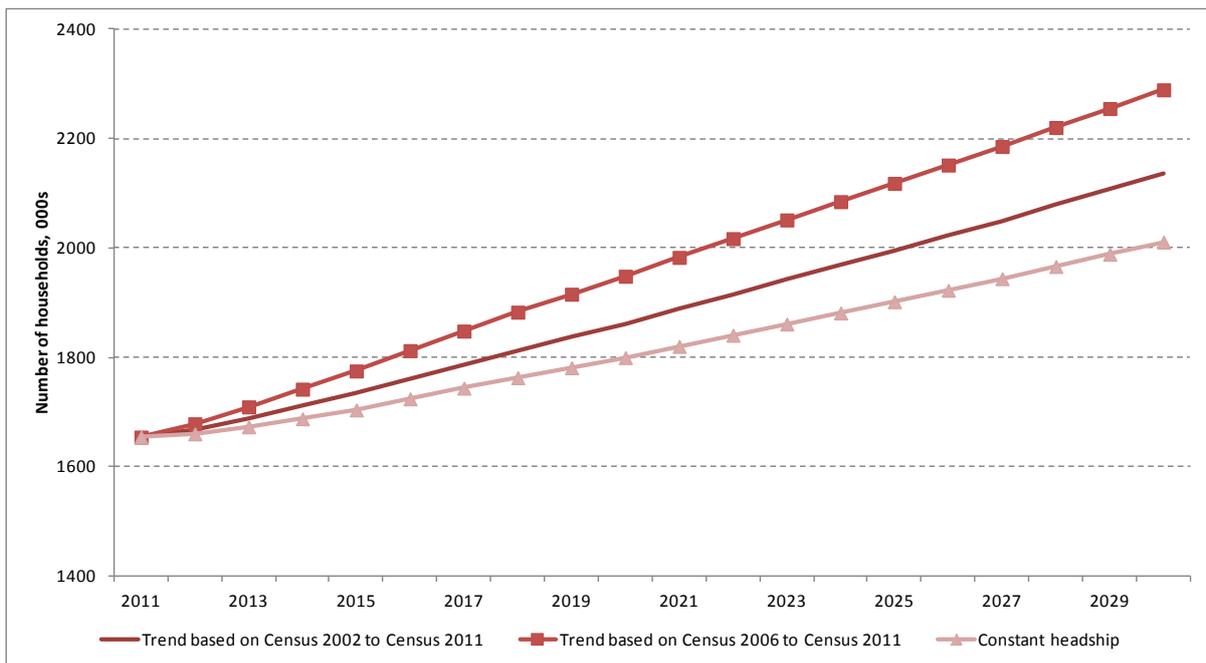


This scenario suggests a continued decline in the average number of persons per household so that by 2030 the average number of persons per household drops below 2.5 persons.

**Scenario 3: Headship Trend: Census 2006 – Census 2011**

As an initial sensitivity test we estimate new household formation based on the trend between *Census 2006* and *2011*. This trend captures the rise in headship that occurred over the period, as shown above in Figure 4. However, headship trends in this period may reflect the impact of the housing market boom and bust, rather than underlying trends. Using this time period, the number of households would reach 2.29 million in 2030, from 1.65 million in 2011, an increase of 635,000 on the 2011 level. Given our population forecasts this would suggest that the number of persons per household would decline to an average of 2.25. Figure 8 compares our base forecast with trends based on the shorter time period.

**FIGURE 8** Forecast Number of Households, Ireland, 2030, Headship Trend: *Census 2006 – Census 2011*

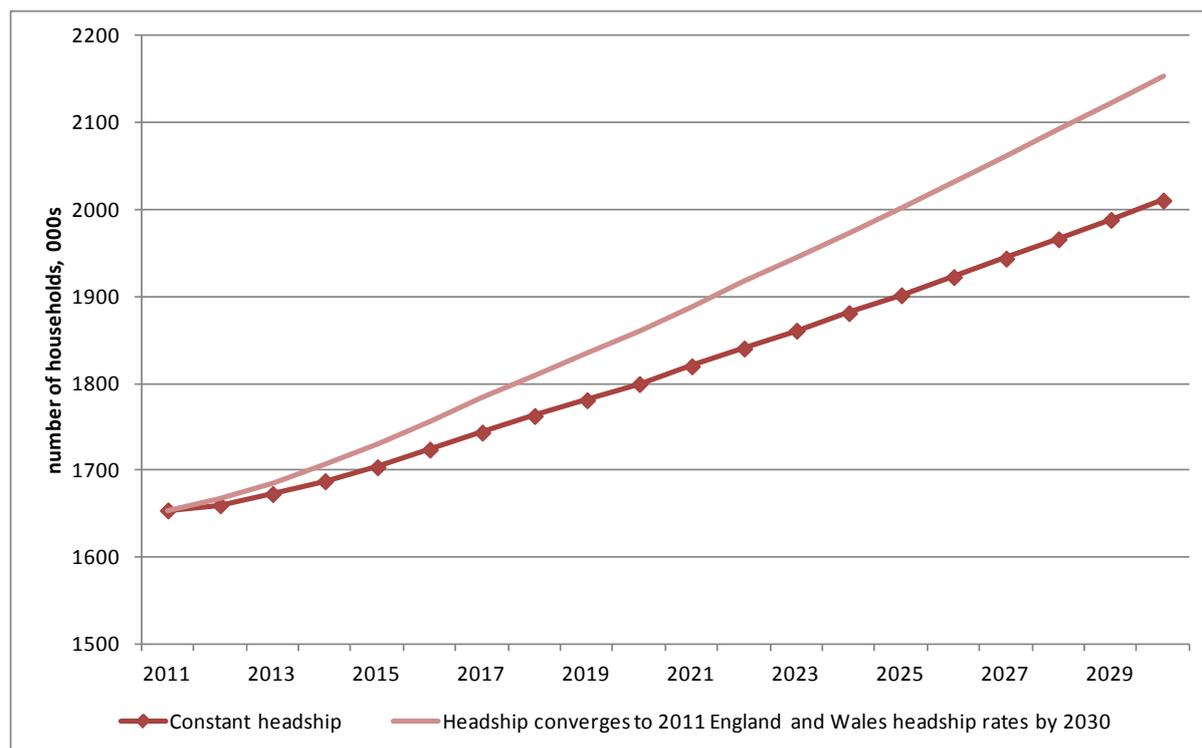


**Scenario 4: Headship Trend: Converging to UK Levels by 2030**

We considered the number of households that would be formed if Ireland converges by 2030 to the headship rates that prevail in England and Wales, based on UK *Census 2011*. We use England and Wales as our comparison as these countries have already experienced the demographic trends currently underway in Ireland, for example population aging. The numbers of new

households that would be formed by 2030 under this scenario would not be very different from our base scenario whereby the trend between *Census 2002* and *2011* continues to 2030, as shown in Figure 9. Converging to current headship rates in England and Wales implies that the number of households would reach 2.15 million, an additional 499,000 households on the level in 2011.

**FIGURE 9** Forecast Number of Households, Ireland, Headship Converging to England and Wales 2011 Rate by 2030



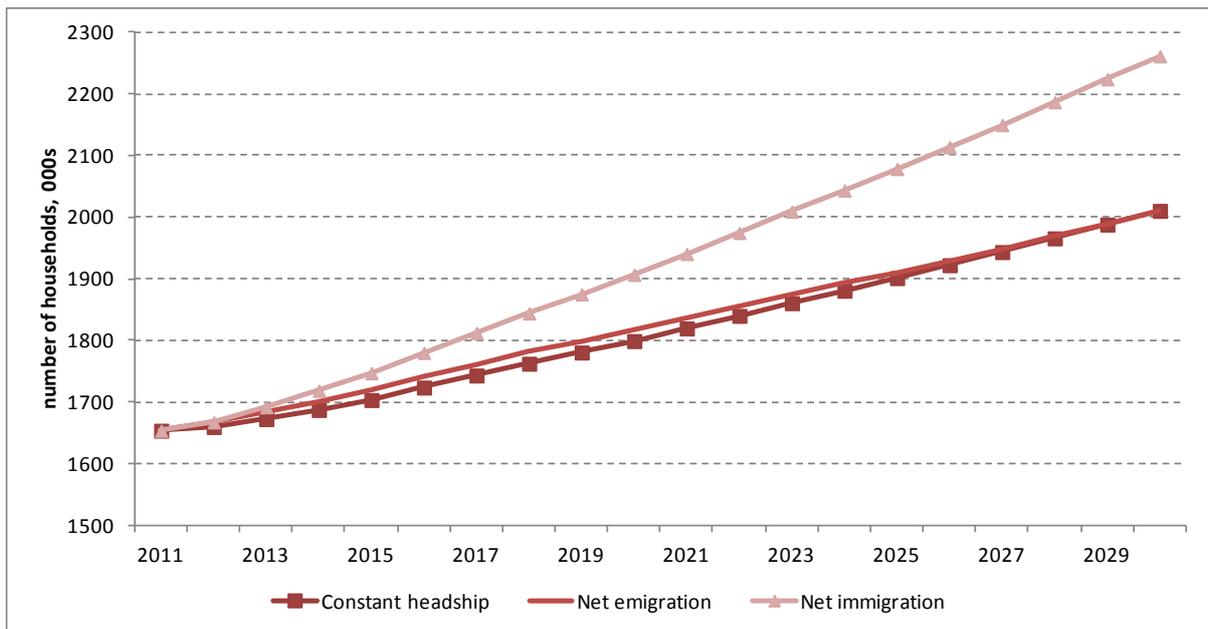
### The Role of Migration Flows

Net migration plays an important role in determining the number of households. *Census 2011* showed that 11.3 per cent of the population was of a foreign nationality. Duffy (2007) showed that migrants to Ireland tend to have higher headship rates than the Irish-born population. Byrne, Duffy and Fitzgerald (forthcoming) find the same result in analysis of micro-data from the *Quarterly National Household Survey*. These results suggest that immigration raises the demand for housing in Ireland through its effect on household formation. The ESRI's *Medium-Term Review* (2013) estimates that between 2003 and 2006 net migration contributed 17,500 units to housing demand per annum.

Our base case, drawn from the *Medium-Term Review* "Recovery" Scenario (2013) assumes that a moderate net inflow will recommence in the period 2020

to 2025. The *Medium-Term Review* estimates that migration flows added 17,500 units per annum to housing demand between 2003 and 2006. This fell to 5,400 units a year between 2007 and 2011 and in the current period, 2012 to 2016, it is estimated that the net outflow from Ireland is reducing the demand for housing by approximately 4,700 per annum. To test the sensitivity of our forecast to assumptions regarding migration flows we look at two alternatives – adjusting upwards or downwards the net migration assumption by 15,000 per annum compared to the “Recovery” Scenario. The baseline, higher emigration and higher immigration scenarios are depicted in Figure 9. Higher net inflows would lead to the formation of 607,000 new households by 2030, compared with 480,000 in our base case. In contrast, higher net outflows reduce the number of new households formed to 355,000 between 2011 and 2030. As is evident from Figure 10, the effect of higher emigration is to reduce the contribution of population growth to household formation and so under this scenario the outcome is virtually identical to the scenario where headship rates are held constant at 2011 levels.

**FIGURE 10** Forecast Number of Households, Ireland, Alternative Migration Assumptions



### Discussion

Table 4 summarises the results under the different scenarios. These scenarios point to the number of households rising to above 2 million by 2030. The extent of the growth depends on a variety of factors including trends in headship and migration flows.

**TABLE 4** Summary of Scenarios for Number of Households in Ireland by 2030

	Number of Households, 2030	Increase, 2011-2030	Annual average Increase, 2011-2030
Base: Headship constant at 2011 rates	2.01 million	356,000	19,400
Trend in headship: Census 2002-2011	2.14 million	481,000	25,600
Trend in headship: Census 2006-2011	2.29 million	635,000	33,300
Converge to 2011 headship rates in England and Wales by 2030	2.15 million	499,000	26,500
Higher Immigration, +15,000 per annum	2.26 million	607,000	31,900
Higher Emigration, +15,000 per annum	2.01 million	355,000	19,000

Across a range of scenarios demographic factors indicate that the rate of new household formation could be at least 20,000 per annum. In calculating the actual demographic pressure on the housing stock account must also be taken of the availability of vacant dwellings at the beginning of the period and also demand for additional holiday homes and replacement dwellings. Currently, there appears to be a very limited stock of vacant dwelling in high demand areas such as Dublin so that the increased number of households will require additional dwellings. In addition, past experience suggests that obsolescence could account for around 5,000 dwellings a year. Taken together, these results suggest an ongoing need for at least 25,000 new dwellings a year over the coming fifteen years.

### References

- Central Statistics Office (2012). Profile 4: the Roof over our Heads, August, Stationery Office, Dublin.
- Central Statistics Office (2012). This is Ireland: Highlights from Census 2011 Part 1, March, Stationery Office, Dublin.
- Central Statistics Office (2013). *Statistical Yearbook 2012*, Stationery Office, Dublin
- Central Statistics Office (2013). *Population and Migration estimates*.
- Department for Communities and Local Government, 2013, Updating Department for Communities and Local Government's Household Projections to a 2011 base: Methodology Report, April.
- Duffy, D. (2007). "The Housing Tenure of Immigrants in Ireland: Some Preliminary Analysis", ESRI WP No. 188, April, Dublin: Economic and Social Research Institute.

Federal Statistics Office (2013). "Population, families, living arrangements" in *Statistical Yearbook 2013*, Germany, extract Chapter 2.

FitzGerald, J. *et. al.* (2013). "Medium-Term Review: 2013-2020, No. 12," Forecasting Report, March, Dublin: ESRI.

Mandic, S. (2008). "Home-Leaving and its Structural Determinants in Western and Eastern Europe: An Exploratory Study", *Housing Studies*, Vol. 23, No. 4, pp. 615-636, July.

Rae, D. and P. van den Noord (2006). "Ireland's housing boom: what has driven it and have prices overshot?", OECD Economics Department Working Paper No. 492, Paris: OECD.

**APPENDIX TABLE A1** Headship Rate by Gender and Age Group, %

	1991	1996	2002	2006	2011
<b>Male</b>					
20-24	13.3	12.9	14.9	15.2	14.7
25-29	44.1	37.2	31.1	31.5	32.1
30-34	68.6	63.0	51.2	49.3	49.5
35-39	77.7	74.1	62.6	59.3	59.5
40-44	81.9	79.1	69.8	65.9	66.2
45-49	85.1	82.4	74.3	71.2	70.7
50-54	86.3	85.4	77.3	75.4	75.2
55-59	87.1	86.7	80.4	78.5	78.3
60-64	86.8	87.1	81.5	81.2	81.0
65 and over	80.9	82.4	79.9	80.0	81.5
	1991	1996	2002	2006	2011
<b>Female</b>					
20-24	13.8	17.0	22.9	23.4	22.6
25-29	15.0	21.5	31.2	36.2	38.5
30-34	16.6	22.6	34.7	40.7	44.4
35-39	17.0	23.0	33.1	38.8	42.5
40-44	16.2	23.0	32.0	36.4	39.9
45-49	16.8	21.9	30.4	35.6	38.1
50-54	18.9	22.6	29.0	34.4	37.3
55-59	23.8	24.9	29.3	33.2	36.1
60-64	31.8	31.3	32.0	33.6	35.0
65 and over	45.2	47.7	48.2	48.8	47.6
	1991	1996	2002	2006	2011
<b>Total</b>					
20-24	13.5	14.9	18.9	19.3	18.7
25-29	29.3	29.3	31.2	33.8	35.4
30-34	42.4	42.4	42.9	45.0	46.9
35-39	47.3	48.2	47.8	49.2	51.0
40-44	49.3	51.0	50.8	51.3	53.1
45-49	51.5	52.5	52.4	53.5	54.3
50-54	53.2	54.5	53.4	55.1	56.2
55-59	55.6	56.2	55.2	56.1	57.2
60-64	58.6	59.1	56.9	57.6	58.1
65 and over	60.6	62.6	61.9	62.6	63.0
All ages	28.9	31.0	32.9	34.7	36.1

Source: Based on Central Statistics Office data.

# The Structural Balance for Ireland

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\* Adele Bergin, John FitzGerald

## Introduction

The concept of the structural balance has considerable significance as a key target for fiscal policy. However, while the concept of the structural balance is enshrined in legislation, the precise definition of the structural balance is not clear, even if the broad meaning of the concept is well understood.<sup>1</sup> This note considers different approaches to estimating the structural balance and, using an appropriate methodology, it provides an estimate of the structural balance for 2014. In turn, this provides a preliminary guide to the appropriate stance for fiscal policy in 2015.

The structural balance is the government sector's surplus or deficit after factoring out the current cyclical position – in other words, when the economy is operating in equilibrium. In turn, the economy is in equilibrium when actual output is equal to the output that the economy can sustain, commonly referred to as potential output. The actual deficit then differs from this structural deficit due to “cyclical factors” reflecting the fact that the economy is not operating at its equilibrium or due to “one off measures”. Given Ireland's debt level, which in 2012 was the fourth highest in the EU-27, the objective for government, formalised in legislation, is to restore the government sector's structural deficit to balance or a small surplus. Under the terms of the adjustment programme, agreed with the EU Commission, Ireland has been permitted to adopt a more gradual adjustment path to eliminating the structural deficit than would normally be required under the *Stability and Growth Pact*. Nonetheless, for 2015 the requirement, consistent with the legislation, is to have the actual government deficit below 3 per cent of GDP. Beyond that date the requirement is to eliminate the structural deficit entirely consistent with the requirements of the Medium-Term Objective (MTO) set out as part of the *Stability and Growth Pact* (SGP). The estimate of the structural deficit, therefore, is crucial to determining the degree of further fiscal adjustment that may be required.

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<sup>1</sup> In the Fiscal Responsibility Act 2012 it is defined as: “annual structural balance of the general government”, in relation to a year, means the general government deficit or general government surplus for the year, cyclically adjusted and net of one-off and temporary measures, expressed as a percentage of gross domestic product at market prices.

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There are many different ways to define the structural balance and the related concept of potential output. In the approach that is used by the EU Commission, potential output is defined as the level of output consistent with price and labour market equilibrium – when there is no inflationary pressure on wages or prices. However, while this harmonised methodology is appropriate for some EU countries, the measure of labour market equilibrium used and how it is calculated is inappropriate for Ireland. In particular, it takes no account of whether the economy as a whole is in equilibrium – for example whether the current account balance is consistent with long-term equilibrium.

In this Article we first consider the appropriate definition of the structural balance for Ireland. We then consider how this approach is applied by the EU Commission, using the EU methodology, and the defects with this approach. We then present an alternative approach and apply it to the Irish economy today. In the final section of this Note we consider the implications of these results for the appropriate stance of fiscal policy in 2015.

### **Defining the Structural Balance**

There are a number of different ways of measuring the potential output of the economy. All of these methods aim to estimate what level of output would be consistent with stable inflation, given the endowment of resources in the economy. Some of the methods take account of the specific structure and factor endowments of an economy while others are little more than a rule of thumb.

For potential output to be sustainable there should simultaneously be equilibrium in key markets – on the current account (the goods market), in the labour market (full employment consistent with stable inflation), households should have adjusted their consumption (and savings) so that their debt to income ratio is sustainable, the factor input mix (e.g., capital and labour) employed by companies should be chosen to minimise their costs of production and the housing market should also be in long-term equilibrium. The government accounts must also be on a sustainable path when the economy is in equilibrium – e.g., in balance or showing a small surplus.<sup>2</sup> In some approaches to modelling potential output these equilibrium conditions are not necessarily all guaranteed or imposed. For example, in the approach currently used by the EU to estimate potential output a particular definition of labour market equilibrium is used and it takes no account of other possible disequilibria in the economy. In the case of

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<sup>2</sup> The government accounts can in principle be in equilibrium with a small deficit if the debt stock is not starting from an excessive level.

Ireland, one of the most important disequilibria that is missing from this approach is the current account. Other research has shown that incorporating information about the financial cycle can also be important.<sup>3</sup>

Once potential output is defined, we can then estimate what the budget deficit or surplus would be if actual output were equal to its potential. The structural balance for the government is estimated using a model that relates the major public finance aggregates to the level of GDP and its components.<sup>4</sup> The difference between this “structural balance” and the actual balance is then attributable to both cyclical and temporary one-off factors which explain why the economy is not in equilibrium.

### EU Approach and Alternative Approaches to Measuring Structural Balance

The European Commission uses a production function methodology for calculating potential growth rates and output gaps. The methodology is extensively described in D’Auria *et al.* (2010). The approach uses a simple Cobb Douglas specification where potential output depends on a combination of factor inputs (capital and labour) multiplied by total factor productivity. The trend components of the individual factors (apart from capital) are estimated and an estimate of potential output is obtained by substituting the estimates of potential employment, trend efficiency and actual capital into the production function. D’Auria *et al.* (2010) argue that the results provide an indication of likely developments if past trends were to persist into the future and cannot be interpreted in terms of medium-term sustainable growth rates.

The EU Commission applies exactly the same approach to calculating the structural balance to all member states. Of necessity, this one size fits all approach requires that similar parameters must be used for each country.<sup>5</sup> However, while this methodology provides a reasonable way of estimating the structural balance for some EU countries, this uniform approach is not well suited to the characteristics of the Irish economy.<sup>6</sup> The Department of Finance as long

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<sup>3</sup> C. Borio, P. Disyatat and M. Juselius, (2013). “Rethinking potential output: Embedding information about the financial cycle”, Bank for International Settlements Working Papers No 404.

<sup>4</sup> The model may be a single equation or a more complex set of relationships between public finance aggregates and key economic aggregates.

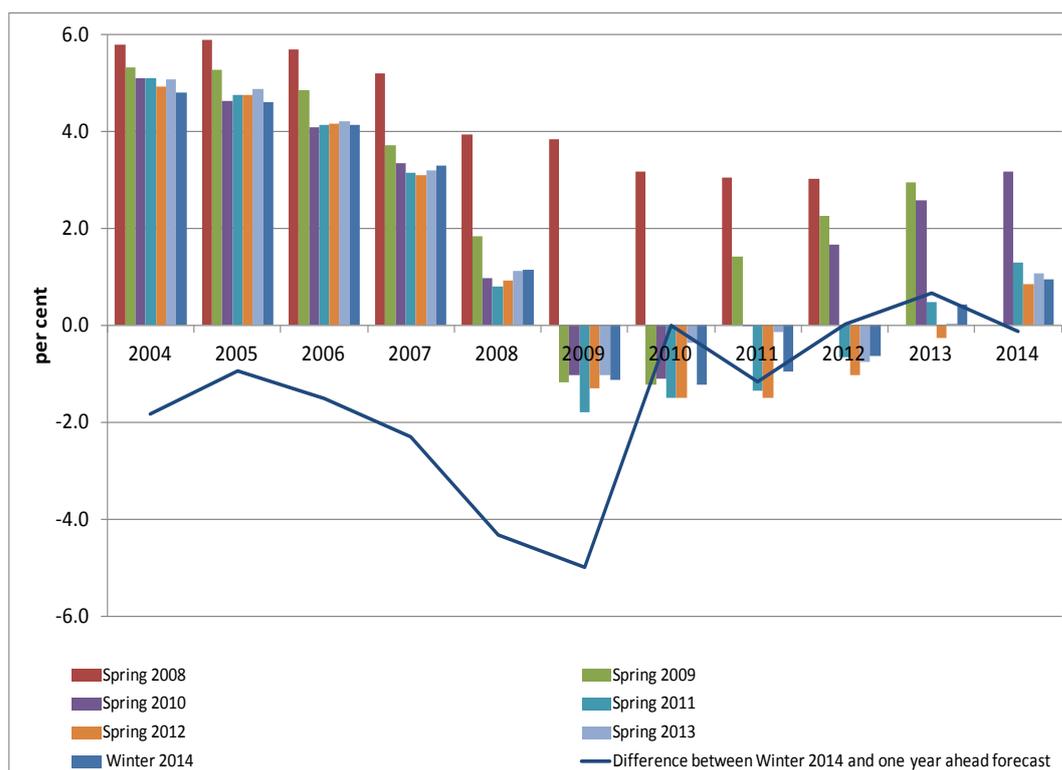
<sup>5</sup> This approach is adopted because it is not realistic to expect the Council of Ministers to debate the precise parameters of the production function or other similar technical issues for each individual country.

<sup>6</sup> See <http://www.bruegel.org/nc/blog/detail/article/1176-blogs-review-the-structural-balance-controversy/> for a discussion of the shortcomings of this approach.

ago as 2004 drew attention to its inadequacies in an Irish context and the EU Commission itself has recognised these problems.<sup>7</sup>

Figure 1 shows estimates of the potential growth rate for Ireland for the years 2004 to 2014 using this methodology. These estimates are available from the European Commission (EC) through the CIRCABC website.<sup>8</sup> Klär (2013) points to the volatility of the estimates and how they have been subject to substantial revisions since the onset of the financial crisis. The figure clearly shows that estimates of potential output for any year can change over time, in some cases quite considerably, as new data become available and the estimation methodology is changed. The downwards revisions to the potential growth rate for more recent years is striking. The line in the graph shows the percentage point difference in projections for potential output growth between the Winter 2014 and one year ahead estimates of potential growth.<sup>9</sup>

**FIGURE 1** European Commission Estimates of the Potential Growth Rate



<sup>7</sup> In their *Ireland – Stability Programme: December 2003 Update* the Department of Finance provided a detailed critique of the EU methodology <http://budget.gov.ie/Budgets/2004/Stability.aspx>. They ended by saying: “This volatility in the estimates of the NAIRU (over a period of less than one year) is unhelpful in applying the CABB methodology for Ireland.”

<sup>8</sup> See: <https://circabc.europa.eu/faces/jsp/extension/wai/navigation/container.jsp>

<sup>9</sup> One year ahead forecasts refer to the forecast for potential output in 2008 made in 2007, the forecast for 2007 made in 2006 etc. We use the one year ahead forecasts as this information is likely to be used in planning policy for the next year.

Interestingly, estimates of potential growth before the crisis have been revised downwards. One of the concerns in this note is that the estimate of potential growth for any given year, based on the current EU methodology, is a moving target and, as such, it is not an appropriate basis on which to base fiscal policy.

**FIGURE 2** European Commission Estimates of the Contribution of Components to Potential Growth

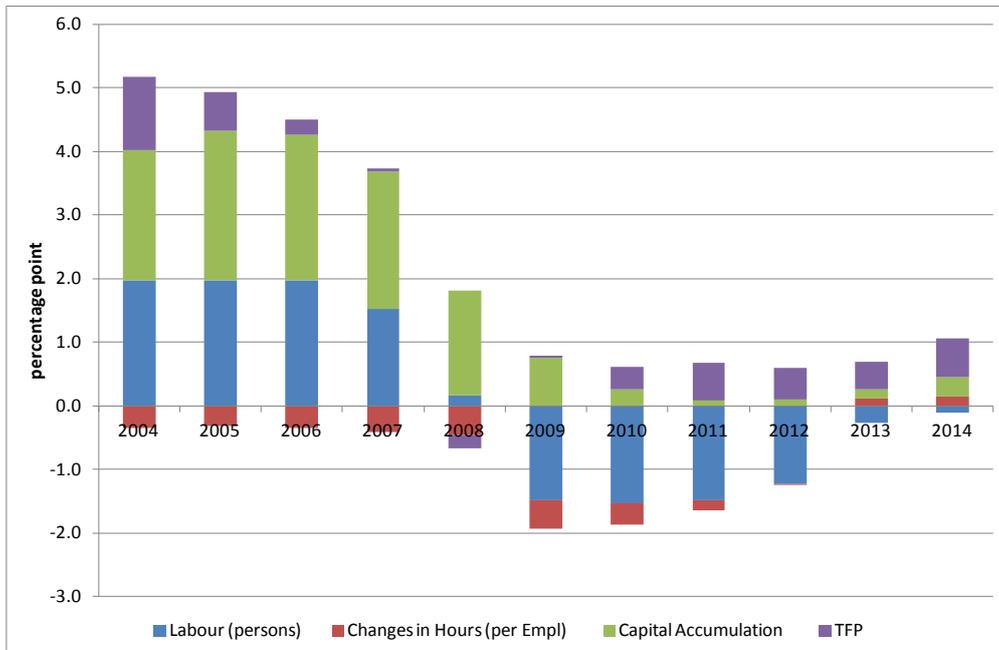


Figure 2 shows the contributions from labour, capital and total factor productivity to potential growth from the February 2014 European Commission estimates. The graph shows that the contribution from the labour input is negative over the period 2009 to 2013. Klär (2013) notes that the revisions to potential growth for Ireland are largely driven by a decrease in labour inputs so here we examine the treatment of the Irish labour market in the EU methodology for estimating potential output more closely.

The EU methodology for calculating the trend labour input involves several steps. Labour input is defined in terms of hours. The trend labour force is obtained by mechanically detrending the participation rate (using a HP filter) and applying it to the population of working age. Then trend unemployment, consistent with stable non-accelerating wage inflation (NAWRU), is estimated using a statistical technique. Potential labour supply (trend hours worked) is then obtained by multiplying trend employment with the trend of average hours worked.

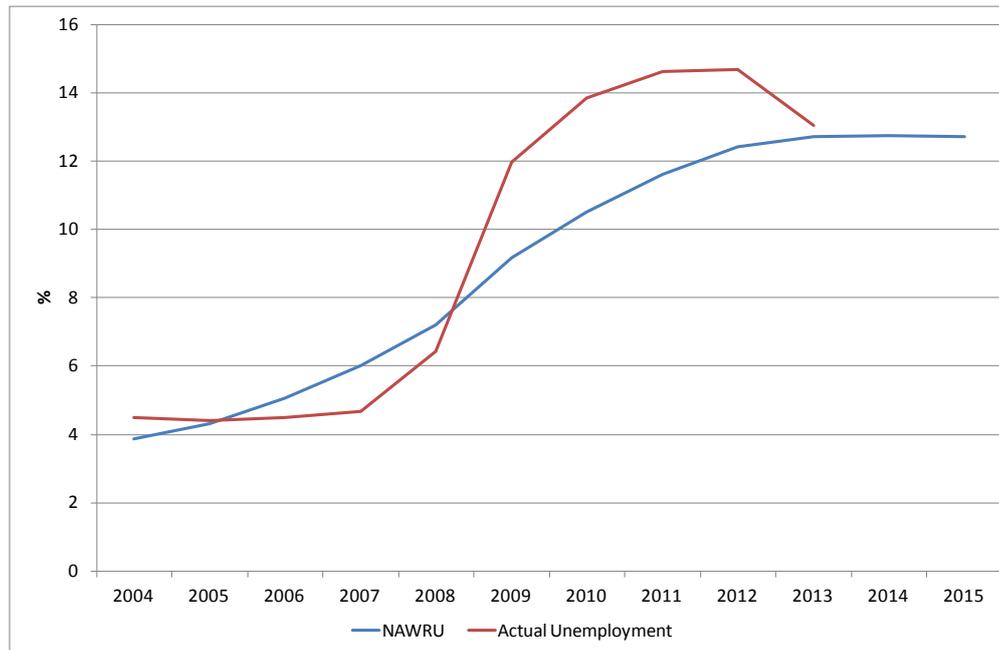
There are two key problems with this approach.<sup>10</sup> First, as discussed above, because it only focuses on imbalances in the labour market it may well reach inappropriate conclusions – for example, ignoring imbalances on the current account. Second, the methodology used to measure the disequilibrium in the labour market (to calculate a NAWRU), produces particularly strange conclusions for Ireland because it does not take account of the extensive research on how the Irish labour market actually operates. This latter point is probably the most controversial aspect of the EU methodology.

The methodology underlying the estimation of the NAWRU is based on the Philips curve and it is not an appropriate model of wage formation for a country with a very open labour market, where migration responds to (relative) wages or relative unemployment. Figure 3 shows the EU estimates of the NAWRU, together with the actual unemployment rate from the CSO. The graph shows that in 2013 the NAWRU was very close to the actual unemployment rate, suggesting that actual employment was close to potential. It also shows that, prior to the crisis, the long-run equilibrium unemployment rate was below or only slightly above the actual unemployment rate. If, as seems likely, the actual unemployment rate falls below this estimate of the NAWRU in 2014, this would imply ‘excess employment’ in the economy (Darvas, 2013). Darvas (2013) comments “In other words, almost all presently unemployed people are regarded as useless from the perspective of the production potential of the economy. This is strange indeed, even though it may be difficult to employ all former construction workers in other sectors in the coming years.” If employment is close to potential, output is, by definition, close to potential and this implies that the structural balance is also close to the actual government balance.

Using the EU methodology, the *Stability Programme 2013* estimated that the structural deficit for Ireland for 2014 will be 4.6 per cent of GDP with the economy producing close to potential output. With the economy assumed to be producing at capacity, this deficit would have to be eliminated by discretionary fiscal policy action in the future to restore the economy to long-term equilibrium consistent with the legislation.

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<sup>10</sup> An additional problem is that the EU approach uses the actual capital stock rather than the equilibrium capital stock. It can be argued that the capital stock in 2008 was excessive.

**FIGURE 3** European Commission Estimates of the NAWRU

Bergin *et al.*, 2013, consider the impact of different fiscal policy instruments on key economic aggregates including GNP, the government balance and the current account balance. This paper shows that whichever fiscal instruments were chosen to eliminate such a structural deficit, there would be a matching impact on the current account balance. Thus, if cuts in public expenditure were used to reduce the structural deficit by 4.6 percentage points of GDP, the current account surplus would be increased by a similar magnitude.<sup>11</sup> With the current account surplus for 2014 forecast to be almost 8 per cent of GDP,<sup>12</sup> this would mean that the effect of eliminating the structural deficit of 4.6 per cent of GDP, as defined by the EU, would be to eventually raise the current account surplus to 12.6 per cent of GDP.

A surplus of this magnitude would be a very clear sign that the economy was far from equilibrium. Such a rate of accumulation of net foreign assets (or reduction in net foreign liabilities) would not be sustainable for long. At some stage households and companies would react to their very rapidly improving foreign asset/liability position by increasing investment and consumption. In turn this would translate into a significant improvement in the government balance. It would also, inevitably, see the Irish economy breaching the EU guidelines on the

<sup>11</sup> This is derived using the *HERMES* model and assuming that roughly half of the adjustment was carried out by increasing taxation and half by cutting expenditure, Bergin *et al.* (2013).

<sup>12</sup> If allowance is made for the effects of the earnings of the redomiciled plcs on the surplus, the forecast is for a surplus of 3.5 per cent of GDP.

size of the current account surplus under the European Semester's Macroeconomic Imbalances Procedure (MIP).

This result illustrates clearly the difficulties associated with applying the current EU methodology to estimate the structural balance for Ireland. This approach gives rise to a series of inconsistencies which suggest the need for a more appropriate methodology for estimating the structural balance. In particular, it is important to consider approaches that take into account the specific characteristics of the Irish labour market and the other major imbalances in the economy.

### **Model Based Estimate of the Structural Balance**

The *HERMES* macro model, which is specified in long-run equilibrium form, is a suitable tool to calculate an alternative measure of the structural balance of the economy in the medium term.<sup>13</sup> In the *Medium-Term-Review* the model was used to develop scenarios where the economy returns to long-run equilibrium, not only in the labour market, but also in a number of other important markets mentioned above. Equilibrium in the goods market – a current account in balance or limited surplus – is affected by the behaviour of households (adjusting their savings behaviour) and companies minimising their cost of production (choosing an appropriate capital stock and related path for investment), together with a government sector in balance. The key relationships in the *HERMES* model are specified in equilibrium form so that, when subject to shocks, the economy will generally return to a stable equilibrium over a number of years.<sup>14</sup>

To estimate long-run equilibrium output the *HERMES* model is benchmarked to current economic conditions and it is then simulated out into the future. This provides a scenario where the economy returns to equilibrium and the model estimates the resulting government balance consistent with that equilibrium. Such medium-term scenarios depend on the external environment for the Irish economy that is assumed. Thus potential output and the structural balance are not independent of conditions in the rest of the EU economy.

The future path of the public finances is modelled assuming a neutral fiscal policy from 2015 onwards – where the stance of fiscal policy is neither stimulating nor

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<sup>13</sup> The latest version of the *HERMES* model is described in Bergin *et al.* (2013).

<sup>14</sup> As discussed in FitzGerald and Kearney (2013), there may be multiple possible equilibria depending on the sustainability of the level of public debt.

deflating the economy. This is modelled using a set of indexation rules which, for example, assume average direct tax rates remain unchanging over time.<sup>15</sup> This scenario allows the economy to return to equilibrium, where actual output is equal to potential output. At the point where the economy is restored to equilibrium, the government balance, estimated by the model, represents the structural balance. If no fiscal adjustment is needed (a series of neutral budgets) to produce balance on the government accounts when the economy reaches its long-term stable equilibrium, then that defines the government balance in that year as being attributable to cyclical factors – the fact that the economy is currently out of equilibrium. To the extent that a further fiscal adjustment might be needed to restore the economy to equilibrium that required adjustment is a measure of the structural deficit.

The single most important difference in this approach to measuring potential output and the other commonly used methodologies is that, in *HERMES*, account is taken of the fact that the Irish labour market tends to clear in the long run at an unemployment rate of around 5 per cent. It also takes account of the endogeneity of labour supply through migration (and labour force participation decisions). The EU methodology that is currently used implies that the equilibrium rate of unemployment in Ireland is well over 10 per cent. This would suggest that the unemployment problem is entirely structural and that the recovery in activity, currently under way, will have no impact on the unemployment rate.

This EU estimate of the equilibrium rate of unemployment takes no account of a range of research on the Irish labour market,<sup>16</sup> which suggests a very different conclusion. First, while structural unemployment is a risk in the wake of the crisis, an examination of the composition of unemployment shows that quite a high proportion have third level qualifications. This significantly increases the likelihood that these workers will regain employment as recovery takes hold. The long-term unemployment rate, a proxy for structural unemployment, has declined to 7.2 per cent in the most recent data – a fall of over 2 percentage points in under two years. Furthermore, a range of published research on the Irish labour market over a long period provides empirical evidence of the flexibility of the Irish labour market and the elastic labour supply (Barrett, FitzGerald and Nolan, 2002). The weight of this evidence suggests that the

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<sup>15</sup> The approach and indexation rules used are set out in Bergin *et al.* (2013). In the indexation rules used here it is assumed that government investment and consumption remain unchanged in volume terms. In a growing economy this assumption imparts a mild deflationary bias to our set of indexation rules.

<sup>16</sup> The evidence is discussed in Bergin *et al.* (2013). See also Barrett, A., J. FitzGerald and B. Nolan (2002), "Earnings Inequality, Returns to Education and Immigration into Ireland", *Labour Economics*, Vol. 9, No. 5.

likelihood that the rate of unemployment in the Irish labour market would remain over 10 per cent indefinitely is very low. Developments in the Irish labour market during the crisis and in the past year are consistent with these findings.

The second important difference in approach lies in the fact that, using the *HERMES* model, long-term equilibrium is imposed, so that the current account surplus does not continue growing. The counterpart to this restoration of external balance is that the effects of the household and company sector deleveraging will be largely completed. This means that investment, including investment in housing, returns to a level that at least maintains the existing capital stock and is also consistent with optimising behaviour by the company sector.

### Estimating the Structural Balance Using *HERMES*

In the *Medium-Term Review*, published in July 2013, a number of scenarios were set out for the future development of the Irish economy. Here we consider the structural deficit implied by the *Recovery Scenario*. Since the scenario was published the path of the economy has been consistent with that implied by this scenario. However in our conclusions we take account of the fact that there is no certainty that this recovery will be realised.

**TABLE 1** Summary Results with Indexation from 2015 Onwards

	2012	2013	2014	2015	2016	2017	2018	2019	2020
GDP, %	0.2	-0.4	2.6	3.5	4.6	3.8	3.8	3.5	3.4
GNP, %	1.8	3.3	3.5	3.7	4.7	2.9	2.8	2.6	2.5
Unemployment rate									
ILO, percentage points	14.7	13.1	11.4	10.1	8.1	7.4	6.7	6.0	5.2
Investment/ GNP ratio	13.1	13.4	14.5	15.7	19.2	19.8	20.6	20.9	21.1
Non-agri wage rates, %	0.9	0.0	0.0	1.0	2.6	4.7	4.2	4.0	3.9
Labour Share of Value Added except agric.	46.9	47.8	47.3	46.8	46.7	46.4	46.0	45.5	45.1
Personal savings ratio	7.3	8.3	7.6	8.1	8.3	9.2	9.8	9.4	9.4
Housing Completions, number	8,488	8,301	12,000	15,000	28,177	30,233	28,982	26,501	23,784
Net emigration	-34.4	-33.1	-18	0	0	0	0	0	0
% of GDP									
Balance of payments surplus, adjusted for redomiciled plcs	-0.1	2.1	3.5	4.3	3.7	3.7	3.5	3.6	4.0
General government deficit	8.2	7	4.5	2.8	-0.2	-1.0	-1.7	-2.2	-2.6

Note: In some cases the data definitions used in *HERMES* may differ from the published series.

The most negative scenario (Stagnation Scenario) in the *Review* was based on a failure of the EU economy to grow over the rest of the decade. Currently this seems less likely than it did last year. There remains a possibility that a failure to resolve the problems of the financial system could delay the recovery that is under way (the *Delayed Adjustment* scenario). However, this would postpone a return of actual output to its potential level rather than permanently damaging the growth rate of potential output.

For this note we have rerun the *Medium-Term Review Recovery* scenario calibrating to the latest estimate of the outturn for 2013 and the forecast for 2014 published in the current *Quarterly Economic Commentary*. We first set out some of the key aggregates from this scenario in Table 1, aggregates which show the economy returning to equilibrium by the later years of this decade as the cyclical effects of the crisis fall away.

Based on the latest forecasts for EU and world demand, this scenario sees the economy gradually returning to equilibrium over the rest of the decade.<sup>17</sup> The current account surplus stabilises at a sustainable level.<sup>18</sup> The savings ratio also stabilises and rising real income is reflected in growing consumption and a return to normality in the housing market, with output broadly equal to the number of dwellings required for a rising population (see Byrne *et al.*, in this *QEC*). The company sector returns to investing, reflecting a recovery in profitability after the crisis. As a result, investment stabilises at a little over 20 per cent of GNP, broadly consistent with the level of investment in other similar developed economies. In the later years of the decade wage rates rise roughly in line with the rate of inflation plus the rate of increase in productivity. Thus, while the labour share of added value decreased over the course of the crisis, having seen the economy return to competitiveness on foreign markets, it readjusts to a new equilibrium from 2015 onwards.

The labour market takes somewhat longer than the rest of the economy to return to equilibrium. It is likely to be 2018 or 2019 before the economy approaches a level of unemployment which would be consistent with long-term equilibrium – in the range 5 to 6.5 per cent of the labour force. This level of unemployment would be consistent with the rate of wage inflation discussed above and with labour's share of added value remaining stable at its current relatively low level.

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<sup>17</sup> A full description of the assumptions underpinning the *Recovery* scenario, as well as detailed results are available in FitzGerald and Kearney, 2013.

<sup>18</sup> Account is taken of the effect of redomiciled plcs on the balance of payments.

The specification of the model and the resulting simulations ensure that:

The labour market eventually clears.

The current account surplus is sustainable (not too large). This is helped by the model specification that, in the long run, there is a stable relationship between household wealth, consumption and income.

The rate of wage inflation is consistent with a constant labour share of added value.

The investment to GNP ratio is consistent with stable growth

House prices reach a new equilibrium and housing investment is consistent with long-run stability in the housing market.

With a broadly neutral fiscal policy stance from 2015 onwards, as defined here, the model shows the government sector moving into surplus in 2016 with a more significant surplus in 2017. This shows that, conditional on the assumptions about the world economy being realised, the current fiscal deficit is largely attributable to the fact that the economy is producing well below its long-run equilibrium level. In other words, the structural deficit for 2014 is close to zero. This is dramatically lower than the number derived using the EU methodology. However, in this case it is consistent with an economy moving into long-term equilibrium, whereas the EU approach would imply a huge current account surplus that would not be sustainable in the medium term.

## Conclusions

This analysis highlights the inappropriate nature of the EU approach to estimating the structural balance for Ireland. Because of the importance of this concept for fiscal policy it is important to develop alternative measures to the EU methodology. This Research Note develops one such alternative measure that provides more realistic results.

Based on the *Medium-Term Review* Recovery scenario, and using the HERMES model of the economy, we estimate that the bulk of the government deficit in 2014 is cyclical in nature. Assuming a neutral fiscal policy from 2015 onwards, when the economy is restored to equilibrium later in the decade the current government deficit is likely to be eliminated, to be replaced by a small surplus. If this scenario were to prove correct, then no further fiscal adjustment would be needed in 2015 to ensure that the government finances would move into surplus by 2017/2018.

However, even though the recovery in the economy has, to date, proved more vigorous than anticipated, there remains considerable uncertainty about the strength of the recovery elsewhere in the EU and also about the ability of the financial system to fund the ongoing recovery in Ireland. Furthermore, in order to maintain the credibility of Irish fiscal policy (and to meet required targets, now enshrined in legislation) it will be very important to ensure that the actual deficit for 2015 is below 3 per cent of GDP. Thus it would be premature to lock into a particular budgetary policy for 2015 at this point in time. Instead, it would be prudent to prepare for possible further cuts next year to guard against the risk that the fragile recovery, currently underway, peters out. This echoes the recommendation we have made previously that fiscal policy should be formulated on a “no regrets” basis”. A final decision can be made about fiscal policy for 2015 at the end of September when the progress of the Irish recovery is somewhat clearer.

## References

- Barrett, A., J. FitzGerald and B. Nolan (2002). “Earnings Inequality, Returns to Education and Immigration into Ireland”, *Labour Economics* Vol. 9, No. 5.
- Bergin, A., T. Conefrey, J. FitzGerald, I. Kearney and N. Žnuderl, (2013). “The HERMES-13 macroeconomic model of the Irish economy”, ESRI Working Paper No. 460.
- Borio, C., P. Disyatat and M. Juselius (2013). “Rethinking potential output: Embedding information about the financial cycle”, BIS Working Papers No. 404.
- Byrne, D., D. Duffy and J. FitzGerald (2014). “Alternative Scenarios for New Household Formation in Ireland”, ESRI Research Note, this *Commentary*.
- D'Auria, F., C. Denis, K. Havik, K. Mc Morrow, C. Planas, R. Raciborski, W. Röger and A. Ross (2010). “The production function methodology for calculating potential growth rates and output gaps”, *European Economy Economic Papers*, No. 420.
- Darvas, Z. (2013). “Mind the gap! And the way structural budget balances are calculated - an alternative calculation of the output gap”, available at: <http://www.bruegel.org/nc/blog/detail/article/1170-mind-the-gap-and-the-way-structural-budget-balances-are-calculated/>
- FitzGerald, J. and I. Kearney, eds. (2013). *Medium-Term Review: 2013-2020*, ESRI Forecasting Series 12.
- Klär, E. (2013). “Potential Economic Variables and Actual Economic Policies in Europe”, *Intereconomics*, Vol. 48, No. 1, pp. 33-40.



# Research Note



# A Survey-based Analysis of Irish Savings Behaviour by Age

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**Kevin Timoney\***

## **Introduction**

The savings behaviour of Irish households in recent years has often been described as precautionary. Domestic and international crises have led to heightened uncertainty, persistent unemployment and low economic growth. At the same time, personal disposable income and personal consumption expenditure have been reduced. The difference between them (personal savings) has been large, despite a very low interest rate environment. The personal savings ratio has increased from an average of 4 per cent of disposable income for 2001-2007 to 8 per cent on average for 2008-2012.

This Note uses survey data to investigate Irish savings behaviour by age during and since the recent crisis. The survey data are collected monthly for the Nationwide UK (Ireland)/ESRI *Savings Index*. The data are collected by telephone based on a nationally representative survey of over 800 respondents, with a new sample selected each month. In terms of response rates, approximately 50 per cent of private households complete the survey in full. The data are calibrated to population totals based on gender, age group, marital status, household size, education and economic status. This provides findings that are nationally representative.<sup>1</sup> Survey data for the period January 2010 to February 2014 are analysed by three age categories: those aged 21-35, 36-50 and 51 and over.

## **Irish Savings Behaviour by Three Age Groups**

As mentioned in the introduction, uncertainty and weak economic performance are often cited as explanations for the emergence of precautionary saving in

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<sup>1</sup> Duffy (2010) details the survey methodology:  
[http://www.esri.ie/irish\\_economy/savings\\_index/SavingsIndexMethodology.pdf](http://www.esri.ie/irish_economy/savings_index/SavingsIndexMethodology.pdf)

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Ireland in recent years. However, deleveraging has also been prevalent, with loan drawdowns outpaced by loan repayments for several years, and bank deposits remaining broadly flat. The combination of credit stagnation and negative equity of homeowners has reduced the capacity of many households to smooth consumption, and the response has been one of balance-sheet consolidation. McCarthy and McQuinn (2014) combine survey and regulatory data, finding that there are negative implications for household consumption when deleveraging applies, and that older, affluent households are more likely to be deleveraging. Durkan and O’Hanlon (2012) and Gerlach-Kristen (2013) have previously used *Household Budget Survey* (HBS) data to estimate the impact of the crisis on household consumption and savings behaviour in 2009/10 compared to 2004/5. The broad conclusion arising from the HBS data is that negative income and wealth effects have considerably held back the profile of consumption in recent years, with an uncertain outlook encouraging precautionary savings to insure against potential loss of future income. This effect is likely to have been strongest among first-time buyers from the peak of the property market in the mid-2000s, thus especially applicable to the cohort currently aged mid-30s to mid-40s.<sup>2</sup>

Meanwhile, large-scale net emigration since 2010 has been concentrated heavily amongst the younger age groups of the population. Conditions in the labour market for those aged 20-34 remain challenging, both relative to older age groups and in absolute terms. The *Quarterly National Household Survey* shows the unemployment rate for this age group at 15 per cent for the fourth quarter of 2013, while annual employment growth has been negative since the second quarter of 2008. However, of those remaining in the country, members of the younger age groups are not heavily indebted as is generally the case for their older counterparts. As credit flows remain subdued, it is likely that many of those reaching the ages formerly associated with first-time buyers are planning to purchase later on. With fewer down payments being made on property purchases, and correspondingly lower debt-servicing costs, there may be a growing latent demand among younger age groups which are instead accumulating significant savings.

In summary, some groups of the population have been particularly affected by recent net emigration, and many others that remain in Ireland carry negative equity from property market collapse, along with large debt-servicing costs. The prevalence of uncertainty in the economy may also be evident in an increased tendency to save as a precaution in case of lost future income. Preliminary indications from the survey data suggest respondents were most likely to save

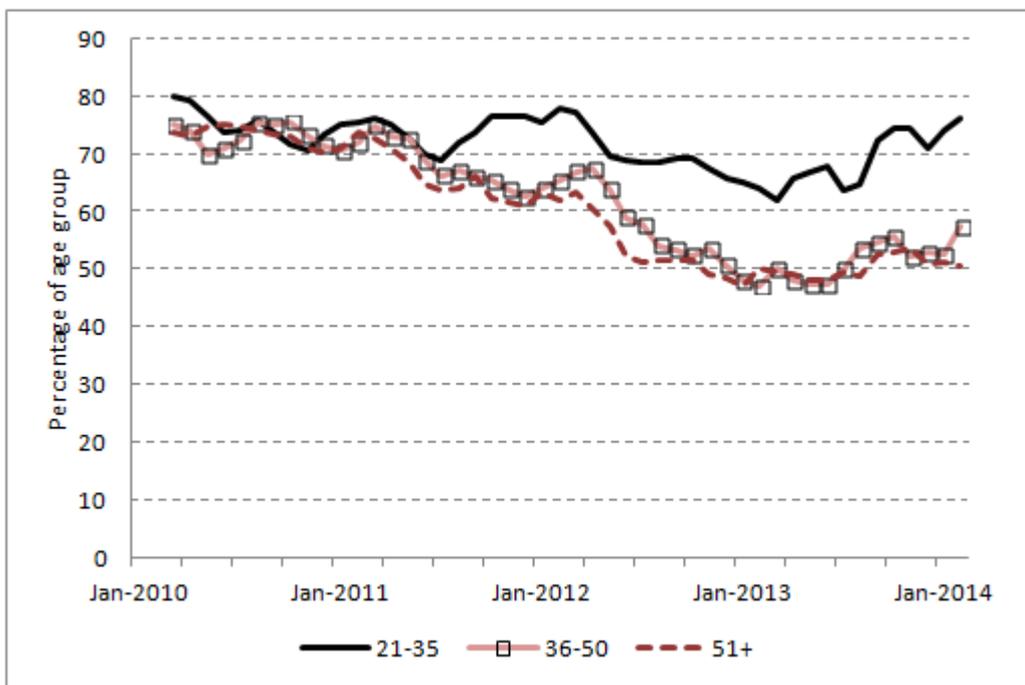
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<sup>2</sup> Using survey data, Duffy and Quail (2005) found 69 per cent of first-time buyers in late 2004/early 2005 were aged 25-34.

with a precautionary motive earlier in the sample period, in particular during 2011. There has also been an ongoing decline in the share of those with a negative view of general economic prospects for the coming year, who are also saving with a precautionary motive

The extent to which the monthly data can be stratified by age is limited by the need to ensure that cell sizes remain greater than 30 cases. Survey data are collected for those aged 16 and over, but for the present analysis, the savings behaviour of ages 16-20 is not examined due to a small cell size. Furthermore, the majority of respondents in this age group are in education or training, implying a more limited ability and motivation to save. As a result, the savings behaviour of those aged 21 and over is analysed in this Note, with variables calculated as percentages of each age group’s full sample. To smooth monthly volatility, the analysis presents the series as three-month moving averages.

**FIGURE 1** Respondents Saving Occasionally or Regularly, by Three Age Groups

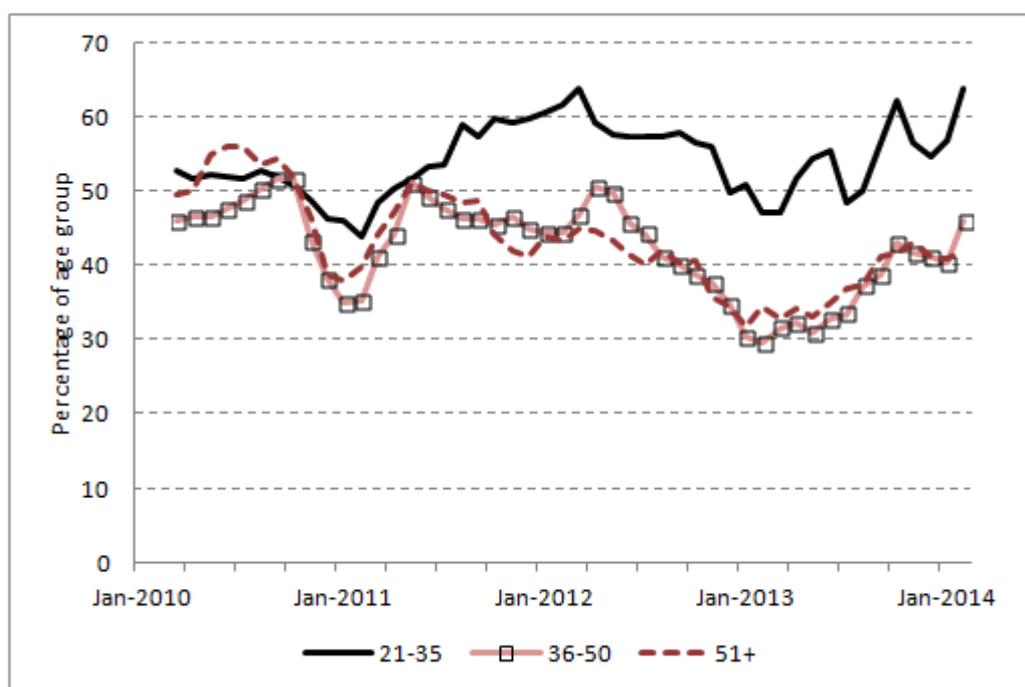


Source: Nationwide UK (Ireland)/ESRI *Savings Index* data.

As shown in Figure 1, a similar pattern has emerged since 2010 for the savings status of those aged 36-50 and 51 and above. Only about half of respondents aged 36 and over have been saving occasionally or regularly since mid-2012. The decreased share of the population that is saving money suggests there has been some decline in precautionary savings for these age groups. Meanwhile, the share of those aged 21-35 saving either regularly or occasionally has been broadly increasing over the past year.

A possible explanation for this relates to the low volume of transactions in the property market – compared to a historical average of about 3 per cent, the current volume of transactions is just above 1 per cent of the country’s housing stock.<sup>3</sup> The effect of this is to marginalise first-time buyers, who are likely to be accumulating savings rather than making down payments on property and meeting debt-servicing costs. According to recent mortgage lending data from the Irish Banking Federation, just 7,535 new first-time buyer mortgages were drawn down in 2013, compared to an average of 14,416 between 2008 and 2010. Further to this, the percentage of this age cohort saving occasionally or regularly is possibly higher due to the past four years of net emigration, as many emigrants were previously unemployed and thus were less likely to be saving at all. Of those remaining in the country, faced with credit constraints and limited housing supply, the share that is saving is likely to be higher as a result.

**FIGURE 2** Respondents Saving Occasionally or Regularly, Expecting the Same or Increasing Savings Over the Coming Six Months, by Three Age Groups



Source: Nationwide UK (Ireland)/ESRI Savings Index data.

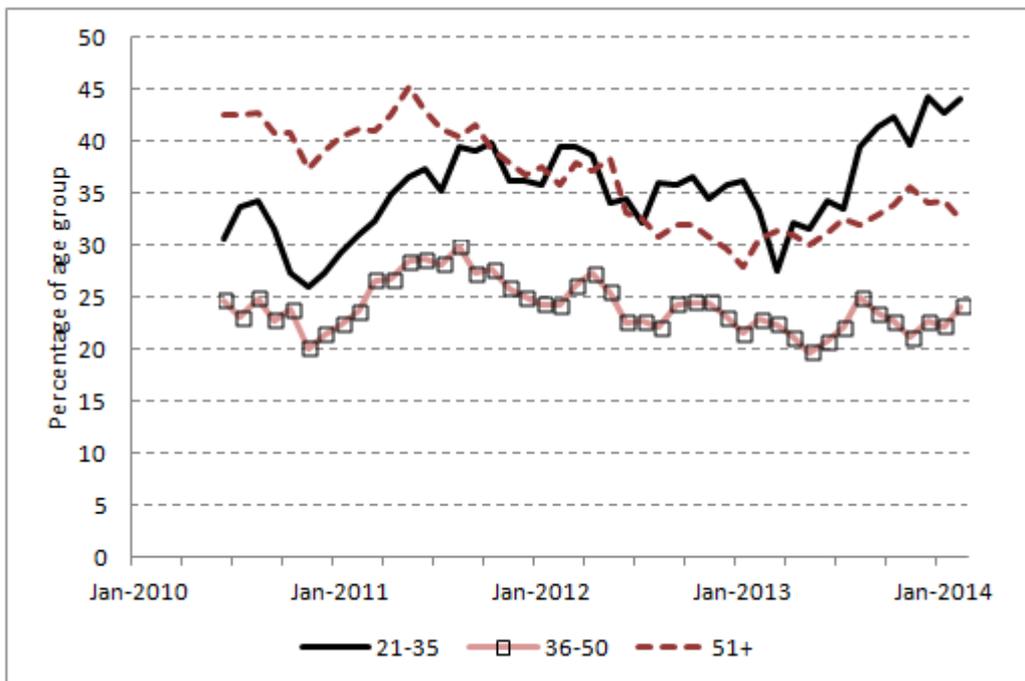
Above, Figure 2 describes the extent to which those saving occasionally or regularly expect their level of savings to either remain the same or increase over the next six months. Consistent with the pattern in Figure 1, over time the youngest cohort shown (21-35 year-olds) emerges as the age group that is most

<sup>3</sup> According to the Residential Property Price Register, there has been an increase of 8 per cent in transactions volume for the first quarter of 2014 compared to the first quarter of 2013. However, this is likely flattened by the low transactions seen a year ago following the expiry of Mortgage Interest Relief at end-December 2012.

positively disposed towards future saving. More recently, there has been a growing share of those in older age groups who expect to save at least as much six months from now as they currently do. This proportion remains substantially lower than for those aged 21-35, however.

Figure 3 illustrates the share of respondents saving occasionally or regularly whose first preference for spare money over and above everyday needs is to save or invest it. The series are pooled from the following four choices: invest in shares, save in a deposit account, place into a pension scheme, save in some other way. Respondents may choose between these and two other alternatives; whether they would use the money to pay down debt or for spending. Of the savings/investment-related responses, the pattern emerging is broadly similar to that in Figures 1 and 2, but the series is relatively higher for those aged 51 and over despite a reduced preference over time. The series is particularly low for the 36-50 age group, owing to a stronger preference for debt repayment. This finding is consistent with more limited ability to smooth consumption for this age group, as a result of the negative income and wealth effects described earlier. Notably, the series has lately been trending upwards for those aged 21-35, further supporting the intuition from Figures 1 and 2 above.

**FIGURE 3** Respondents Saving Occasionally or Regularly, Whose First Preference for Spare Money is to Save or Invest, by Three Age Groups



Source: Nationwide UK (Ireland)/ESRI Savings Index data.

## Conclusion

The past 50 months of Irish survey data on savings are analysed in this Note by three age groups. This exercise portrays how different circumstances facing various parts of the population have manifested into a range of savings patterns. The main findings suggest that precautionary savings, once a significant feature across much of the population, is likely to have become less prevalent over time. Older age groups have shown a reduced tendency to save money, and this is linked to the negative income and wealth effects resulting from the crisis period. In earlier years of the crisis, there is evidence of high saving amongst older age groups, but this effect diminishes over time. Rather, the continued high level of savings observed in National Accounts data today is likely to relate to widespread balance-sheet repair, and a growing unmet demand in the youngest cohort examined, those aged 21-35 years old. Respondents from this age group have been particularly disposed towards savings since 2010, and this finding is linked to trends in the property market and the high net emigration that has taken place in recent years. While the volume of housing-market transactions remains historically low, the average age of first-time buyers will tend to increase, and the accumulation of savings by the 21-35 age group is likely to persist. One implication of this is that consumption and investment for younger age groups may remain subdued relative to potential over the medium term.

## References

- Duffy, D. and A. Quail (2005). "First-Time Buyers in the Irish Housing Market: Survey of *permanent tsb* First-Time Buyers," Economic and Social Research Institute: Dublin.  
[http://www.esri.ie/pdf/OPEA049\\_First%20time%20Buyers.pdf](http://www.esri.ie/pdf/OPEA049_First%20time%20Buyers.pdf)
- Durkan, J. and N. O'Hanlon (2012). "The Savings Rate during the Recession," ESRI Research Note 20120202 in Summer *Quarterly Economic Commentary*, Economic and Social Research Institute: Dublin.  
<http://www.esri.ie/UserFiles/publications/RN20120202.pdf>
- Gerlach-Kristen, P. (2013). "Younger and Older Households in the Crisis," ESRI Research Note 20130104 in Spring *Quarterly Economic Commentary*, Economic and Social Research Institute: Dublin.  
<http://www.esri.ie/UserFiles/publications/RN20130104.pdf>
- McCarthy, Y. and K. McQuinn (2014). "Deleveraging in a highly indebted property market: Who does it and are there implications for household consumption?" Central Bank of Ireland Research Technical Paper 05/RT/14  
<http://www.centralbank.ie/publications/Documents/05RT14.pdf>





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