

# Quarterly Economic Commentary

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Autumn 2014



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The *Quarterly Economic Commentary* analyses current economic trends and provides macro-economic forecasts for the current and following year. It assesses international economic prospects and provides short-term forecasts in the framework of a consistent set of national accounts for Ireland. Its wide range of users includes government departments, policy-makers, social partners, international organisations, academics and the national and international financial sectors.

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The forecasts in this *Commentary* are based on data available by 8 October 2014.  
Draft completed 8 October 2014.

## Special Articles

## Research Notes

## Research Bulletins

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The *Commentary*, *Research Notes*, *Special Articles* and *Research Bulletins* contained within have been accepted for publication by the Institute, which is not responsible for either the content or the views expressed.

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Alan Barrett, Yumiko Kamiya and Vincent O'Sullivan
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“Credit Requirements for Irish Firms in the Economic Recovery”  
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“Irish Fiscal Policy in Good Times and in Bad: Its Impact During Different Stages of the Economic Cycle”  
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“Nowcasting and the Need for Timely Estimates of Movements in Irish Output”  
*David Byrne, Ciara Morley and Kieran McQuinn.*

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## Summary Table

	2011	2012	2013	2014	2015
<b>Output (Real Annual Growth %)</b>					
Private Consumer Expenditure	-1.2	-1.2	-0.8	1.5	2.0
Public Net Current Expenditure	-2.1	-2.1	1.4	0.0	0.0
Investment	-2.9	5.0	-2.4	14.2	12.8
Exports	5.5	4.7	1.1	5.6	6.0
Imports	-0.6	6.9	0.6	4.5	5.0
Gross Domestic Product (GDP)	2.8	-0.3	0.2	5.0	5.3
Gross National Product (GNP)	-0.9	2.0	3.3	4.9	5.2

<b>Prices (Annual Growth %)</b>					
Consumer Price Index (CPI)	2.6	1.7	0.5	0.3	1.0
Growth in Average Hourly Earnings	1.9	0.9	1.1	1.3	1.3

<b>Labour Market</b>					
Employment Levels (ILO basis (000s))	1,848	1,835	1,880	1,914	1,965
Unemployment Levels (ILO basis (000s))	317	316	282	244	208
Unemployment Rate (as % of Labour Force)	14.6	14.7	13.1	11.3	9.6

<b>Public Finance</b>					
General Government Balance (€ bn)	-21.9	-14.3	-12.2	-7.1	-4.1
General Government Balance (% of GDP)	-12.8	-8.3	-7.0	-3.8	-2.1
General Government Debt (% of GDP)	99.0	111.4	116.1	113.5	106.0

<b>External Trade</b>					
Balance of Payments Current Account (€ bn)	0.1	1.5	6.6	8.5	11.2
Current Account (% of GNP)	0.1	1.0	4.5	5.5	6.8

<b>Demand</b>					
Final Demand	2.7	2.4	0.5	4.8	5.1
Domestic Demand	-0.7	-0.6	-0.3	3.7	4.0
Domestic Demand (excl. Stocks)	-1.7	-0.2	-0.7	3.7	3.9

## Summary

The fiscal and economic growth conditions underpinning the 2015 budget have improved quite significantly over the past quarter. In light of the recent trends observed in economic activity, we now revise upwards our growth forecasts for GNP to 4.9 and 5.2 per cent for 2014 and 2015 respectively. This improvement in the forecast is driven by a combination of better than expected performance in the net trade sector, a pick-up in investment levels and strong budgetary receipts. In a research note to the *Commentary* we highlight how the adoption of the “Nowcasting” methodology enhances our understanding of movements in Irish economic activity between the official release dates of the quarterly national accounts.

Notwithstanding the improvements in general macroeconomic conditions, the budget is still framed against a backdrop of Ireland’s relatively high debt to GDP ratio and current sovereign borrowing costs, which by any standards are exceptionally low. While low yields may be attractive in the short run, from the point of view of improved borrowing costs, over the long run the sustainability of these yields is very uncertain.

Up to recently the general consensus was that a significant fiscal correction was still required in order for the deficit in 2015 to be less than 3 per cent of GDP. The Irish government, as part of the EU-IMF programme of financial support, agreed in 2010 to reduce the size of the Irish deficit-to-GDP ratio, by 2015, to less than this rate. Our assessment now suggests that a deficit of 2.1 per cent of GDP will be attained in 2015 under a neutral fiscal scenario.<sup>1</sup> We believe that achieving this target in such circumstances is the optimal strategy for the economy at this point.

Given that €400 million in additional revenue will arise in 2015 due to water charges, a neutral budget policy implies that approximately €500 million is available for a consumption or investment package.<sup>2</sup> In the general assessment we argue that in such circumstances, the State should adopt an investment strategy which targets an increase in the number of social housing units. The multiplier effect associated with an investment package is more likely to consolidate the still nascent growth rates being experienced in the economy as

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<sup>1</sup> Fiscal neutrality means that demand in the economy is neither stimulated nor diminished by taxation and government spending.

<sup>2</sup> The extra €100 million is due to certain savings accruing from the Haddington Road Agreement.

opposed to, say, a consumption measure. Such a policy would also help tackle one of the most pressing economic and social policy concerns at this point namely, the supply-side of the residential property market.

Two Special Articles accompany this *Commentary*. In one article, the impact of fiscal policy on Irish output levels at different stages of the economic cycle is explored. It would appear that expansionary and contractionary fiscal policy measures have more impact on Irish economic activity in circumstances when the economy is operating below its potential. The results, which accord with certain international studies, are important in terms of how budgetary policy is framed.

In a second article a series of quantitative models are used to assess the present levels of credit extended in the Irish economy and likely future trends. Results suggest that, while the future stock of credit required in the Irish economy may not change significantly, the composition of the stock is likely to change somewhat with a reorientation of credit away from the residential and commercial construction sectors to other areas of the economy. The development of such models is particularly important as the Institute continues to achieve a greater understanding of the relationship between the financial sector and the real economy.



## National Accounts 2013

### A: Expenditure on Gross National Product

	2012	2013	Change in 2013		
	€ bn	€ bn	Value	Price	Volume
Private Consumer Expenditure	82.5	83.3	1.1	1.9	-0.8
Public Net Current Expenditure	25.9	26.0	0.1	-1.2	1.4
Gross Fixed Capital Formation	26.9	26.5	-1.4	1.0	-2.4
Exports of Goods and Services	182.5	184.1	0.8	-0.3	1.1
Physical Changes in Stocks	0.3	0.8			
<b>Final Demand</b>	<b>318.1</b>	<b>320.7</b>	<b>0.8</b>	<b>0.3</b>	<b>0.5</b>
less:					
Imports of Goods and Services (M)	147.1	147.7	0.4	-0.2	0.6
Statistical Discrepancy	1.7	1.8			
<b>GDP at Market Prices</b>	<b>172.8</b>	<b>174.8</b>	<b>1.2</b>	<b>1.0</b>	<b>0.2</b>
Net Factor Payments (F)	-31.5	-27.3			
<b>GNP at Market Prices</b>	<b>141.2</b>	<b>147.5</b>	<b>4.4</b>	<b>1.1</b>	<b>3.3</b>

### B: Gross National Product by Origin

	2012	2013	Change in 2013	
	€ bn	€ bn	€ bn	%
Agriculture	3.0	3.0	0.0	0.3
Non-Agriculture: Wages, etc.	69.5	71.9	2.3	3.4
Other	63.7	61.1	-2.6	-4.1
Adjustments: Stock Appreciation	-0.1	0.6		
Statistical Discrepancy	-1.7	-1.8		1.9
<b>Net Domestic Product</b>	<b>134.5</b>	<b>134.8</b>	<b>0.4</b>	<b>0.3</b>
Net Factor Payments	-31.5	-27.3	4.2	-13.4
<b>National Income</b>	<b>102.9</b>	<b>107.5</b>	<b>4.6</b>	<b>4.5</b>
Depreciation	23.0	23.7	0.6	2.6
<b>GNP at Factor Cost</b>	<b>126.0</b>	<b>131.2</b>	<b>5.2</b>	<b>4.1</b>
Taxes less Subsidies	15.2	16.3	1.1	7.0
<b>GNP at Market Prices</b>	<b>141.2</b>	<b>147.5</b>	<b>6.3</b>	<b>4.4</b>

### C: Balance of Payments on Current Account

	2012	2013	Change in 2013
	€ bn	€ bn	€ bn
X – M	35.4	36.3	0.9
F	-31.5	-27.3	4.2
Net Transfers	-2.4	-2.5	0.0
<b>Balance on Current Account</b>	<b>1.5</b>	<b>6.6</b>	<b>5.1</b>
as % of GNP	1.1	4.5	3.5

## National Accounts 2014

### A: Expenditure on Gross National Product

	2013	2014	Change in 2014		
	€ bn	€ bn	Value	Price	Volume
Private Consumer Expenditure	83.3	85.0	2.0	0.5	1.5
Public Net Current Expenditure	26.0	25.9	-0.4	-0.4	0.0
Gross Fixed Capital Formation	26.5	31.1	17.1	2.6	14.2
Exports of Goods and Services	184.1	195.5	6.2	0.6	5.6
Physical Changes in Stocks	0.8	0.8			
<b>Final Demand</b>	<b>320.7</b>	<b>338.3</b>	<b>5.5</b>	<b>0.7</b>	<b>4.8</b>
less:					
Imports of Goods and Services (M)	147.7	155.6	5.4	0.9	4.5
Statistical Discrepancy	1.8	1.8			
<b>GDP at Market Prices</b>	<b>173</b>	<b>182.7</b>	<b>5.6</b>	<b>0.5</b>	<b>5.0</b>
Net Factor Payments (F)	-27.3	-27.9			
<b>GNP at Market Prices</b>	<b>147.5</b>	<b>155.5</b>	<b>5.4</b>	<b>0.5</b>	<b>4.9</b>

### B: Gross National Product by Origin

	2013	2014	Change in 2014	
	€ bn	€ bn	€ bn	%
Agriculture	3.0	3.1	0.1	2.5
Non-Agriculture: Wages, etc.	71.9	74.1	2.2	3.1
Other	61.1	66.4	5.3	8.7
Adjustments: Stock Appreciation	0.6	0.6		
Statistical Discrepancy	-1.8	-1.8		
<b>Net Domestic Product</b>	<b>134.8</b>	<b>142.4</b>	<b>7.6</b>	<b>5.6</b>
Net Factor Payments	-27.3	-29.0	-1.7	6.3
<b>National Income</b>	<b>107.5</b>	<b>113.4</b>	<b>5.9</b>	<b>5.5</b>
Depreciation	23.7	24.0	0.3	1.4
<b>GNP at Factor Cost</b>	<b>131.2</b>	<b>137.4</b>	<b>6.2</b>	<b>4.7</b>
Taxes less Subsidies	16.3	18.1	1.8	10.8
<b>GNP at Market Prices</b>	<b>147.5</b>	<b>155.5</b>	<b>8.0</b>	<b>5.4</b>

### C: Balance of Payments on Current Account

	2013	2014	Change in 2014
	€ bn	€ bn	€ bn
X – M	36.3	39.9	3.6
F	-27.3	-29.0	-1.7
Net Transfers	-2.5	-2.5	0.0
<b>Balance on Current Account</b>	<b>6.6</b>	<b>8.5</b>	<b>1.9</b>
as % of GNP	4.5	5.4	1.2

## National Accounts 2015

### A: Expenditure on Gross National Product

	2014	2015	Change in 2015		
	€ bn	€ bn	Value	Price	Volume
Private Consumer Expenditure	85.0	87.6	3.0	1.0	2.0
Public Net Current Expenditure	25.9	25.3	-2.4	-2.4	0.0
Gross Fixed Capital Formation	31.1	36.0	15.7	2.6	12.8
Exports of Goods and Services	195.5	209.4	7.1	1.0	6.0
Physical Changes in Stocks	0.8	1.0			
<b>Final Demand</b>	<b>338.3</b>	<b>359.2</b>	<b>6.2</b>	<b>1.0</b>	<b>5.1</b>
less:					
Imports of Goods and Services (M)	155.6	164.8	5.9	0.9	5.0
Statistical Discrepancy	1.8	1.8			
<b>GDP at Market Prices</b>	<b>182.7</b>	<b>194.3</b>	<b>6.4</b>	<b>1.0</b>	<b>5.3</b>
Net Factor Payments (F)	-29.0	-30.9			
<b>GNP at Market Prices</b>	<b>155.5</b>	<b>165.2</b>	<b>6.3</b>	<b>1.0</b>	<b>5.2</b>

### B: Gross National Product by Origin

	2014	2015	Change in 2015	
	€ bn	€ bn	€ bn	%
Agriculture	3.1	3.2	0.1	2.5
Non-Agriculture: Wages, etc.	74.1	77.2	3.1	4.2
Other	66.4	73.4	7.0	10.5
Adjustments: Stock Appreciation	0.6	0.6		
Statistical Discrepancy	-1.8	-1.8		
<b>Net Domestic Product</b>	<b>142.4</b>	<b>152.6</b>	<b>10.2</b>	<b>7.2</b>
Net Factor Payments	-27.9	-29.8	-1.9	6.6
<b>National Income</b>	<b>113.4</b>	<b>121.7</b>	<b>8.3</b>	<b>7.3</b>
Depreciation	24.0	24.5	0.5	2.1
<b>GNP at Factor Cost</b>	<b>137.4</b>	<b>146.2</b>	<b>8.8</b>	<b>6.4</b>
Taxes less Subsidies	18.1	19.0	0.9	5.2
<b>GNP at Market Prices</b>	<b>155.5</b>	<b>165.2</b>	<b>9.7</b>	<b>6.3</b>

### C: Balance of Payments on Current Account

	2014	2015	Change in 2015
	€ bn	€ bn	€ bn
X – M	39.9	44.5	4.6
F	-29.0	-30.9	-1.9
Net Transfers	-2.5	-2.5	0.0
<b>Balance on Current Account</b>	<b>8.5</b>	<b>11.2</b>	<b>2.7</b>
as % of GNP	5.4	6.8	1.6

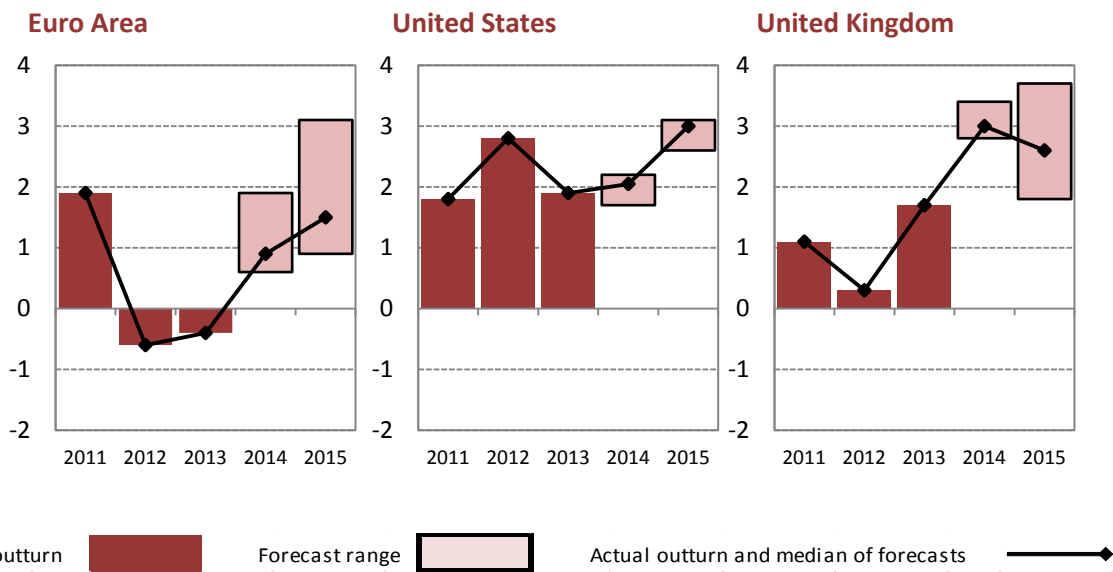


# 1

## The International Economy

Ireland’s recent strong exporting performance has benefited from relatively robust growth in two of its main trading partners: the United States and United Kingdom. The US economy is forecast to grow by 2.1 per cent in 2014 and by 3 per cent in 2015. Growth in the United Kingdom is expected to be 3 per cent in 2014 and 2.6 per cent in 2015. The Euro Area, on the other hand, continues to perform weakly in terms of growth. Weak Euro Area demand hampers the export environment for Ireland and for the other Euro Area countries, particularly countries such as France which are relatively dependent on intra-union trade.

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



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

### The Euro Area Economy

Real GDP in the Euro Area was unchanged in Q2 compared to Q1, at 0.0 per cent growth and grew by 0.7 per cent year-on-year in the second quarter of 2014. The recovery in the Euro Area appears to be losing momentum once again, and compares unfavourably with the recent outcomes in the United States and United Kingdom. The two largest members of the Euro Area, Germany and

France,<sup>3</sup> performed particularly poorly in Q2. Quarter-on-quarter growth in Germany was -0.2 per cent, while real GDP in France remained flat. Recent business and consumer sentiment indicators for these countries have been particularly negative, showing little sign of a return to stronger growth this year. Employment in the Euro Area grew by 0.2 per cent quarter-on-quarter in Q2.

Export sectors for Euro Area countries have been affected by the strength of the euro and by low growth within the bloc itself, something which has been undoubtedly exacerbated by the coordinated and prolonged fiscal consolidation programmes undertaken by many member countries. France, in particular, has been impacted by weak export growth. The French Government recently announced it would not meet its 3 per cent deficit-to-GDP target in 2015, needing a further extension of two years following an earlier extension in 2013.

Annual inflation in the Euro Area, as measured by the *Harmonised Index of Consumer Prices*, was 0.3 per cent in September, falling from 0.4 per cent in August. Core inflation, excluding energy, food, alcohol and tobacco, fell to 0.7 per cent from 0.9 per cent. Energy prices fell by 2.4 per cent in September and 2 per cent in July, a return to the pattern of falling prices earlier in the year.

As discussed in the *Summer Commentary*, the European Central Bank (ECB) announced a series of new measures in June to return inflation to target and to stimulate growth. Further measures were announced in September, including an asset-backed securities (ABS) programme, a cut to the main refinancing rate to 0.05 per cent, and a reduction in the deposit rate to -0.2 per cent. The ABS programme would entitle Euro Area financial institutions to sell packaged loans, including mortgages and loans to companies and to the ECB. Further ABS programme details are due this month.

The ECB has announced its intention to increase the size of its balance sheet by approximately €1 trillion, split equally between outright asset purchases and liquidity injections via Targeted Long-Term Refinancing Operations (TLTROs). This would return the ECB's balance sheet to 2012 levels of approximately €3.1 trillion. The first TLTRO operation, in September, was a disappointment, however, with the ECB only lending €82.6 billion to Euro Area banks. The ECB's outlined plan for asset purchases does not constitute a full Quantitative Easing (QE)

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<sup>3</sup> Together, Germany and France accounted for approximately half of Euro Area nominal GDP in 2013.

programme due to the exclusion of sovereign bonds. It is also likely that further extensions to the ECB's programme will first focus on widening the scope for private sector debt, rather than sovereign debt. Previous *Commentaries* have argued that QE would have a stimulatory effect on growth and inflation and, in particular, would benefit Euro Area exporters through an exchange rate channel effect.

### The US Economy

Real GDP in the United States grew at an annual rate of 4.6 per cent in the second quarter of 2014, following a fall of 2.1 per cent in the first quarter. Exports rose by 11.1 per cent in volume terms year-on-year in Q2, compared with a fall of 9.2 per cent in Q1, while non-residential investment grew by 9.7 per cent in the quarter compared with 1.6 per cent annual growth in the first three months of the year. Real personal consumption expenditure was highlighted as one of the weakest performers in the US economy's sluggish start to the year. It rebounded in Q2, growing at a 2.5 per cent rate year-on-year.

The unemployment rate in the United States fell to 6.1 per cent in August from 6.2 per cent in July. The rate has fallen 1.1 percentage points over the past year and is close to a six-year low. This is despite the relatively disappointing growth in employment in August; the Labor Department's *Non-Farm Payrolls* survey showed job growth of 142,000. This represents the lowest employment growth in 2014 and contrasts with average monthly growth of 212,000. Instead of growth in jobs, it seems that falling labour force participation has driven the most recent decline in unemployment. The participation rate fell by 0.1 percentage points month-on-month to 62.8 per cent in August, matching the lowest participation rate since the late-1970s. Real wages in the United States were effectively flat in August; nominal wages rose 2.1 per cent year-on-year while inflation rose by 2 per cent.

The September meeting of the Federal Open Market Committee offered a positive outlook on the US economy, with some notes of moderation. The improving labour market situation is tempered by evidence of significant under-utilisation of labour. While investment and private expenditure are recovering, activity in the US housing market is lagging behind. As a result, the growth forecast was cut to between 2 and 2.2 per cent for 2014, and to between 2.6 and 3 per cent in 2015. The Fed left its benchmark interest rate at 0 to 0.25 per cent, while cutting its monthly asset purchase programme by \$10 billion, to \$15 billion from a peak of \$85 billion.

## The UK Economy

Real GDP in the United Kingdom grew by 0.9 per cent quarter-on-quarter in Q2 and by 3.2 per cent compared with the same quarter of 2013. The services sector continues to make the largest contribution to GDP growth in the UK; it grew by 1.1 per cent in the quarter, while production grew by 0.2 per cent, construction grew by 0.7 per cent, and agriculture shrank by 0.3 per cent.

Revisions to the *Quarterly National Accounts* for Q2 show that UK GDP declined 6 per cent from peak to trough in the recent recession, compared with the previous estimate of 7.2 per cent. The recovery has been subdued, taking 22 quarters from the beginning of recession for output to exceed its pre-downturn level. This marks the longest duration before recovery in output since the 1920s. While the economy has recovered in terms of output, it has not recovered in productivity terms. The National Institute of Economic and Social Research (NIESR) estimates that output per hour worked remains 4.5 per cent below pre-recession levels.

Unemployment has continued to fall in the UK, reaching 6.2 per cent for May to July 2014. This represents a fall of 0.4 percentage points on the previous quarter and a fall of 1.5 per cent with respect to the same period last year. The employment rate rose by 1.4 per cent over the year to 73 per cent, the highest rate since 2005. Meanwhile, the inactivity rate, i.e., the percentage of the working-age population not in the labour force, fell by 0.2 per cent year-on-year. Real wages have been falling in the UK since the second quarter of 2009, however. Between May and July 2014, nominal wages grew by 0.7 per cent year-on-year, while inflation rose by 1.6 per cent in the same period.

According to the Office for National Statistics, house prices rose by 11.7 per cent in the year to July, up from a 10.2 per cent increase in the previous month. Despite the state of the UK housing market, the Bank of England's Monetary Policy Committee has been reluctant to raise interest rates from their record low of 0.5 per cent because of low inflation and the weak growth in wages. Rather, the Bank of England has attempted to tackle the housing market using macro-prudential policies, such as thresholds on the ratios of loans and of interest payments to a borrower's income.



## The World Economy

NIESR's August *Global Economic Forecast* has revised down world economic growth to 3.5 per cent in 2014 and 3.7 per cent in 2015. NIESR focuses on the problems posed to monetary policy by the contrast between buoyant financial markets and low growth and inflation. As discussed above, the sluggish and uneven recovery in the Euro Area for instance, with its stagnant wages and elevated levels of unemployment, implies a need for a more accommodative monetary policy. NIESR argues that these weaknesses, and the risk of a Euro Area deflationary spiral, outweigh the importance of the developments in asset markets, while suggesting that greater use of macro-prudential policies may be appropriate to deal with the latter.

# 2

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## Growth, Output and Investment

The recent *Quarterly National Accounts* (QNA) show the Irish economy growing at a strong pace. In volume terms GDP increased by 7.7 per cent, with GNP, our preferred measure, growing by 9 per cent. While the *Quarterly National Accounts* are subject to revision, and are stronger than anticipated, they do confirm our view that the Irish economy is experiencing strong growth at present. In a Research Note in this *Commentary*, Byrne, McQuinn and Morley illustrate the extent to which the “Nowcasting” methodology, recently adopted by the Institute, demonstrated the pick-up in growth rates in the economy in Q2 2014.

The increase in the growth rates contained in this *Commentary* is due to a number of factors: the net trade position continues to improve, while it would appear that investment and consumption are also beginning to register significant growth. This means that the recovery being experienced in the economy is now more broadly based. The improved rate of economic activity is also reflected in better than expected budgetary receipts across a number of areas. This is, particularly, the case for taxation items, such as social insurance contributions which are closely correlated with developments in the labour market.

Given the issues highlighted in previous *Commentaries* concerning the measurement of Irish output growth, we continue to concentrate on GNP as our main indicator of Irish economic performance. The international environment remains important for Irish economic outlook. It seems likely that final demand will grow by rates similar to GNP in both 2014 and 2015. However, based on the forecasts it now seems increasingly likely that growth will be driven by both the domestic economy and the external sector. Export volumes are forecast to grow by 5.6 and 6 per cent in 2014 and 2015. Given the improvement in the domestic economy, demand is forecast to grow by 3.7 per cent in 2014 and by 4 per cent in 2015. These growth rates follow six years of contraction in domestic demand. On the back of this, growth of 4.9 per cent is forecast for GNP in 2014 and 5.2 per cent in 2015.

The most recent data point to a strong pick-up in activity across the different sectors of the economy in the second quarter. Our view, as shown in Table 1, is that output growth will continue into 2015, although the pace of this growth may

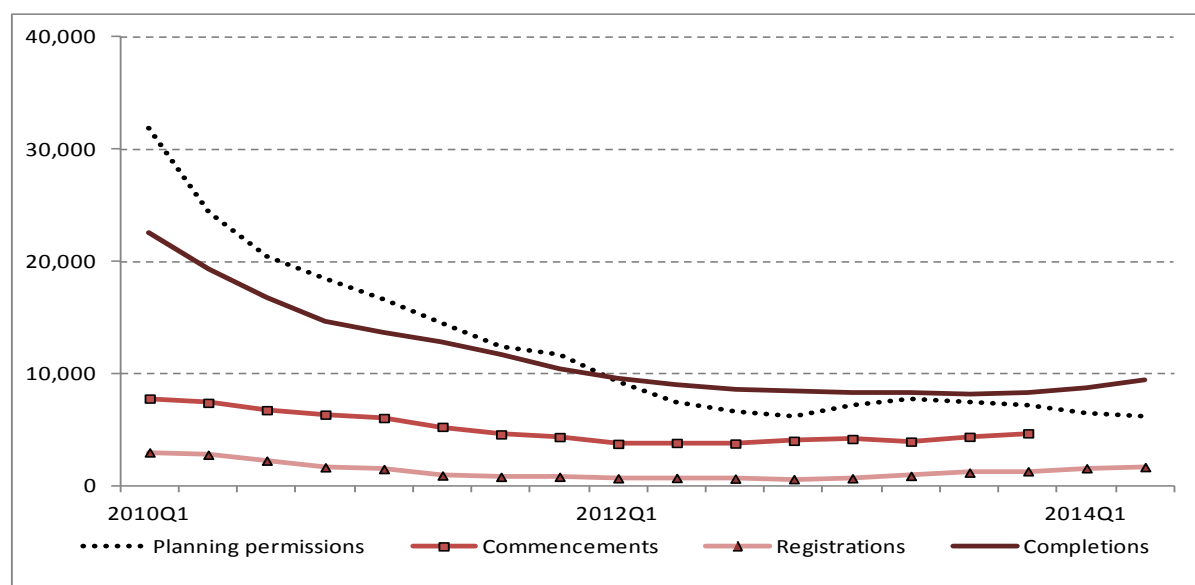
be more moderate than the recovery shown in 2014. The pharmaceutical “patent cliff” impacted on growth in the distribution, transports, software and communications sector in 2013 and may well have some smaller effects in 2014. Our assumption is that these effects will not have any significant impact on growth in 2015. We also expect that growth in “Other Services” will continue. Thus, gross value added at factor cost is expected to grow by 4.5 per cent in 2014 and by 5.4 per cent in 2015.

**TABLE 1** Industry and Output

	2012	2012	2013	2014	2015
	Value	Volume Change			
	€ bn	%	%	%	%
Agriculture	3.8	-12.6	16.5	10.0	4.0
Industry	39.6	-2.1	-2.3	3.0	3.0
Distribution, Transport, Software and Communications	41.0	1.0	-5.2	7.0	5.0
Public Administration and Defence	6.5	-2.6	-2.2	-1.0	-0.5
Other Services	65.7	2.7	2.4	3.4	6.8
<b>GVA at Factor Cost</b>	<b>157.5</b>	<b>-0.5</b>	<b>-0.4</b>	<b>4.5</b>	<b>5.4</b>

The QNA suggest that investment recorded strong growth in the second quarter of this year, with strong growth in Building and Construction being the main driver of the increase. This is not surprising given the present low rate of investment by historical standards noted in the *Summer Commentary*. Data on new house registrations and housing completions indicate that there has been some pick-up in activity in the residential market. Taking these indicators in conjunction with the strength of the sector as shown in the QNA, we have revised upward our level of housing completions for both 2014 and 2015 to 11,500 and 18,000 respectively. However, as we have outlined in previous *Commentaries*, a key factor in determining the level of housing completions will be the availability of credit. In addition, while these forecasts suggest that supply will increase, the level of completions remains somewhat below the level of expected new house formation of approximately 25,000 new households per annum.<sup>4</sup> This is one of the reasons why we advocate the investment package outlined in the General Assessment of this *Commentary*.

<sup>4</sup> Duffy, D., D. Byrne and J. FitzGerald, 2014. “Alternative Scenarios for New Household Formation in Ireland”, *Quarterly Economic Commentary*, Special Article, Spring.

**FIGURE 2** Housing Market Indicators

Sources: Central Statistics Office and the Department of Environment.

Continued positive Foreign Direct Investment flows, economic growth and the undertaking of previously deferred investment activity means that we expect all other components of investment to grow over the forecast period as is evident from Table 2. Thus, the volume of overall investment is expected to grow by over 14 per cent in 2014 and by close to 13 per cent in 2015.

**TABLE 2** Industry and Output

	2012	2012	2013	2014	2015
	Value	Volume Change			
	€ bn	%	%	%	%
Housing	3.0	-22.6	3.5	4.2	22.0
Other Building	6.0	12.7	18.3	26.5	18.6
Total Building and Construction	9.4	-1.5	14.1	19.5	19.2
Machinery and Equipment	17.6	8.8	-11.2	10.6	8.0
<b>GVA at Factor Cost</b>	<b>26.9</b>	<b>5.0</b>	<b>-2.4</b>	<b>14.2</b>	<b>12.8</b>

Source: ESRI Forecasts.

# 3

## Prices and Consumption

### Prices

In August, annual inflation in Ireland was 0.4 per cent according to the Consumer Price Index (CPI). Mortgage interest payments fell by 9.8 per cent in the year to August due, in the main, to falling interest rates and, in particular, to the number of tracker mortgages in the Irish housing market. If mortgage interest repayments are excluded from the CPI, the inflation rate was 1.0 per cent year-on-year in August. The cost of housing<sup>5</sup> remained roughly constant in the year to August, growing by 0.3 per cent; however this can, in large part, be attributed to falling mortgage interest charges offsetting the 8.7 per cent increase in private rents. *Education, Alcoholic Beverages and Tobacco* and *Miscellaneous Goods and Services* were the consumption groupings with the most significant growth in prices in the year to August.

The early estimate of the Harmonised Index of Consumer Prices (HICP) for September showed that the annual Euro Area inflation rate was 0.3 per cent. The full HICP results for August showed that Ireland had the 11<sup>th</sup> highest inflation rate (0.6 per cent year-on-year) of the 28 European Union Member States; this emphasises how low inflation currently is in Europe. The United Kingdom had the highest rate, 1.5 per cent, while eight member States had falling prices in August. Falling energy prices have provided a significant contribution to reduced rates of inflation in recent months. Energy prices fell by 2.4 per cent in the Euro Area in September, 2 per cent in August and by 1 per cent in July. The pattern of falling energy prices had been interrupted temporarily in June due to oil supply fears as a result of the ongoing conflict in Iraq and Syria.

Our forecasts for the CPI, HICP and Personal Consumption Deflator for 2014 and 2015 are included in Table 3. We expect inflation to remain low in Ireland in 2014 before rising moderately in 2015.

<sup>5</sup> We refer to the cost of housing as the cost of renting accommodation, or of mortgage payments on owner-occupied housing. This is distinct from the price of housing, which is measured by the Central Statistics Office's *Residential Property Price Index*, and has risen by 14.9 per cent in the year to August 2014.

TABLE 3 Inflation Measures

	2012	2013	2014	2015
	Annual Change			
	%	%	%	%
CPI	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.

### Consumption

According to the *Quarterly National Accounts*, personal consumption has risen by 1.3 per cent in volume terms in the first half of 2014 with respect to the first half of 2013. Based on the performance this year of indicators such as retail sales, car sales and consumer sentiment, we forecast consumption to grow by 1.5 per cent in real terms in 2014 and by 2 per cent in 2015. We forecast expenditure on private consumption to be €85 billion in 2014 and €87.6 billion in 2015, representing growth of 2 per cent and 3 per cent, respectively (see Forecast Table A3: Personal Disposable Income).

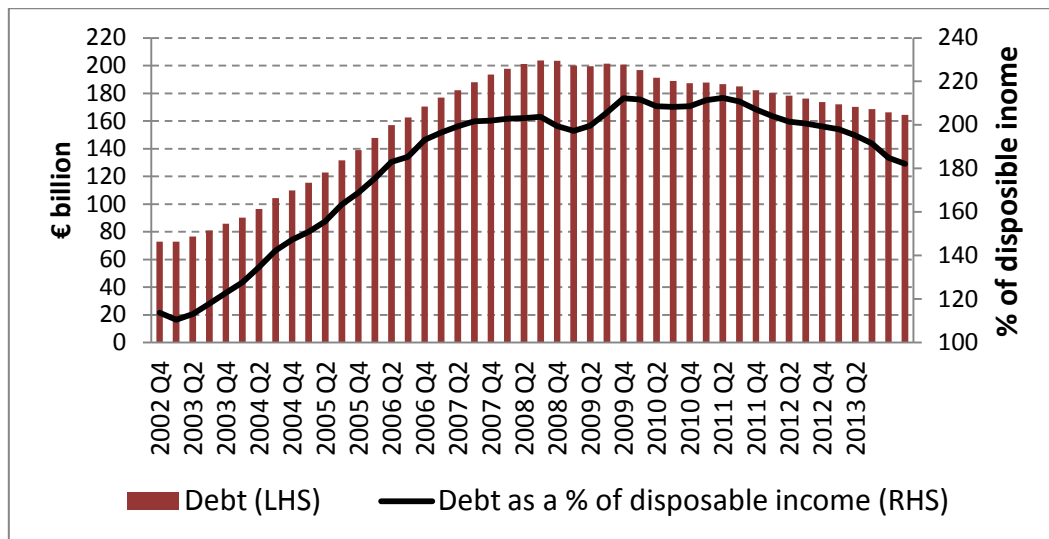
Retail Sales rose by 8.6 per cent in volume terms year-on-year in July 2014. There has been annual volume growth in excess of 5 per cent in each month this year, while October 2013 was the last month to register a volume fall in sales. Excluding car sales from the total, retail sales grew by 3.1 per cent annually in July. Car sales have provided a large contribution to the growth in retail sales in 2014; 82,518 new private cars were licensed in the year to August, a 30.3 per cent increase over the same period on 2013. In addition, there has been a 47.6 per cent increase in the licensing of new goods vehicles. During 2013, sales of second-hand (imported) cars grew strongly while sales of new cars fell compared to the previous year. This relationship has been reversed in 2014, with growth in the sales of second-hand cars moderate by comparison with new car sales. This suggests a stronger recovery in consumption this year than in 2013.

The KBC Ireland/ESRI *Consumer Sentiment Index* showed a trend increase, as represented by the three-month moving average of the series, to 85.9 from 83.3 in July. The monthly reading for the series in August was 87.1, a slight decrease from 89.4 in July. Consumer Sentiment has risen significantly in 2014, with 12 consecutive months of annual increases in the level of the index. This leaves the series currently at levels last seen in 2007. Consumers have become more

positive both in terms of their views of the current state of the economy and of the outlook over the following twelve months.

The Central Bank of Ireland’s most recent *Quarterly Financial Accounts* show that household deleveraging continued in the first quarter of 2014, with the stock of household debt declining by 1.2 per cent, or €1.9 billion, in the quarter. As shown in Figure 3, household debt has been falling since the fourth quarter of 2009, and is at its lowest level since the fourth quarter of 2006. Figure 3 also depicts a measure of debt sustainability: the ratio of debt to Gross Disposable Income. This fell 3 percentage points to 182.3 per cent, being driven mainly by the fall in debt. Another debt sustainability measure is debt to total household assets. This fell by 0.4 percentage points to 24.1 per cent, due also to an increase in the value of household assets. The Nationwide UK (Ireland)/ESRI *Savings Index* survey of saving behaviour among Irish consumers has found, in each month since its inception in 2010, that the most common preference for use of surplus money has been paying-off debt. This tallies with the deleveraging shown in Figure 3. As discussed in the *Summer Commentary*, recent research implies that deleveraging, while making the household debt situation more sustainable, proves a drag on household consumption levels in Ireland.

**FIGURE 3** Household Debt and Sustainability



Source: Central Bank of Ireland.

# 4

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## Exports, Imports and the Balance of Payments

### Exports

It appears that the recovery in Irish export performance through 2014 is gathering a pace.<sup>6</sup> Recent data from the CSO indicates a solid recovery in goods exports in the first half of 2014 with significant growth, year-on-year, in the export of both goods and services at 15.9 and 9.9 per cent respectively in the year to June. Much of this growth is attributable to a bounce-back in the pharmaceutical sector; however, non-pharmaceutical exports also saw improvements, up 1.5 per cent year-on-year driven by a 10.2 per cent rise in food exports. Overall, total exports were up 13 per cent year-on-year in the year to June.

With the Euro Area market accounting for 35 per cent of Irish goods exports, continued low growth in the Euro Area could have a negative impact on export growth into 2015. However, the UK and the US, which are Ireland's largest export markets, accounting for 39 per cent of exports combined, are expected to post solid GDP growth this year. This may offset any potential negative impact from the rest of Europe.

With the international environment expected to show continued recovery in 2014, and given the recent export data released in the *Quarterly National Accounts*, we forecast strong improvements in the volume growth of merchandise exports through 2015 of 8.9 per cent with similar strong gains in service sector exports. As can be seen from Table 4, on the basis of these forecasts, we are projecting an increase in the volume of total exports of 5.6 per cent in 2014 and 6 per cent in 2015.

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<sup>6</sup> New problems are arising in interpreting the published data on trade. In particular, some goods are being processed in Ireland on contract for foreign-based firms and the related import of the materials and the export of the final product are excluded from merchandise trade in the national accounts. This is because the goods at all time remained the property of a foreign owner. The net payment to the Irish processor may then be included in services trade. A similar issue arises with goods processed abroad for Irish based manufacturers. This has apparently had a significant effect on the National Accounts for recent quarters.



**TABLE 4** Exports of Goods and Services

	2012	2012	2013	2014	2015
	Value	Volume Change			
	€ billion	%	%	%	%
Merchandise	97.1	1.0	-4.1	7.5	8.0
Services:					
Tourism	3.0	-3.3	9.5	4.0	4.0
Other Services	87.3	7.1	3.8	3.6	3.8
Total Services	90.3	9.2	7.0	3.6	3.8
<b>Exports of Goods and Services</b>	<b>182.5</b>	<b>4.7</b>	<b>1.1</b>	<b>5.6</b>	<b>6.0</b>

Sources: Central Statistics Office and ESRI Forecasts.

### Imports

We continue to see moderate gains in imports through Q3 2014 with year-on-year growth, in volume terms, in June 2014 of 5.7 per cent. CSO data suggest that these gains have been driven mainly by increases in Machinery and Transport Equipment which rose 13.5 per cent in the first half of 2014 compared to the same period in 2013. This is indicative of the increased investment noted in Chapter 2.

As highlighted in the *Summer Commentary*, a major difficulty in interpreting these data is caused by the importing of new aircraft. This occurs at irregular intervals and could potentially have a significant impact on the overall import bill in any particular month or quarter. Ryanair began importing 180 new Boeing 737s in September 2014 which may, in time, add between €1 billion and €1.5 billion to the import bill. We have taken this into account in our forecast of a 4.5 per cent volume increase in imports in 2014 and a slightly higher increase of 5 per cent in 2015, presented in Table 5. Ryanair has also recently ordered a further 200 Boeing 737 planes, which will have a further impact on the import bill later in the decade. Another significant factor in the growth in imports this year continues to be the increase in imports of motor vehicles, reflecting the major pick-up in car sales this year.

**TABLE 5** Imports of Goods and Services

	2012	2012	2013	2014	2015
	Value	Volume Change			
	€ bn	%	%	%	%
Merchandise	54.6	7.0	3.7	7.2	7.5
Services					
Tourism	4.6	-7.1	-0.9	1.2	1.5
Other Services	82.5	2.2	1.0	2.8	3.4
Total Services	92.5	6.8	-1.2	2.7	3.3
<b>Imports of Goods and Services</b>	<b>147.1</b>	<b>6.9</b>	<b>0.6</b>	<b>4.5</b>	<b>5.0</b>

Sources: Central Statistics Office and ESRI Forecasts.

### Balance of Payments

The previous sections highlight the continuing improvement in the current account, reflecting the ongoing contribution to growth in the economy from foreign demand for Irish goods and services. The Balance of Payments current account surplus was €2.94 billion in Q2 2014 – an increase from €1.33 billion in Q2 2013. This increase in the surplus is critical in terms of the sustainable nature of the growth recovery and the economy's ability to pay down its very large foreign debt.

We believe that much of the growth in the surplus arises from the strong export performance of other, non-pharmaceutical, sectors of the economy. For example, Food and Live Animals and Miscellaneous Manufactured Articles each grew by 9.2 and 3.4 per cent respectively in the first six months of 2014 compared with the same period of 2013. This reflects a major boost to the economy from external demand, a boost that is difficult to pick up from the distorted data on exports.

For 2014 and 2015 we envisage a further improvement in the current account surplus to 5.5 per cent of GNP in 2014 and 6.8 per cent of GNP in 2015, see Forecast Table A5 in the Appendix. When account is taken of the redomiciled PLCs, there was a current account deficit, expressed as a percentage of GNP, of 0.5 per cent in 2013. This is forecast to become a current account surplus of 0.7 per cent in 2014, rising to 2.3 per cent in 2015. The fact that the surplus is forecast to continue to rise through 2014 and 2015, in spite of some growth in domestic demand, reflects the fact that external demand is expected to continue to play a significant role in driving growth in the economy.

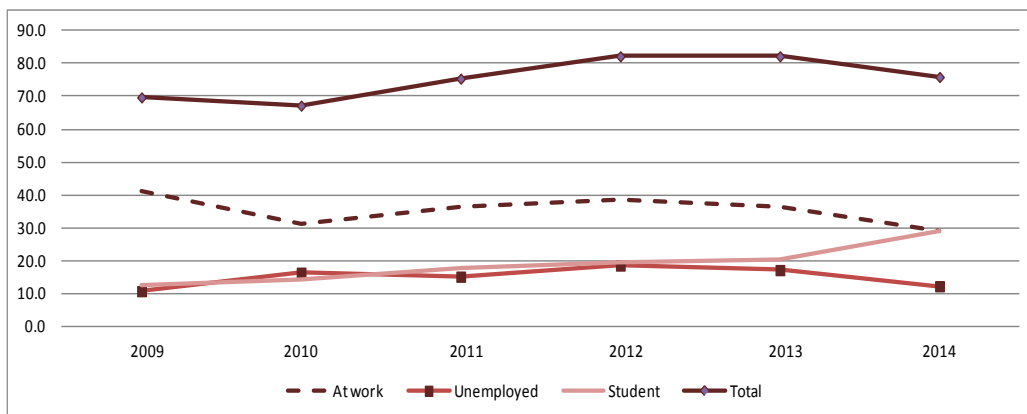
# 5

## The Labour Market and Earnings

The Irish labour market continues to display positive trends into the third quarter of 2014. Employment increased by 1.7 per cent, or 31,600, in the year to 2014 Q2, bringing total employment in the economy to 1,901,600. The majority of new jobs created up to this point have been full-time positions, with an increase of 2.4 per cent, while there has been a decrease in part-time employment of 0.4 per cent. Following these developments, the seasonally adjusted unemployment rate from the most recent *Quarterly National Household Accounts (QNHS)* for Q2 was 11.5 per cent, down from 12 per cent in the previous quarter.

On a seasonally-adjusted basis, the Live Register recorded a monthly decrease of 4,700 in September 2014, leaving the standardised unemployment rate at 11.1 per cent. Although the Live Register is not designed to measure unemployment, this rate mirrors that of the official measure from the QNHS for Q2 2014 of 11.5 per cent. The data also indicate that, for August 2014, the number of persons aged 25 and over on the Live Register decreased by 7.3 per cent year-on-year, while the number of persons aged under 25 years of age decreased by 14.5 per cent over the same period. Annual decreases in this age bracket have occurred in all months since July 2010, while the number of persons aged 25 and over on the Live Register has fallen year-on-year for all months since July 2012.

**FIGURE 4** Emigration Classified by Principle Economic Status (000's)

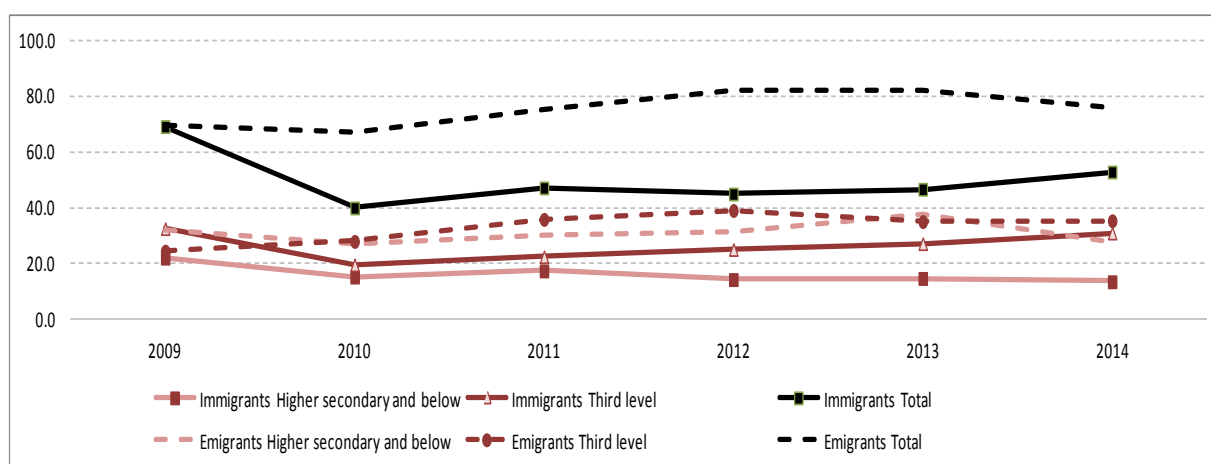


Source: Central Statistics Office.

With net emigration declining in both the twelve months to April 2013 and April 2014, it is employment rather than emigration which explains the declining unemployment rates in these years, in the main. In addition, as shown in Figure 4, fewer than 1 in 5 emigrants in the year to April 2014 were unemployed prior to departure. Emigration did, however, keep the unemployment rate in Ireland from rising further than it did. Participation in Labour Market Activation Programmes has only provided a marginal contribution to the decline in the unemployment rate in the 12 months to July 2014, with an increase of 524 persons on such schemes compared with the increase in employment of 31,600.

The most recent Population and Migration Estimates, which give a breakdown of immigration, emigration and net migration by education level and economic status, show that emigration, in the 12 months to April 2014, is estimated to have fallen to 81,900 from 89,000 in the year to April 2013. Of this number, 40.7 per cent were Irish nationals and a breakdown of emigration by level of education shows that 35 per cent of those leaving Ireland (both Irish and non-nationals) have a third level education (see Figure 5). Since 2010 we have seen growth in the immigration of graduates to Ireland, with proportionally higher educational attainment among those coming to Ireland than emigrants from Ireland. This is compared to a situation in the 1980s, highlighted in the *Winter Commentary*,<sup>7</sup> which saw more educated emigrants leave Ireland than immigrants enter Ireland.

**FIGURE 5** Emigration Classified by Education Attainment (000s)



Source: Central Statistics Office.

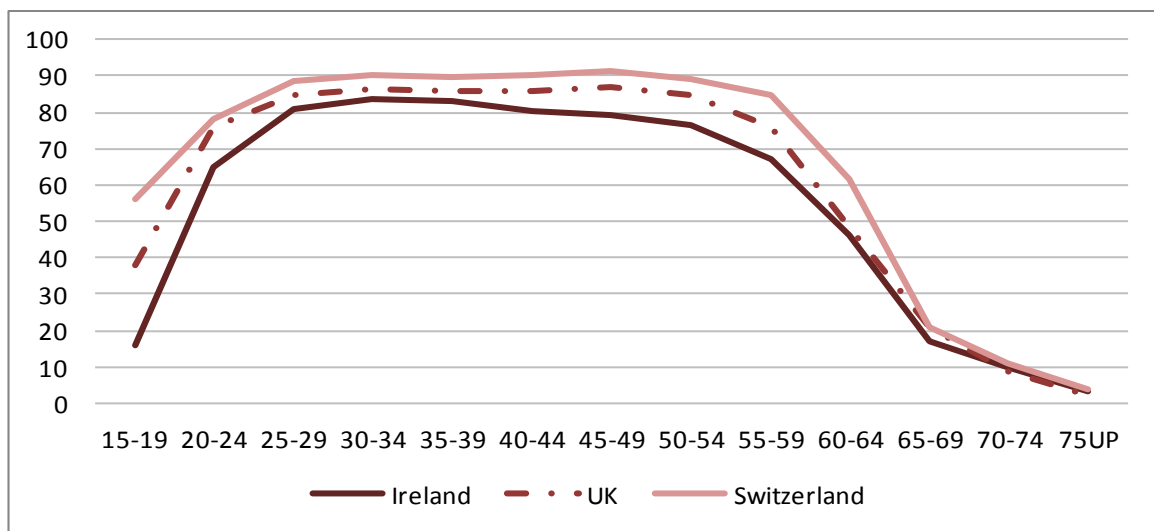
<sup>7</sup> See “Educational Attainment and the Labour Market” by John Fitz Gerald, Winter 2013 *Quarterly Economic Commentary*. <http://www.esri.ie/UserFiles/publications/QEC2013WIN.pdf>

Higher emigration levels impact the labour force by diminishing the working age population. Up to the start of 2008, 65,000 or more were being added to the Irish labour force on an annual basis, driven primarily by net migration. Between Q2 2013 and Q2 2014 there was a negative demographic effect on the labour force resulting in a decline of 9,300. This was primarily concentrated in both the 20-24 and 25-34 age groups.

The Irish labour market is also experiencing changes in participation rates. For example, negative trends in participation rates have impacted on employment levels with the overall participation rate falling from 60.5 per cent in Q2 2013 to 60 per cent in Q2 2014.

More generally, it is worth observing that Irish participation rates in 2013 across all, bar the very oldest, age cohorts are somewhat below those of leading international comparator countries. For example, in Figure 6 we plot the participation rate for each cohort from the 15 to 19 age bracket all the way up to the 75 year and over age group for Ireland vis-à-vis that of the labour market in the United Kingdom and Switzerland, both of which have relatively high participation rates. From a policy perspective, it is clear that a significant increase in Irish employment levels could be attained through increasing participation rates at almost all ages in the domestic labour market.<sup>8</sup>

**FIGURE 6** Irish, UK and Swiss 2013 Labour Force Participation Rates for All Age Cohorts (%)



Source: European Commission.

<sup>8</sup> This is very much reliant, however, on the creation of new jobs and requires that the labour supply readily increases as the economy grows in order to avoid potentially higher unemployment levels as a result of higher participation rates with no new job creation.

The number of employees in the public sector declined by 1 per cent in the year to Q2 2014, bringing the total number of employees to 374,300. The total reduction in employment in this sector over the three years from Q2 2012 to Q2 2014 was just over 8 per cent.

Table 6 outlines the labour market forecasts for the remainder of 2014 and 2015. Based on the results from the most recent QNHS and updated figures for 2013, we forecast that the total number at work will continue to grow in 2014 and 2015. The unemployment rate will continue to decrease this year, and we forecast a rate of 9.6 per cent for next year. We anticipate that growth in both external demand and in investment will continue to drive employment in both the Services and Construction sectors. The decrease in net migration between 2014 and 2015 is mainly due to the forecast growth in employment rates.

**TABLE 6** Employment, Unemployment and Net Migration

	Annual Averages, 000s			
	2012	2013	2014	2015
Agriculture	86	107	110	110
Industry	336	343	350	371
of which: Construction	102	102	108	119
Services	1,421	1,431	1,452	1,485
Total at work	1,835	1,880	1,914	1,965
Employment Growth Rate, %	-0.7	2.4	1.8	2.7
Unemployed	316	282	244	208
Labour Force	2,154	2,163	2,158	2,174
Unemployment Rate, %	14.7	13.1	11.3	9.6
Participation Rate, %	60	60.2	60.5	61
Net Migration	-34.4	-33.1	-21.4	-11.0

Sources: Central Statistics Office and ESRI Forecasts.

### Earnings

Preliminary estimates from the CSO on Earnings and Labour Costs for Q2 2014 reveal that Average Hourly Earnings continue to decrease and are down 1.7 per cent year-on-year. In the public sector, Health recorded the largest sub-sector percentage decrease in Average Hourly Earnings of 4.9 per cent while, in the private sector, Industry and Transportation and Storage continue to increase with Average Hourly Wages rising by 2 per cent year-on-year to Q2 2014 in each

sector. It is assumed, as in previous *Commentaries*, that the falling numbers in the public sector may help to explain the aforementioned falling Average Weekly and Hourly Earnings. If those leaving employment, particularly in the Health sub-sector, earned above the average wage then this change in the composition of the public sector workforce would inevitably lower the average earnings in this sector.

We use the ratio of forecast growth in the wage bill to growth in non-agricultural employment to forecast growth in average earnings of 1.3 per cent in both 2014 and 2015. It is worth noting that in the case of Agriculture, Forestry and Fishing estimates of employment are sensitive to sample changes over time. This is a result of the incremental introduction of the new sample based on the *Census of Population 2011* from Q4 2012 to Q4 2013.<sup>9</sup> Some caution is warranted in the interpretation of trends involving the period of the new sample's introduction as it lowers non-agricultural employment growth, raising our average earnings forecast. We forecast current transfers (social welfare payments) to fall in 2014 and 2015, in-line with the continued reduction in unemployment. Also, personal disposable income is predicted to grow in both years.

**TABLE 7** Personal Disposable Income

	2012	2013	2014	2015
	€ bn	€ bn	€ bn	€ bn
Agriculture etc.	3.0	3.0	3.1	3.2
Non-Agricultural Wages	69.5	71.9	74.1	77.2
Other Non-Agricultural Income	16.6	18.0	20.1	22.8
<b>Total Income Received</b>	<b>89.1</b>	<b>92.9</b>	<b>97.2</b>	<b>103.2</b>
Current Transfers	23.6	23.4	22.8	22.3
Gross Personal Income	112.7	116.2	120.0	125.4
Direct Personal Taxes	23.1	24.2	25.9	27.1
<b>Personal Disposable Income</b>	<b>89.7</b>	<b>92.0</b>	<b>94.1</b>	<b>98.3</b>
Consumption	82.5	83.3	85.0	87.6
Personal Savings	7.2	8.6	9.1	10.8
Savings Ratio	8.0	9.4	9.6	11.0
Average Tax Rate (%)	20.6	20.8	21.5	21.5

Sources: Central Statistics Office and ESRI Forecasts.

<sup>9</sup> See "Recent Employment Recovery", Conefrey, T. and S. Linehan, Central Bank of Ireland *Quarterly Bulletin* 02, April.

## 6

## Public Finances

One of the best indicators of the strength of the recovery in the economy over the course of the year has been the development in tax revenue. On a consistent basis each month, across nearly all tax heads, revenue has exceeded expectations. The revenue from social insurance contributions is a particularly good indicator of labour market activity and it has also exceeded expectations.

This outperformance on the revenue side has proved to be a good leading indicator of developments in the *Quarterly National Accounts*. As a result of the accumulation of new evidence, both from the exchequer returns and from CSO data, we have revised upwards our growth forecast for 2014 and 2015. In turn, this has implications for our forecast for the public finances for the rest of this year and for next year.

Table 8 Public Finances

	2013	2014	2014	2015	2015
	€bn	€bn	% change	€bn	% change
<b>Income</b>					
Taxes on income incl. Social insurance	28.5	30.4	6.8	32.0	5.1
Taxes on expenditure	19.0	20.6	8.5	21.6	4.5
Gross trading and investment income	3.4	3.2	-5.4	3.0	-6.9
Other Income	3.4	3.1	-7.1	3.6	14.7
Total receipts : Current	54.4	57.5	5.7	60.2	4.7
Total receipts : Capital	1.5	1.7	18.1	1.8	1.7
<b>Total receipts - Current and Capital</b>	<b>55.8</b>	<b>59.2</b>	<b>6.1</b>	<b>62.0</b>	<b>4.6</b>
<b>Expenditure</b>					
Subsidies	1.5	1.4	-9.8	1.4	0.0
National debt interest	7.6	7.8	3.6	7.8	-0.3
Transfer payments	27.1	26.5	-2.2	26.0	-1.8
Expenditure on Goods and Services	27.3	27.0	-1.2	26.8	-0.6
Total expenditure – Current	63.4	62.6	-1.3	62.0	-1.0
Total expenditure – Capital	4.7	3.7	-20.9	4.1	10.3
<b>Total expenditure - Current and Capital</b>	<b>68.1</b>	<b>66.3</b>	<b>-2.6</b>	<b>66.0</b>	<b>-0.4</b>
General Govt. Balance	-12.2	-7.1		-4.1	
<b>As % of GDP</b>	<b>-7.0</b>	<b>-3.8</b>		<b>-2.1</b>	

Sources: Central Statistics Office and ESRI Forecasts.



The strong growth in tax revenue so far in 2014 spans nearly all tax heads resulting in an estimated growth in current government revenue for 2014 of just over 6 per cent year-on-year. This strong increase in revenue occurs in spite of the negative effects on government revenue of the ending of the bank guarantee and the resulting reduction in payments by the banks to the exchequer of the related fees. The surge in car sales has been a contributor to the strong growth in VAT and excise tax revenue. Possibly the most surprising development is that revenue from income tax is likely to be up over 9 per cent year-on-year in 2014. The rapid growth in revenue from income tax is occurring in a year when there has been no change in tax rates. This suggests that, in spite of contra-indications from the CSO EHECS data on wage rates, the wage bill for the economy is growing at a reasonable rate. This mirrors the experience for 2013 when the wage bill shown in the *National Accounts* rose by 3.4 per cent, which was much more rapidly than that suggested by the CSO EHECS data.

On the expenditure side there is likely to be very little growth in national debt interest in 2014. This partly reflects the fact that, as existing debt is repaid, it is replaced by new debt at a much lower interest rate. In the case of transfers we are estimating a fall in total expenditure in 2014 of just over 2 per cent. This fall is driven by the reduction in the numbers in unemployment. It would be even greater were it not for the demographic pressures, which mean that the number of people aged over 65 is increasing each year, putting upward pressure on age-related payments, such as pensions.

The fall in government consumption arises from the continuing ban on recruitment and the effects of the Haddington Road Pay Agreement. The fall would have been even greater if the health sector had been able to achieve its Budget targets. There is a substantial fall in public investment in 2014, reflecting the effects of the decisions incorporated in the Budget for the year.

When taken together these trends will see government borrowing for 2014 coming in at just over €7 billion or 3.8 per cent of GDP, a full percentage point below what was envisaged in the Budget.

In preparing our forecasts for 2015 we have assumed a broadly neutral fiscal stance for the year. On this basis, the effect of water charges and the playing out of the Haddington Road Agreement will see an additional €500 million in net revenue being available to the government. Under current circumstances we feel

that priority in using these limited resources should be given to an investment package, which would specifically target increases in social housing. This, we feel, would be the optimal use of scarce resources for the Irish economy at this point.

In line with our definition of a neutral budget (unchanging tax rates and real allowances), we are assuming that the stamp duty on pensions continues next year.<sup>10</sup> In the current year it is expected to bring in over €600 million in revenue and current Department of Finance commitments call for a major reduction in this tax next year, amounting to around €500 million. If this cut were implemented it would leave no net resources for additional investment or other tax cuts. This highlights the fact that, even though we recommend a neutral budget for 2015, the government's room for manoeuvre next year is still strictly limited in spite of the economic recovery that is under way.

### **Fiscal Policy**

In November 2010 the then government published a medium-term fiscal framework designed to return the economy to a sustainable growth path by 2015. Since then the government has managed to outperform the targets in that framework each year and this outperformance has resulted in significant benefits through the enhanced credibility internationally of Irish fiscal policy.

The IMF, in its periodic advice on fiscal policy in Ireland, emphasised that what was important was to undertake the planned adjustment and that it should not be changed even if the outturn differed from the fiscal targets due to surprises in the economic forecasts. In fact the targets were exceeded each year and, as the IMF recommended, up to and including the Budget for 2013 the planned adjustment was fully maintained and the benefits of the outperformance were reflected in lower borrowing.

However, now that the economy has returned to growth and the original target for eliminating borrowing is close to achievement, it is important to develop a revised set of priorities for fiscal policy. While the EU rules provide guidelines that must be observed, they are not necessarily fully appropriate for Ireland's needs. In addition, the problems with the EU approach to measuring the structural

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<sup>10</sup> This tax has a number of undesirable properties and our assumption that it is maintained into 2015 at an unchanged rate is a strictly technical assumption.

balance, discussed in Bergin and FitzGerald (2014)<sup>11</sup>, highlight the need for a more appropriate domestic approach on which to base fiscal policy for the future.

Because of the high level of debt and the relatively favourable, but disimproving, demographics it would seem appropriate for fiscal policy to aim to run a modest surplus over the cycle over the rest of the decade. This surplus should also be sufficient to leave a margin to deal with unpleasant surprises. However, should excessive demand pressures build up in the economy at some future date, substantial surpluses could be appropriate.<sup>12</sup>

In line with the approach taken in Bergin and FitzGerald (2014), we have rerun the medium-term scenario underpinning the analysis in that paper using the HERMES model.<sup>13</sup> We have recalibrated the scenario to the latest revised forecasts for 2014 and 2015. Because of the substantial upward revision in the short-term forecasts there are knock-on effects on the estimates for growth and the public finances in that scenario.

On the basis of current developments in the economy, and a revised medium-term scenario out to 2020, we envisage growth of around 3.5 per cent a year between 2015 and 2020.<sup>14</sup> This relatively high rate of growth by EU standards would essentially be “temporary”. It would result from the continuing substantial gap between actual output and potential output in the economy. Today this gap is reflected in a number of imbalances in the economy – a significant and growing current account surplus, high unemployment, high levels of saving and disequilibrium in the housing market.

By the end of the decade this scenario would be sufficient to eliminate the current high level of unemployment, to maintain a sustainable current account balance, and generally to return the economy to a long-term equilibrium. As a result, by 2020 the rate of growth would fall back to the rate of growth in potential output.

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<sup>11</sup> Bergin, A. and Fitzgerald J. (2014). “*The structural balance for Ireland*”, Special Article, *Quarterly Economic Commentary*, Dublin: The Economic and Social Research Institute, Spring.

<sup>12</sup> Also if there were a temporary downturn at some date in the future it would leave the government some scope to relax fiscal policy.

<sup>13</sup> This scenario was itself based on the *Recovery Scenario* in the ESRI *Medium-Term Review: 2013-2020*.

<sup>14</sup> This is similar to the growth rate in the *Recovery scenario* in the *Medium-Term Review*.

On this basis, with a neutral budgetary policy in 2015 and 2016, the government should develop a small surplus of under 1 per cent of GDP in 2016. In 2017 and subsequent years, on the condition of stable growth, the government surplus should be between 1 and 2 per cent of GDP, broadly appropriate to the needs of the economy. Once achieved, this level of surplus would not be deflationary. In fact, while growth continued at between 3 and 4 per cent each year (until the unused capacity in the economy is exhausted) the maintenance of a significant surplus would be consistent with some limited budgetary stimulus.

Based on this, it would seem appropriate to run a neutral fiscal policy in 2015 and 2016. This would help return the economy to a sustainable growth path with suitable government surpluses in the second half of the decade. This would also leave adequate margin to deal with any negative economic shocks.

Such a trajectory for government borrowing and growth would be sufficient to bring about a major reduction in the debt GDP ratio by the end of the decade. However, other measures open to the government should be used to bring about a major additional once off reduction in the burden of debt over the rest of the decade.

In the *Medium-Term Review*, published last year, we incorporated a reduction in the debt GDP ratio of around 20 per cent of GDP in 2020 in our *Recovery* scenario. This arose from three different factors: the return to the government on selling off the remaining stakes in Irish banks; the establishment of Irish Water as a fully independent state-owned utility; and the sale of the Central Bank's holdings of Irish government debt. While it is still too early for the government to realise these gains, and the actual returns that will be obtained when they do so are unclear, it should remain a major objective of public policy to maximise the return on these assets. Also, when the assets are sold, the government should apply all of the revenue to reducing debt. While in some cases the revenue may be classified as current income in the National Accounts, it will be once-off in nature and should not be used to fund current expenditure or tax cuts.

On this basis, as well as running a budgetary surplus over the cycle for the rest of the decade, it would be sensible for the government to aim to reduce the net debt to GDP ratio to 70 per cent or less of GDP by the end of the decade. This would leave the economy much less vulnerable to future world economic shocks that might affect Ireland. Such a trajectory would also be consistent with a return to fiscally neutral Budgets and a return of the output level in the economy to its long-term potential, including a return to full employment.

# 7

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## Monetary and Financial Sector Developments

The upcoming European Central Bank Comprehensive Assessment (CA) is the major short-term policy issue confronting Irish financial institutions. The CA comprises three distinct elements – (i) an asset quality review, followed by (ii) a supervisory risk adjustment and finally (iii) a stress test. These elements will provide a comprehensive appraisal of the balance sheets of each of the major credit institutions operating in the Irish market. The objective of this analysis is to enhance the transparency of the European banking sector and to implement necessary corrective actions if required.

Both from an Irish and European perspective, the outcome of the CA is impossible to predict and comprehensive results are not expected until late 2014. However, in the case of Irish institutions, improvements in house prices over the past 18 months may prove very important in terms of the mortgage section of institutions' balance sheets. In the year to July, residential property prices at a national level, increased by 13.4 per cent. This compares with an increase of 12.5 per cent in June and an increase of 2.3 per cent recorded in the twelve months to July 2013. Duffy (2014) determined that the recovery in house prices in 2013 reduced the number of homes in negative equity by 45,000. The recent dramatic increase in Dublin house prices, by 23.1 per cent compared to a year earlier, will only serve to increase the number of mortgages exiting negative equity thus leading to a strengthening of the balance sheets of Irish credit institutions.

From the point of view of the small and medium enterprises (SMEs) and non-financial corporations (NFCs) component of Irish institutions' balance sheets, it is much more difficult to assess the possible degree of loan impairment. Nonetheless, the improvement in property prices and the overall improvement in economic conditions should have a positive impact on developments for the sector.

### Credit Risk and Extension

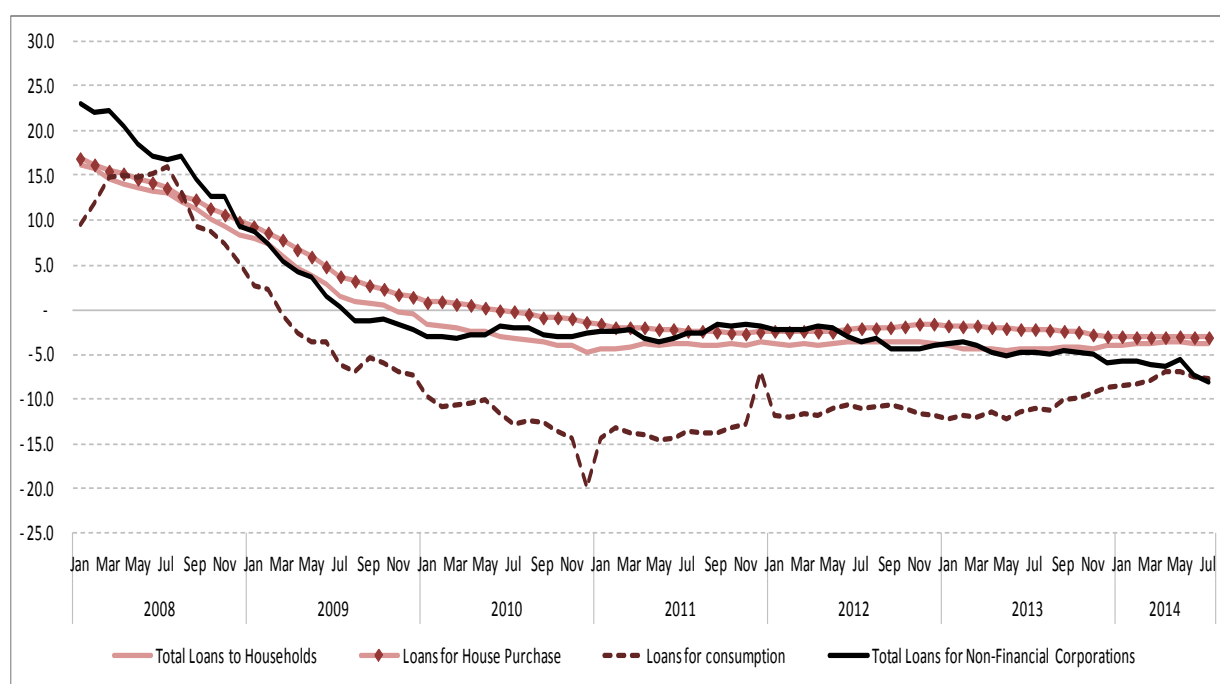
New lending by credit institutions to households and NFCs remains extremely weak in Q3 2014. The low levels of lending are still likely to be determined primarily by the high level of impaired loans. On an annual basis, lending to Irish

households continues to fall, decreasing by 3.9 per cent year-on-year to July 2014, as seen in Figure 7. This is consistent with the rate of decline observed in June and is the highest annual rate of decline since January of this year. Loans for house purchases also declined further in July at an annual rate of 3.1 per cent while the annual rate of decline in consumer loans is beginning to show modest improvements when compared to 12 months ago with a decline of 7.7 per cent year-on-year was observed. In a Special Article to this *Commentary*, Lawless, McInerney, McQuinn and O’Toole examine the credit requirements for Irish firms over the medium term.

Access to credit also remains a challenge for Irish resident NFCs with lending to this sector declining by 8.2 per cent year-on-year to July 2014 compared with an annual decrease of 7.3 per cent in June. Recent data from the Central Bank of Ireland indicate that while the sector is extremely indebted, almost 84 per cent of SMEs have a debt-to-turnover ratio of less than a third and one-third of all SMEs have no debt at all.

Overall, the outstanding stock of loans to the Irish private sector declined by approximately €9 billion during July 2014 which indicates that deleveraging amongst households and firms is still larger than the amount of new loans being issued.

**FIGURE 7** Lending to Irish Resident Households and Non-Financial Corporations (Annual % Change)



Source: Central Bank of Ireland.

Data from the Central Bank indicate that the number of mortgage accounts for principal dwelling houses (PDH) in arrears fell for the fourth consecutive quarter in Q2 2014. A total of 16.5 per cent of accounts were in arrears at the end of Q2, a fall of 4.7 per cent relative to Q1. Despite a further decline in arrears over 90 days there has been a continuing increase in very long-term arrears. In particular, PDH accounts in arrears over 720 days increased by 5 per cent in Q2 and currently account for 4.9 per cent of the total PDH mortgage accounts.

Buy-to-let (BTL) mortgage accounts in arrears over 90 days increased by 2.3 per cent during Q2 of the year with a quarter-on-quarter increase of 9.4 per cent in BTL accounts in arrears over 720 days. By June 2014, there were 14,536 BTL accounts in arrears over 720 days, with an outstanding balance of €4.5 billion. This is equivalent to 16 per cent of the total outstanding balance on all BTL mortgage accounts. The percentage of BTL accounts in arrears for more than 90 days has continued to increase from 20.4 per cent in June 2013 to 22 per cent in June 2014.

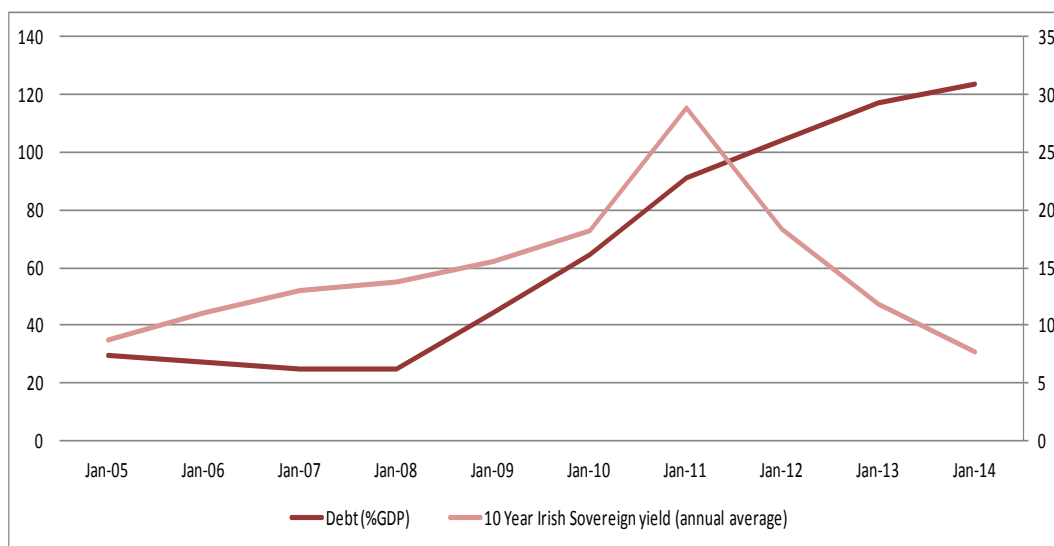
### **Irish Sovereign Bond Yields**

Bond yields on Irish sovereign debt have continued to decline through 2014 against the backdrop of both the continuing appetite for yields internationally and a number of recent positive developments affecting the Irish economy. In early 2014, credit rating agency Moody's upgraded its rating on Irish sovereign debt to investment grade following the government's announcement, in December 2013, of the conclusion of the EU-IMF programme. The eventual increase by all rating agencies, from sub-investment to investment grade means that certain investors are now able to purchase Irish sovereign bonds and this is having a direct effect on yield rates and the ease with which refinancing of Irish debt has been possible. However, confidence in the Irish sovereign bonds remains a function of both domestic and international considerations.

In September 2014 the European Central Bank (ECB) unexpectedly cut its main financing rate from 0.15 per cent to 0.05 per cent. This resulted in record low yields for both the 2- and 10-year Irish sovereign bonds, with the 2-year rate in particular falling into negative territory for the first time. Yields on the 10-year benchmark, which is the rate at which the state borrows, also reached new lows falling to 1.64 per cent. This means that the cost of borrowing for Ireland is below that for both the US and the UK and indicates that investors would rather earn zero yields on a short-traded Irish bond than have to pay for the right to deposit their money with the bank. While yields are low, they are high relative to countries like Germany, for example, due to the ratio of public debt to GDP which is still very high by international standards (see Figure 8).

In the short term the improvement in borrowing costs is a positive development for Irish sovereign bonds. However, over the medium to longer term, the sustainability of these low yields is questionable. As noted in previous *Commentaries*, any deterioration of international sentiment will have significant implications for the borrowing costs of both the State and domestic financial institutions. In light of the declining rates over the past 12 months, the National Treasury Management Agency (NTMA) has raised more than 80 per cent of its €8 billion target for this year, to complete pre-funding for 2015 through four issuances of 10-year treasury bonds. This, along with the success of the government in recently achieving agreement for the early repaying of loans to the IMF, is a highly prudent policy at this point.

**FIGURE 8** Debt to GDP Ratio and 10-Year Sovereign Bond Yield



*Source:* Department of Finance.

*Note:* Bond yields are reported on the right axis.

Other international concerns which may affect Irish debt yields include any adjustment by the US Federal Reserve in its programme of Quantitative Easing which could put upward pressure on international interest rates. Also, investors, in response to increased geopolitical concerns, may switch their bond holdings away from sovereigns such as Ireland to accepted “safe haven” assets such as US and German sovereign bonds. Any of these factors could see upward pressure on Irish sovereign bond yield rates.



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## General Assessment of the Irish Economy

The context for the 2015 budget is set against the backdrop of a number of changing and countervailing considerations. The release of the most recent Quarterly National Accounts indicates the pace of economic growth appears to be quickening somewhat and the related improvement in the fiscal accounts changes the scale of the potential policy action required. Up to quite recently, many commentators believed a significant correction was still necessary for a deficit of 3 per cent of GDP or less to be achieved in 2015. It now appears that a deficit of 2.1 per cent can be attained in 2015 with a neutral fiscal policy.

The case for maintaining fiscal discipline is clear; the Irish debt to GDP ratio is still one of the highest in the Euro Area, while borrowing costs associated with the debt are at a particularly low and arguably unsustainable level. Any deterioration in international market sentiment could see the cost of servicing the debt change quite dramatically.

We believe the most prudent budgetary strategy for 2015 is to adopt a neutral fiscal position, which would likely result in a deficit of 2.1 per cent. A neutral policy is warranted to balance the continued requirement for fiscal vigilance with the need to consolidate the growth recovery in the economy. It is worth noting that the Irish economy has been, and continues to be, the subject of certain intense contractionary pressures; fulfilling the terms of the 2010 EU-IMF programme of financial support necessitated a dramatic reduction in government expenditure occurring simultaneously during a period of significant deleveraging in both the household and financial sector. Thus, the effects on the economy of a further package of austerity cannot be ignored.

Furthermore, we believe that a neutral fiscal position should also be adopted in subsequent years, the result of which is likely to entail a moderate surplus being achieved in 2016 with a somewhat larger surplus in 2017. Recent trends, particularly in investment and exports, lead us to revise upwards our growth forecast for 2014 and 2015 to 4.9 and 5.2 per cent respectively for GNP. Our equivalent estimates for GDP are 5.0 per cent and 5.3 per cent. While the significant pick-up in growth rates announced in September may still be the subject of some revision at a later date, the 'Nowcasting' methodology adopted by the Institute and the subject of a Research Note by Byrne, McQuinn and

Morley<sup>15</sup> in this *Commentary* does indicate a significant rate of growth throughout 2014.

While this increase in growth is welcome it is necessary to temper expectations somewhat. The presence of a deficit in 2015 means that any increases in expenditure or reductions in taxation planned for next year will only be accomplished by offsetting measures elsewhere. This consideration is important in light of any easing of fiscal policy which may be contemplated.

Given that €400 million in additional revenue will arise in 2015 due to water charges, a neutral budget policy implies that approximately €500 million is available for a consumption or investment package. In this context, we feel priority should be given to an investment package, which would specifically target increases in social housing. This, we feel, would be the optimal use of scarce resources for the Irish economy at this point. We offer a number of reasons for this:

- a. Investment is still at a very low rate in the Irish economy. This has particular implications for the housing sector where (as noted in the *Summer Commentary*) prices and rents, particularly in the Dublin area, have escalated sharply over the past 12 months.
- b. The impaired nature of the financial sector and legacy issues from the financial crisis have had significant implications for the provision of credit to the supply-side of the market. Greater government involvement in the supply-side of the housing market would help to engender confidence in the damaged relationship between the financial sector and those seeking to develop and supply residential properties. On a practical level this could be implemented through Part V of the Planning and Development Acts.
- c. Curtailing future house price increases through greater supply would yield a number of benefits on an economy-wide basis, not least of which would be maintaining the recent improvements achieved in competitiveness.
- d. For a small open economy such as Ireland's, the multiplier effect of an investment stimulus has been shown to be more substantial than that of measures which would increase, say, household demand.<sup>16</sup> This is due to the relatively high level of imports which would normally ensue on foot of

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<sup>15</sup> Byrne D., K. McQuinn and C. Morley (2014). "Nowcasting and the Need for Timely Estimates of the Movements in Irish Output Levels", ESRI Research Note, *Quarterly Economic Commentary*, Autumn 2014.

<sup>16</sup> See *Medium-Term Review: 2013-2020*, ESRI Forecasting Series 12, Fitzgerald J. and I. Kearney (eds.) for example.

an increase in consumption. Maximising the growth impact of any such fiscal action taken at this point is a particularly important consideration when the recovery is still somewhat fragile in nature.

- e. In a special article to this commentary, Cronin and McQuinn examine the impact of Irish fiscal policy on economic activity. They focus on the implications of an increase in government consumption at different stages of the economic cycle and find it having a beneficial effect on activity when the economy is operating below its trend level.

More generally, the public finances section of this *Commentary* suggests that the Irish economy is likely to register budget surpluses in 2016 and 2017. This presents a certain challenge as to the framing of future budgetary strategy. During the Celtic Tiger era, the scale of the transaction-based taxation receipts from the property sector meant that the Irish State was in the unique position of jointly reducing personal taxation rates and increasing public expenditure. It is highly unlikely that the Irish Exchequer will be in such a position in the future. Consequently, specific choices will have to be made concerning budgetary policy in terms of the balance between possible cuts in taxation and increased government expenditure. In this regard, greater vigilance in meeting budgetary targets, particularly in the case of the health sector, is a prerequisite before any substantial increases in fiscal outlay in these areas is even considered.

One issue which urgently needs to be revisited is the future public sector pension liabilities of the State.<sup>17</sup> Almost the entire value of the National Pension Reserve Fund (NPRF) (€21 billion), which had been a highly prudent fiscal policy, was subsequently used in the programme of support agreed with the Troika where it was used to capitalise both Allied Irish Bank and the Bank of Ireland. It will be necessary to devote some element of any future surpluses to this issue. The need to do so is underlined by recent population forecasts of the European Commission which show that the proportion of people in the working age category of 15 to 64 will fall to 56 per cent in Ireland by 2050 from a peak in 2007 of almost 69 per cent.

The optimal strategy in addressing the pensions issue must also consider the likely future realisation of certain State financial assets. These include but are not restricted to the possibility of returns from both the €29.4 billion expenditure on Allied Irish Bank, Bank of Ireland and Irish Life and Permanent and the surplus income transferred from the Central Bank of Ireland to the Exchequer as part of

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<sup>17</sup> Certain reforms have already been conducted in this area such as the introduction in 2013 of the single public service pension scheme.

the bond swap agreement tied in with the liquidation of Irish Bank Resolution Corporation in February 2013. In any consideration of these issues, the ongoing large government debt to GDP ratio is an important factor; the possibility of using future budgetary surpluses and any future revenue accruing to the State to reduce the scale of the national debt may be considered as an alternative to the re-establishment of the original pension fund.

Accompanying the *Commentary* are two Special Articles. The first examines the effectiveness of Irish fiscal policy at different stages of the economic cycle. Cronin and McQuinn, show that increased government consumption expenditure has a more beneficial effect on economic activity in Ireland during the downturn phase of the cycle, a finding in line with recent international studies. Fiscal policy's effectiveness at different stages of the economic cycle, accordingly, should be borne in mind when formulating budgetary policy.

While there is some debate concerning the exact level of potential output and the output gap in the Irish economy at this time, there is evidence indicating that activity levels are still below their potential level. That the unemployment rate, rate of investment and level of total credit extension are below their long-run averages is supportive of this view. In these circumstances, the appropriate role for fiscal policy in economic activity deserves consideration. On the one hand, it needs to support fiscal sustainability and must operate within the constraints imposed by EU fiscal rules, including in respect of the size of the budget balance. On the other hand, budgetary policy will be able to prioritise particular expenditure and taxation measures over others and could be expected to exercise influence on the level of activity in the economy.

Cronin and McQuinn note that one area where work in this area could be expanded on would be to examine the impact of fiscal policy during credit cycles and the latter's interaction with the overall economic cycle. Recent research in the Bank of International Settlements (BIS)<sup>18</sup> has argued that information about the financial cycle should be incorporated into estimates of potential output and output gaps.

The second Special Article by Lawless, McInerney, McQuinn and O'Toole provides estimates of both the whole economy and individual sector credit level requirements in an Irish context. The paper uses two different approaches to forecasting Irish credit stocks: (i) the results of a macroeconomic model of the

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<sup>18</sup> In particular see Borio, C., P. Disyatat and M. Juselius (2013). "Rethinking Potential Output: Embedding information about the financial cycle", Bank of International Settlements (BIS) Working Papers No. 404.

Irish banking sector and (ii) sectoral models of credit demand. The latter approach takes into account the current over or under leverage rates of the different components of the Irish economy.

Both the aggregate and sectoral approaches give substantially similar results with total credit stocks estimated to remain relatively stable at their current levels over the near term, but with a movement in lending away from the property sector towards the expansion of credit to other areas of the economy.

There are a number of reasons why it is important to empirically model the levels of credit in the economy. The open nature of the Irish economy ensures that international capital can flow in and out of the domestic financial sector, thereby giving rise to the possibility of substantial fluctuations in the level of credit being provided. Thus, it is imperative that a series of quantitative tools be developed which assess whether the current level of credit is in line with that predicted by fundamental variables in the economy.

An additional reason to assess the level of credit in the economy is the increasing use of certain macro-prudential policy levers in an institutional context. For example, Basel III<sup>19</sup> uses the gap between the credit-to-GDP ratio and its long-term trend in a country as a guide for setting countercyclical capital buffers for banks in that economy. In order to properly calibrate these levers, it is essential to have an understanding of both the likely determinants of credit and future possible trends in the credit requirements of the economy in question.

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<sup>19</sup> Basel III is a macro-prudential framework developed by the Bank of International Settlements (BIS), which has been adopted by a variety of international regulatory bodies. For more details see M. Drehmann and K. Tsatsaronis (2014) “The credit to GDP gap and countercyclical capital: Questions and answers”, Bank of International Settlements (BIS) Quarterly Review, March.



# Detailed Forecast Tables

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

	2012	% change in 2012		2013	% change in 2013		2014	% change in 2014		2015
	€ bn	Value	Volume	€ bn	Value	Volume	€ bn	Value	Volume	€ bn
Merchandise	97.1	-5.4	-4.1	91.8	7.5	7.5	98.7	8.9	8.0	107.4
Tourism	3.0	10.4	9.5	3.3	4.5	4.0	3.5	5.0	4.0	3.7
Other Services	87.3	4.6	3.8	91.3	5.1	3.6	95.9	5.3	3.8	101.0
Exports Of Goods and Services	176.1	0.2	1.1	176.6	6.2	5.6	187.5	6.9	6.0	200.5
FISM Adjustment	6.4			7.5			8.1			8.9
Adjusted Exports	182.5	0.8	1.1	184.1	6.2	5.6	195.5	7.1	6.0	209.4

**FORECAST TABLE A2** Investment

	2012	% change in 2012		2013	% change in 2013		2014	% change in 2014		2015
	€ bn	Value	Volume	€ bn	Value	Volume	€ bn	Value	Volume	€ bn
Housing	3.0	6.5	3.5	3.2	7.6	4.2	3.5	25.9	22.0	4.4
Other Building	6.0	21.7	18.3	7.3	30.1	26.5	9.5	22.1	18.6	11.5
Transfer Costs	0.4	38.4	36.1	0.5	20.5	17.0	0.6	15.4	12.0	0.7
Building and Construction	9.4	17.4	14.1	11.0	23.1	19.5	13.5	22.8	19.2	16.6
Machinery and Equipment	17.6	-11.5	-11.2	15.5	12.9	10.6	17.6	10.3	8.0	19.4
Total Investment	26.9	-1.4	-2.4	26.5	17.1	14.2	31.1	15.7	12.8	36.0



**FORECAST TABLE A3** Personal Income

	2012		% change in 2012		2013		% change in 2013		2014		% change in 2014		2015
	€ bn	%	€ bn	%	€ bn	%	€ bn	%	€ bn	%	€ bn	%	€ bn
Agriculture, etc	3.0	0.3	0.0		3.0	2.5	0.1		3.1	2.5	0.1		3.2
Non-Agricultural Wages	69.5	3.4	2.3		71.9	3.1	2.2		74.1	4.2	3.1		77.2
Other Non-Agricultural Income	16.6	8.7	1.4		18.0	11.6	2.1		20.1	13.6	2.7		22.8
Total Income Received	89.1	4.2	3.8		92.9	4.7	4.4		97.2	6.1	5.9		103.2
Current Transfers	23.6	-1.2	-0.3		23.4	-2.5	-0.6		22.8	-2.1	-0.5		22.3
Gross Personal Income	112.7	3.1	3.5		116.2	3.3	3.8		120.0	4.5	5.4		125.4
Direct Personal Taxes	23.1	5.1	1.2		24.2	7.0	1.7		25.9	4.5	1.2		27.1
Personal Disposable Income	89.7	2.6	2.3		92.0	2.3	2.1		94.1	4.6	4.3		98.3
Consumption	82.5	1.1	0.9		83.3	2.0	1.7		85.0	3.0	2.6		87.6
Personal Savings	7.2	19.9	1.4		8.6	4.7	0.4		9.1	19.0	1.7		10.8
Savings Ratio	8.0				9.4				9.6				11.0
Average Personal Tax Rate	20.6				20.8				21.5				21.5

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

	2012		% change in 2012		2013		% change in 2013		2014		% change in 2014		2015
	€ bn	Value	Volume	%	€ bn	Value	Volume	%	€ bn	Value	Volume	%	€ bn
Merchandise	54.6	1.8	3.7		55.6	8.0	7.2		60.0	8.3	7.5		64.9
Tourism	4.6	-0.1	-0.9		4.6	3.7	1.2		4.8	5.1	1.5		5.0
Other Services	82.5	1.8	1.0		84.0	3.8	2.8		87.2	4.4	3.4		91.1
Imports of Goods and Services	136.6	1.3	0.0		138.3	5.3	0.0		145.7	5.9	0.0		154.2
FISM Adjustment	10.5				9.4				10.0				10.6
Adjusted Imports	147.1	0.4	0.6		147.7	5.4	4.5		155.6	5.9	5.0		164.8

**FORECAST TABLE A5** Balance of Payments

	2012	2013	2014	2015
	€ bn	€ bn	€ bn	€ bn
Exports of Goods and Services	176.1	176.6	187.5	200.5
Imports of Goods and Services	136.6	138.3	145.7	154.2
Net Factor Payments	-31.5	-27.3	-29.0	-30.9
Net Transfers	-2.4	-2.5	-2.5	-2.5
Balance on Current Account	1.5	6.6	8.5	11.2
As a % of GNP	1.0	4.5	5.5	6.8

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

	2012	2013	2014	2015
	000s	000s	000s	000s
Agriculture	86	107	110	110
Industry	336	342	350	371
Of which: Construction	102	102	108	119
Services	1,421	1,431	1,452	1,485
Total at Work	1,835	1,880	1,914	1,965
Unemployed	316	282	244	208
Labour Force	2,154	2,163	2,158	2,174
Unemployment Rate, %	14.7	13.1	11.3	9.6

# Special Articles



# Credit Requirements for Irish Firms in the Economic Recovery

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Martina Lawless, Niall McNerney, Kieran McQuinn, Conor O’Toole<sup>1</sup>

## Abstract

This article examines the outlook for bank credit amongst Irish non-financial corporations, and small and medium enterprises in particular. Taking into account different assumptions about the path of overall economic growth and sector-level output, we expect that the total credit stock will return to a stable level of approximately 40 per cent of GDP, similar to the level that prevailed prior to the credit expansion of the mid-2000s. At a sectoral level, a reduction in the share of credit accounted for by the Property sector is expected and credit growth mainly accounted for by non-Property firms.

## Introduction

Following the financial crisis of 2007-08, one of the most pressing challenges for macroeconomic policymakers is to achieve a better understanding of the relationship between the real economy and the financial sector. Significant changes in international, wholesale finance markets, particularly following the creation of the euro, enabled financial institutions in certain jurisdictions to greatly increase the provision of credit to the real economy. However, this large outward shift in the credit supply schedule precipitated an unsustainable level of activity in certain parts of the real economy as well as profound financial stability difficulties.

The open nature of the Irish economy ensures that international capital can flow in and out of the domestic financial sector, thereby giving rise to the possibility of substantial fluctuations in the level of credit being provided. Thus it is imperative that a series of quantitative tools be developed which can assess the demand for credit in the Irish economy. This is particularly the case as economic growth returns to the Irish economy. In this paper we present two different modelling strategies which look at possible paths for credit demand amongst Irish firms, in particular for the small and medium sized enterprises (SMEs) that comprise the bulk of Irish firms and employment. By generating a benchmark of expected credit levels in the economy, it is possible to gauge how well the banking sector

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<sup>1</sup> The authors would like to acknowledge the comments of an anonymous referee on a previous draft. Any remaining errors are the responsibility of the authors.

has recovered and to estimate whether credit levels are sustainable on the basis of activity levels within the real economy.

An additional reason to assess the level of credit in the economy is the increasing use of certain macro-prudential policy levers in an institutional context. For example, Basel III<sup>2</sup> uses the gap between the credit-to-GDP ratio and its long-term trend in a country as a guide for setting countercyclical capital buffers for banks in that economy.<sup>3</sup> In order to calibrate these levers properly, it is essential to have an understanding of both the likely determinants of credit and future possible trends in the credit requirements of the economy in question.

We use two different approaches to forecast credit stocks over the period 2014 to 2020.

1. We use a macroeconomic model of the Irish banking sector to model supply and demand simultaneously.
2. We use sectoral data to estimate a long-run relationship between each sector's credit and output. We then apply an error-correction model to forecast how these will evolve over time taking into account the current over- or under- leverage rates of the different sectors.

Complementing the aggregate model with a sectoral level approach is informative as it provides an increased degree of granularity in assessing the role of credit in an economy. For example, over the period 2000–2007, the level of credit issued in the Irish economy rose sharply; however, it was primarily concentrated in the construction sector. This focus on property lending arguably led to other sectors being “crowded out” in terms of bank lending. Therefore, the overall national figure can mask significant inter-sectoral differences.

It is important to note that in both approaches the level of economic activity is predetermined and the associated level of credit demand is then estimated as a function of this output. We do not allow, for example, for the possibility that credit growth in of itself could lead to an increase in economic activity. In this we are explicitly assuming that, over the medium-term, lending practices in the Irish economy will be of a more traditional, conservative nature.

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<sup>2</sup> The Basel III framework has been developed by the Bank of International Settlements in Basel, Switzerland and adopted by a variety of international regulatory bodies. See Drehmann and Tsatsaronis (2014) for details.

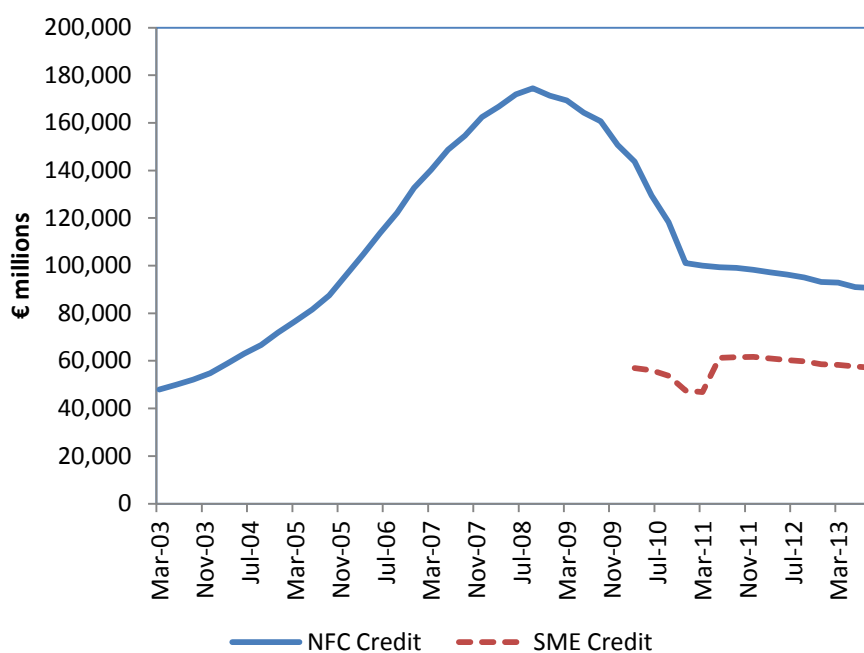
<sup>3</sup> See Kelly, McQuinn and Stuart (2011) for an appraisal of this rule in an Irish context.

We take three forecast scenarios for GDP and sector output from the ESRI *Medium-Term Review 2013-2020* (FitzGerald and Kearney, 2013) to give a range of possible paths for credit depending on the outturns for the economy. Both the aggregate and sectoral approaches give substantially similar results with total credit stocks estimated to remain relatively stable at their current levels over the near term, but with a re-orientation of lending away from property towards the expansion of credit in other sectors. The result is a return to a ratio of non-financial firm credit to GDP of approximately 40 per cent, close to the level observed prior to the dramatic expansion of credit in the early 2000s. This compares to a high point of credit to GDP of 106 per cent in 2008, which has since reduced to 60 per cent in the most recent figures for 2013.

### **Recent Trends in Credit Extension to the Irish Economy**

The dataset we use is the stock of non-financial domestic firm credit taken from the Central Bank of Ireland. These data are available from 1970 onwards. Ideally, it would be optimal to use data on the real value of new loans advanced to each sector; however, the only data available at a sectoral level relate to the stock of credit. It is necessary to generate the initial forecasts using data for all non-financial firms to establish relationships between credit and other variables because a separate series to distinguish SME credit from the total stock is not available prior to 2010. Using the current share of SME loans in the total, we can rescale our forecasts for total firm lending to generate the implications for SMEs.

The evolution of Irish domestic firm credit for all non-financial corporations (NFCs) and SMEs is shown in Figure 1, which focuses on the period from 2003 to 2013. This shows the dramatic increase in credit, which tripled between 2003 and the peak reached in 2008. The SME sector's credit stock has been at a relatively stable level of just under €60 billion since the series was introduced in March 2010 so we are unable to identify if the boom-bust pattern was more or less pronounced for these firms compared to the total.

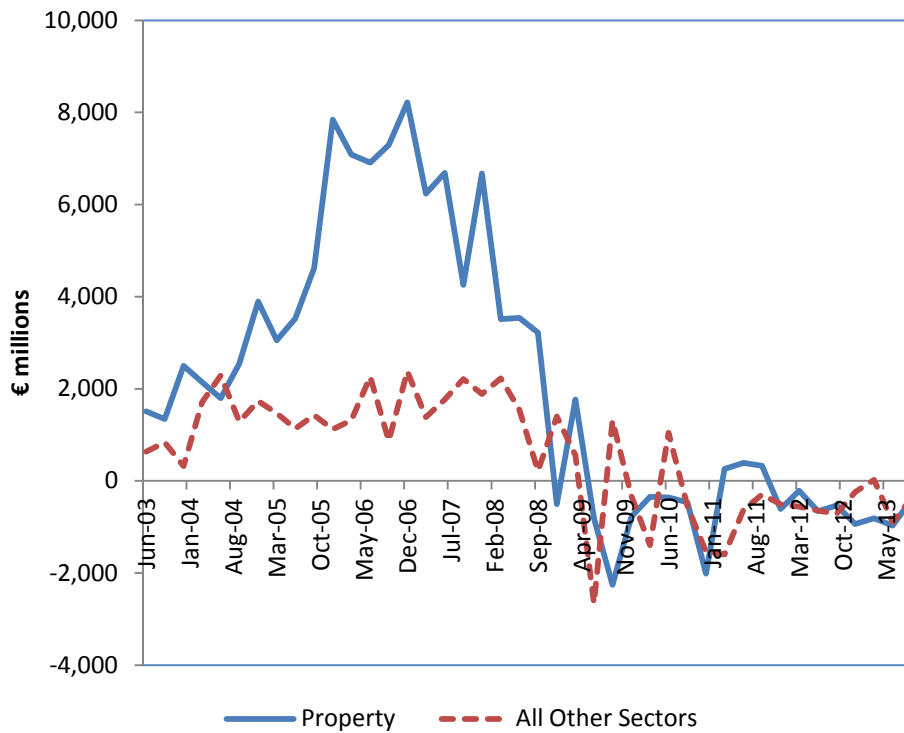
**FIGURE 1** Domestic Firm Credit 2003-2014 (Excluding Financial Intermediation)

The growth and decline in credit can also be seen in the transactions shown in Figure 2. This separates credit into property lending (broadly defined as including both construction and real estate) and all other lending. This shows a clear link between the property sector boom and overall firm credit, with transactions in the property sector outweighing all other lending by a factor of three at the height of the boom. Since late 2008, the transactions have been negative for property and other sectors, indicating broadly that more credit is being paid off than is being extended.<sup>4</sup> Five years of negative transactions indicates that a considerable degree of deleveraging has been undertaken by the Irish financial institutions. This raises concerns about the extent to which credit might be constrained for viable businesses if banks remain focused on unravelling the legacy debt built up in the boom as the economic recovery takes hold.

<sup>4</sup> The transactions series is calculated from quarterly differences in outstanding amounts which are adjusted for reclassifications, other revaluations, exchange rate variations and any other changes which do not arise from transactions. Information on the credit data series and definitions is available from the Central Bank website at: [http://www.centralbank.ie/polstats/stats/cmab/Documents/Business\\_Credit\\_and\\_Deposits\\_Explanatory%20Notes.pdf](http://www.centralbank.ie/polstats/stats/cmab/Documents/Business_Credit_and_Deposits_Explanatory%20Notes.pdf)

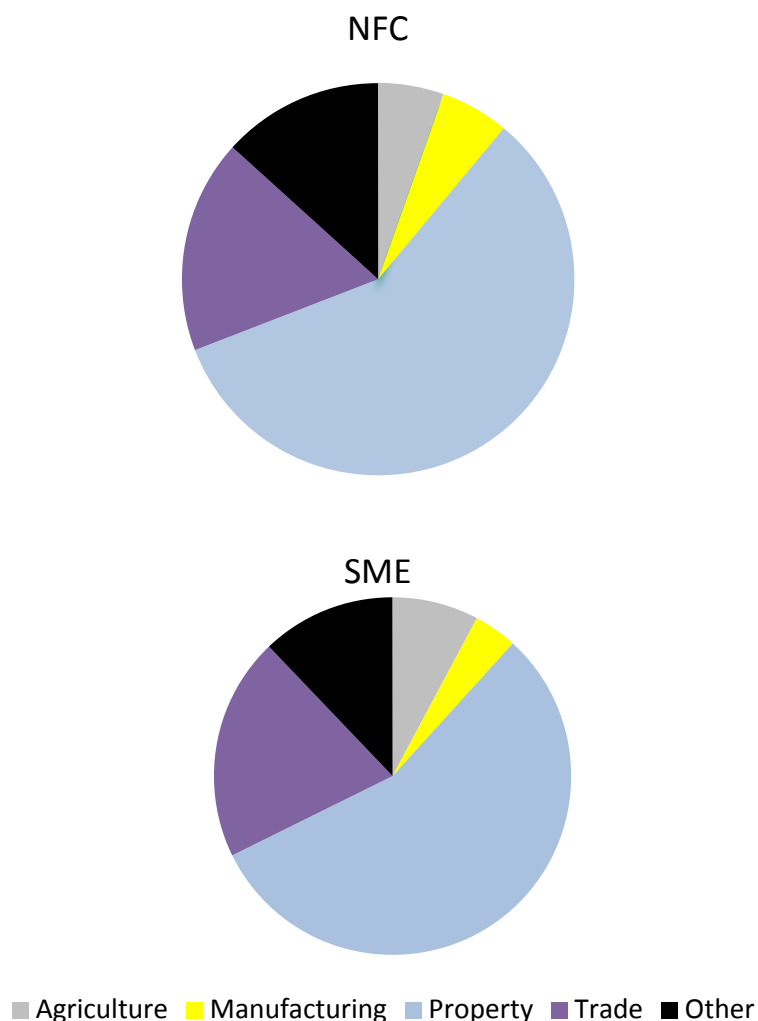


**FIGURE 2** NFC Credit Transactions



The dominant role of the property sector in total NFC and SME credit can be seen in Figure 3, which shows the sectoral shares of credit as at the end of 2013. The sector shares are almost identical for total firm and SME credit stocks. Property makes up 58 per cent of total firm credit and 56 per cent of SME credit. The next largest sector is trade and hospitality which accounts for 18 per cent of total firm credit. Agriculture and manufacturing each account for approximately 5.5 per cent of total NFC credit, but agriculture is a slightly higher proportion of SME lending at close to 8 per cent. The “other” group includes a range of different smaller sectors, primarily other services and communications. Close to 13 per cent of credit is currently extended to this category of firms.

FIGURE 3 Sectoral Credit Shares (2013)



We consider three different scenarios for the path of the economy as the main inputs to the forecasting exercise. These are taken from the ESRI's *Medium-Term Review 2013-2020* (FitzGerald and Kearney, 2013) and the main elements are summarised in Table 1. The scenarios are based on different speeds of recovery: the first of these is a "Recovery" scenario that returns the economy to its historic average growth rate of 4 per cent by 2015, resulting in a gradual decline in unemployment to 5.6 per cent by 2020. The second scenario is one of "Delayed Adjustment", where it takes until 2017 for GDP growth to get close to 3 per cent (due in large part to continued constraints in the credit market) and the third scenario is a "Stagnation" alternative in which GDP growth remains below 2 per cent for the entire period in the case where the external economy is hit with further shocks that have a knock-on negative effect on Irish recovery.

**TABLE 1** Macroeconomic Scenarios

	2013	2014	2015	2016	2017	2018	2015-2020
	Recovery Scenario						
GDP growth %	1.7	3	4	4.1	4.2	3.7	4
Deficit (% GDP)	7.3	5	3.2	1.2	0.4	-0.3	-1
Unemployment	14	13.4	11.8	10.6	9.5	8.2	5.6
	Delayed Adjustment Scenario						
GDP growth %	1.8	1.9	2.7	1.9	2.7	3	3.3
Deficit (% GDP)	7.3	9.2	3.2	1.2	0.3	-0.4	-1
Unemployment	13.9	13.8	12.9	13.5	13.1	11.9	8.4
	Stagnation Scenario						
GDP growth %	1.7	3.5	1.3	1.1	2	0.8	1.4
Deficit (% GDP)	7.3	4.5	2.7	2.5	2	0.6	0.7
Unemployment	14.1	13.1	12.5	13.4	12.8	12.5	11.8

Source: FitzGerald and Kearney (2013).

### Forecasts from Macro Model Approach

In modelling the volume of outstanding credit to non-financial corporations, a number of different approaches may be used. The first is to include the factors that affect the supply and demand for credit in a single equation with the volume of credit as the dependent variable. The second approach is to model the supply and demand for credit individually and assume that the interest rate is exogenous. Both of these approaches imply that the interest rate is not affected by the volume of lending, which is arguably an unlikely scenario in the case of the Irish banking sector given the changes in competition and in lending standards that occurred over the credit boom period.

The approach that we follow is to treat both the interest rate and the volume of credit as being simultaneously determined and to instrument for the interest rate in the credit demand and supply equations. We consider this to be a more accurate characterisation of the market for NFC credit in the Irish case. Therefore, we estimate the model as a system of simultaneous equations and use the supply factors as instruments for the interest rate in the demand equation. This captures the fact that changes in supply have an impact on the interest rate and hence on the volume of credit that is unrelated to demand but needs to be accounted for. Conversely, we use the demand factors as instruments for the interest rate in the supply equation to control for the impact of changes in demand on the interest rate and credit volumes.

The demand for credit by non-financial corporations is assumed to rise with economic activity, proxied by real GDP, and expect to fall as the real cost of credit increases.<sup>5</sup> The *ex ante* real interest rate is the average interest rate on NFC credit minus (annualised) lagged quarterly inflation.<sup>6</sup>

On the supply side, the model assumes that lending to non-financial corporations depends on the return from lending (i.e., the interest rate charged), the cost of funding that banks face, the opportunity cost of lending to NFCs and a measure of the perceived riskiness associated with corporate lending. The funding environment experienced by the banking sector is controlled for through the inclusion of the volume of deposits and the money market rate. The former reflects the volume of retail funding that the bank holds, while the latter reflects the cost of alternative financing (via wholesale money markets).

The model assumes that banks maximise the risk-adjusted return on a portfolio of assets. The interest rate on ten-year government bonds, a measure of the long-term risk-free rate, is used to proxy the opportunity cost of lending to non-financial corporations. We use lagged annual GDP growth to capture macroeconomic risk implying that the financial health of corporations is positively correlated over time.

We estimate the model using quarterly data starting from the first quarter of 1985 up to the third quarter of 2003. After examining the stability of the estimates, the main reason for excluding later data is that preliminary analysis suggests that corporate lending becomes explosive when the post-2003 data are included. Interestingly, this occurs both when property lending is included in total NFC credit outstanding and when it is excluded. Another important reason for focusing on the pre-2003 period is that it captures the funding constraints that banks will be more likely to face in the future due to financial regulation and structural change in the banking system. The banking sector's reliance on retail deposits as the primary source of funding was greatly reduced in the 2003-2007 period as relatively cheap wholesale funding via money markets became more accessible.

Table 2 presents the results of the model with total credit to non-financial corporations (including property but excluding financial intermediation) as the dependent variable. The model is estimated using Three Stage Least Squares. In

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<sup>5</sup> The volume of NFC credit, GDP and deposits are in real per capita terms. The variables are deflated using the consumer expenditure deflator.

<sup>6</sup> We also considered other measures of inflation expectations such as the lagged annual change in the consumer expenditure deflator and various moving averages. These alternative measures did materially affect our results.

terms of demand, the volume of credit is negatively related to the interest rate (long-run semi-elasticity of 0.03) and positively related to economic activity (long-run elasticity of 1.65).

On the supply side, the main determinant of the amount of credit that banks are willing to extend is the volume of deposits (long-run elasticity of 0.8) and the riskiness of lending, as approximated by the growth in real GDP (long-run elasticity of 2.5). As expected, credit supply is increasing in the interest rate on NFC credit and decreasing in the return on alternative investments and the cost of alternative sources of funding. These coefficients can now be used to produce forecasts for the volume of NFC credit for given paths of the model's exogenous variables using the three alternative growth scenarios discussed in the previous section.

**TABLE 2** Supply and Demand for Total NFC Credit

Dependant Variable: Total NFC Credit Per Capita			
Demand	Supply		
Constant	-0.451***	Constant	-0.029
NFC Credit <sub>t-1</sub>	0.925***	NFC Credit <sub>t-1</sub>	0.966***
Interest Rate	-0.002**	Interest Rate	0.006***
Real GDP	0.123***	Long Rate	-0.004***
		Deposits	0.028***
		Mon. Mkt Rate	-0.004***
		Change Real GDP	0.087***
Adjusted R <sup>2</sup>	0.996	Adjusted R <sup>2</sup>	0.997
Sample	1985q1-2003q3	Sample	1985q1-2003q3

Source: Own estimates.

Figure 4 shows the path for NFC credit (including credit to the property sector) in the three scenarios. Total outstanding NFC credit is forecast to rise to €109 billion by 2020 in the Recovery scenario, €99 billion in the Delayed Adjustment scenario and €97 billion in the Stagnation scenario. The Stagnation and Delayed Adjustment scenarios give overlapping paths of credit evolution for the earlier years of the forecast horizon, until the pick-up in GDP in the Delayed Adjustment scenario. However, the overall variation in the credit stocks under the different scenarios remains relatively modest.

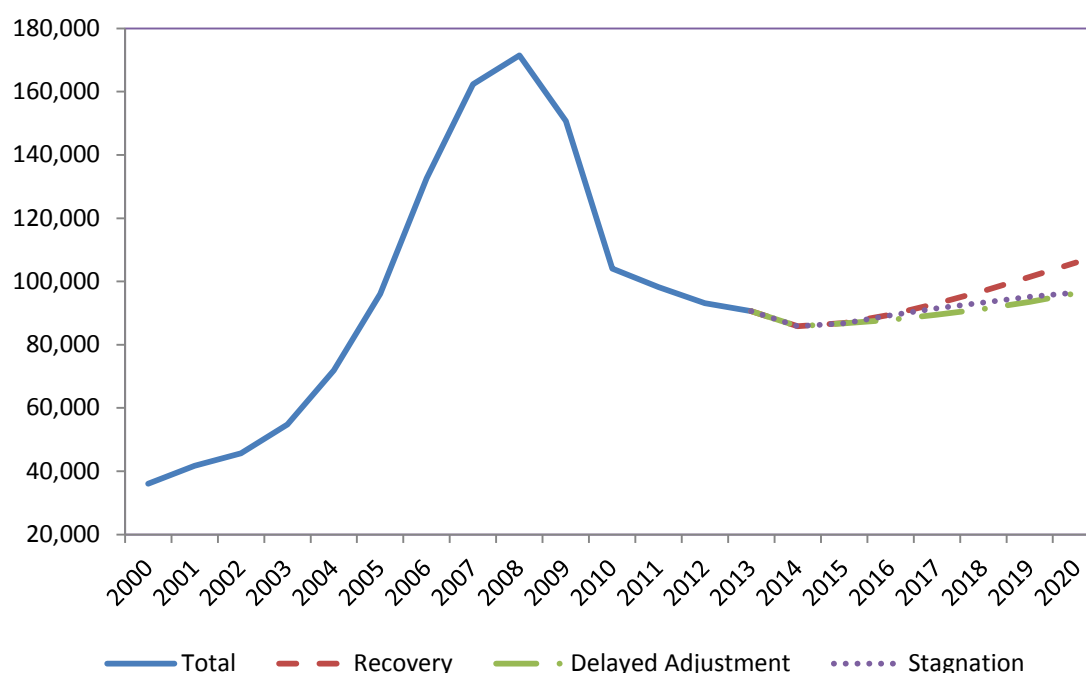
**FIGURE 4** Path for Total NFC Credit – Macro Model

Table 3 presents the results of the model when property related lending is excluded from outstanding NFC credit. The main difference in the results relative to the model of total credit is a significantly lower coefficient on real GDP in the demand equation. This may pick up that non-property NFC debt could be affected by other factors such as global growth, whereas property demand would be driven primarily by domestic factors. The long-run elasticity of non-property NFC credit with respect of real GDP is 0.9 compared to 1.65 for total NFC credit. On the supply side, the long-run elasticities are also significantly lower for deposits (0.4 versus 0.8) and GDP growth (1.1 versus 2.5).

**TABLE 3** Supply and Demand for NFC Credit Excluding Property Related Lending

Dependant Variable: Total NFC Credit per capita			
Demand	Supply		
Constant	-0.527***	Constant	-0.202***
NFC Credit <sub>t-1</sub>	0.909***	NFC Credit <sub>t-1</sub>	0.941***
Interest Rate	-0.002**	Interest Rate	0.005**
RGDP	0.084***	Long Rate	-0.003***
		Deposits	0.023***
		Mon. Mkt Rate	-0.004***
		ΔRGDP	0.066**
Adjusted R <sup>2</sup>	0.991	Adjusted R <sup>2</sup>	0.992
Sample	1985q1-2003q3	Sample	1985q1-2003q3

Source: Own estimates.

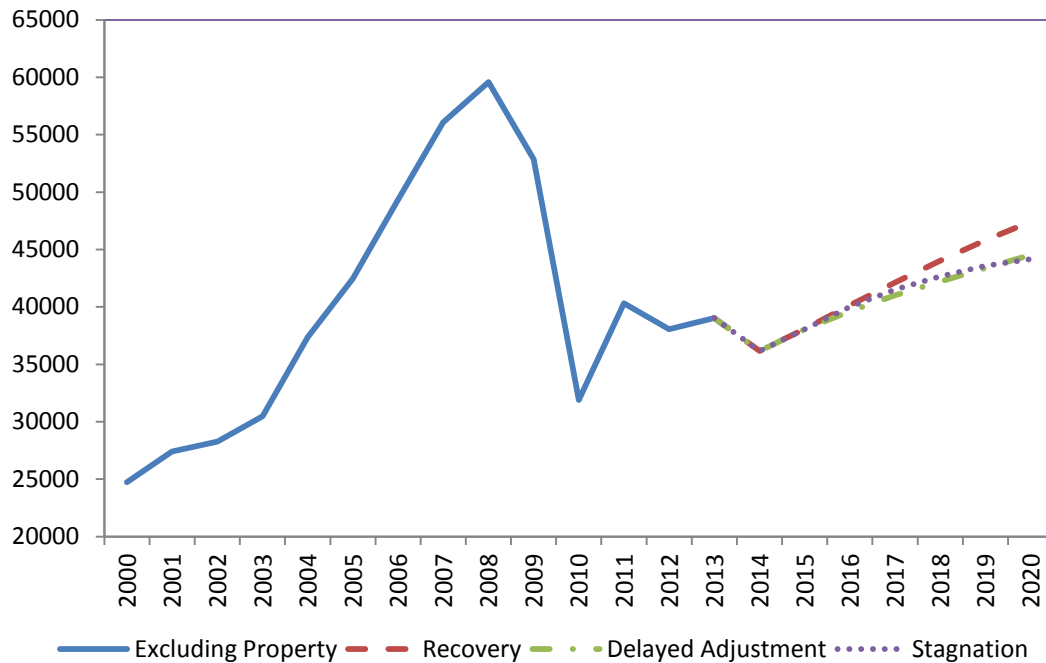
**FIGURE 5** Path for NFC Credit Excluding Property – Macro Model


Figure 5 shows the forecast path for NFC credit excluding property related lending in the three scenarios. NFC credit rises to €49 billion by 2020 in the Recovery scenario, €45 billion in the Delayed Adjustment scenario and €44 billion in the Stagnation scenario. Table 4 presents the growth rates of credit generated by the forecasts above.

**TABLE 4** Annual Credit Growth Rates

Credit Stock Growth Rates			
	Recovery	Delayed	Stagnation
<b>Total</b>			
2015	0.01	0.01	0.01
2016	0.03	0.01	
2017	0.04	0.02	0.02
2018	0.04	0.02	0.02
2019	0.05	0.02	0.02
2020	0.05	0.03	0.01
<b>Excluding Property</b>			
2015	0.05	0.05	0.05
2016	0.05	0.04	0.05
2017	0.05	0.04	0.04
2018	0.04	0.03	0.03
2019	0.04	0.03	0.02
2020	0.04	0.03	0.01

### Sectoral Credit Forecasts

The banking model projections taking into account the simultaneity of supply and demand factors provide an outlook for the likely evolution of total credit in the Irish market. In this section, we explore how this credit may be allocated across the broad sectors of business activity. In order to do this, we follow the same methodology as Lydon, McQuinn, O'Brien and Sherman (2011) and link the demand for credit to output and other relevant factors in each sector. Unlike the previous section, this sector level approach focuses on the demand side, implicitly assuming that the available supply of credit will be allocated in line with demand across sectors.

There are two steps to generating the sector level projections for credit demand. The first step is to establish a long-run “fundamental” level of credit in each sector, which is specified as a function of output in the sector, total GDP in the economy and the interest rate. The current level of credit in each sector is then compared to this fundamental level to establish if the sector is under or over leveraged relative to historic norms. In comparing these results to those from the macroeconomic model in the previous section, it should be noted that it is not possible to endogenise credit supply at the sector level (as this relates to the allocation of credit by the banking sector rather than the determination of the amount available) so the analysis here is focused on the demand determinants only.

The second step generates a forecast for each sector using an error correction model, which is based on the current gap between the actual and fundamental levels of credit, which are assumed to unwind over time and developments in output scenarios. As in the previous section, we use three alternatives for growth in GDP and sector output based on the scenarios in the ESRI's *Medium-Term Review for 2013-2020*. Four sectors are explicitly modelled: these are Agriculture, Manufacturing, Property, Trade and Hospitality. This results in a residual category covering other services including private sector health and education, along with communications and utilities. Given the heterogeneity of this group and data limitations on sector output, the credit demand is not directly modelled. As the “other” category is mainly service-based, we make the assumption that it grows at the same rate as that projected for the Trade and Hospitality sector to generate a total credit level.

The long-run relationships between sector credit levels, sector output, total GDP and the interest rate are presented in Table 5. These are almost identical to the results of Lydon *et al.* (2011) with minor differences due to the addition of more recent data. Taking the fitted values from these estimates allows us to compare



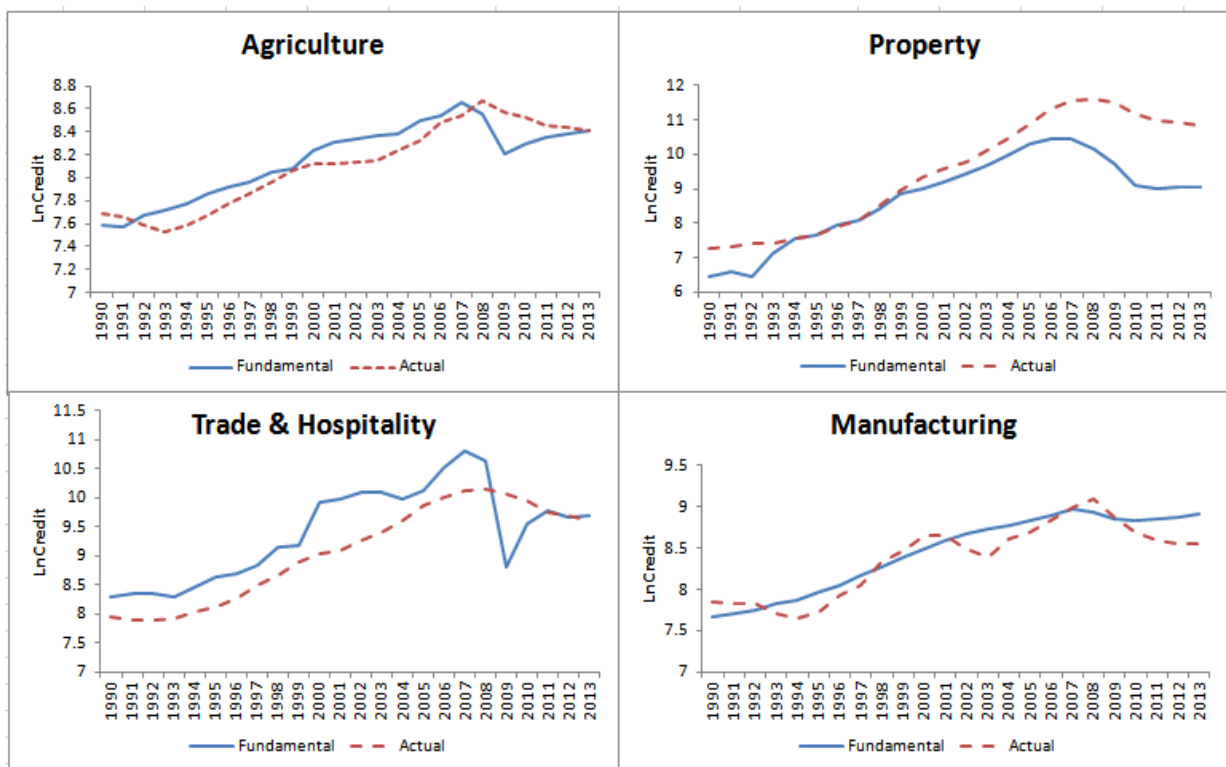
the current level of credit in each of the sectors to the level predicted by the historic relationship in the regression. The actual and fundamental levels of credit since 1990 in the four modelled sectors are shown in Figure 6 where divergences between the two lines can be interpreted as indicating some disequilibrium, either over or under extension of credit relative to the level expected by the output in the sector.

**TABLE 5** Sector Long-Run Results

	Agriculture	Property	Trade	Manufacturing
Constant	-1.92	-1.31	-1.73	-0.56
Output	0.55	1.37	1.04	
GDP	0.49			0.79
Interest	0.00	-0.15	-0.01	
Adjusted R <sup>2</sup>	0.96	0.93	0.99	0.94

Source: Own estimates.

**FIGURE 6** Actual and Fundamental Credit 1990-2013



The expected fundamental level of credit in the Agriculture sector was above the actual level for much of the economic boom period, suggesting that credit expansion was focused in other sectors with Agriculture being somewhat credit constrained during the boom. Since 2008, this relationship between the actual and fundamental credit series reversed for a time and the two are currently

approximately in equilibrium. A similar pattern applies to the Trade and Hospitality sector, where actual credit was below the long-run relationship for most of the period graphed but which has seen a convergence to the fundamental level in the most recent years of the sample.

The expansion of credit in the Property sector was the dominant story of the economic boom throughout the early and mid-2000s and this sector-level estimation shows that actual levels of credit began to outstrip the fundamental relationship as early as 2000, with the gap widening up until 2010. More recently, both actual and fundamental levels of credit in the Property sector appear to have stabilised but a relatively large degree of leveraging is still evident in this sector. Manufacturing, on the other hand, currently shows a higher expected fundamental level of credit relative to the actual credit stocks, implying that there may be some credit constraints in this sector.

The short-run projections for credit use an error-correction framework, whereby any gaps between actual and fundamental credit estimated in the long-run estimates are expected to be unwound over time, with the speed at which this occurs captured by the ECM term in Table 6. The short-run results also control for lagged changes in credit, changes in sectoral output and total GDP.

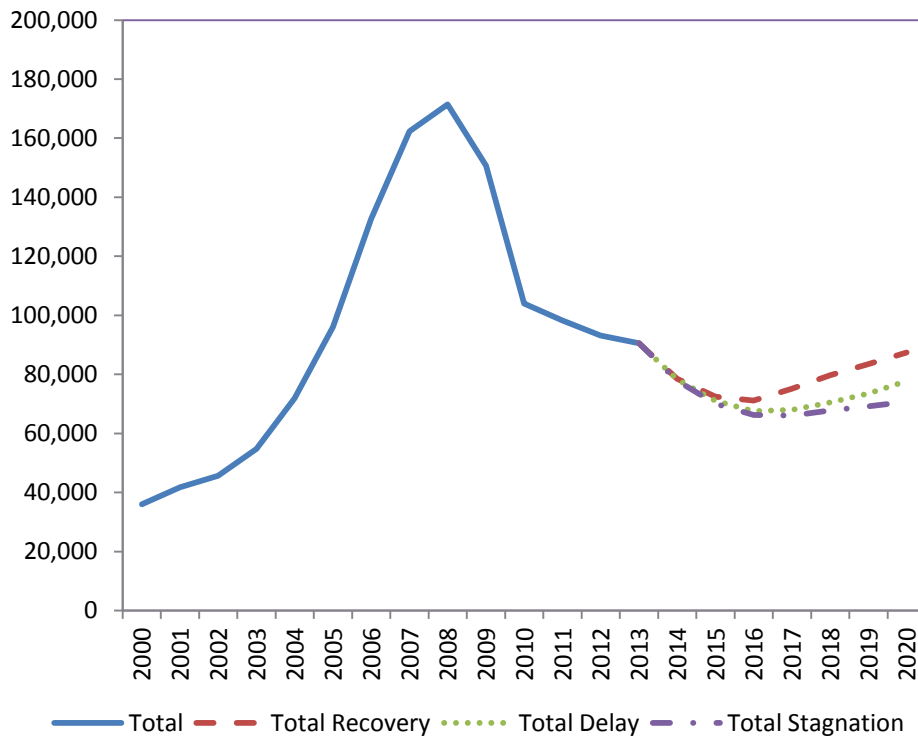
**TABLE 6** Sector Short-Run Results

	Agriculture	Property	Trade	Manufacturing
ECM(t-1)	-0.13	-0.11	-0.26	-0.16
d.C(t-1)	0.53	0.46		0.26
d.O(t)		0.41	0.99	
d.O(t-1)	0.41			
d.Y(t-1)				0.69
d.R(t)	0.00			
Adjusted R <sup>2</sup>	0.67	0.74	0.47	0.47

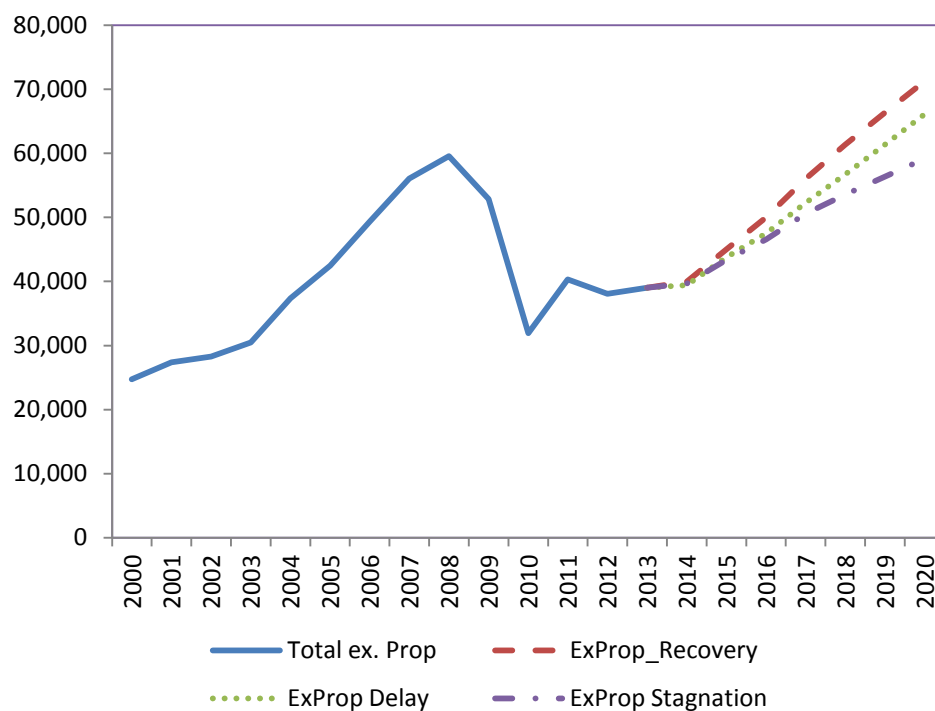
Source: Own estimates.

Combining these coefficients with the projected output and GDP paths from the *Medium-Term Review 2013-2020*, we generate credit forecasts for each of the sectors over the time horizon 2013 to 2020 for the different macroeconomic scenarios. Figure 7 shows the path of these forecast scenarios for all sectors combined and Figure 8 shows the forecasts when the Property sector is excluded.

**FIGURE 7** Forecast Credit Stocks – All Sectors



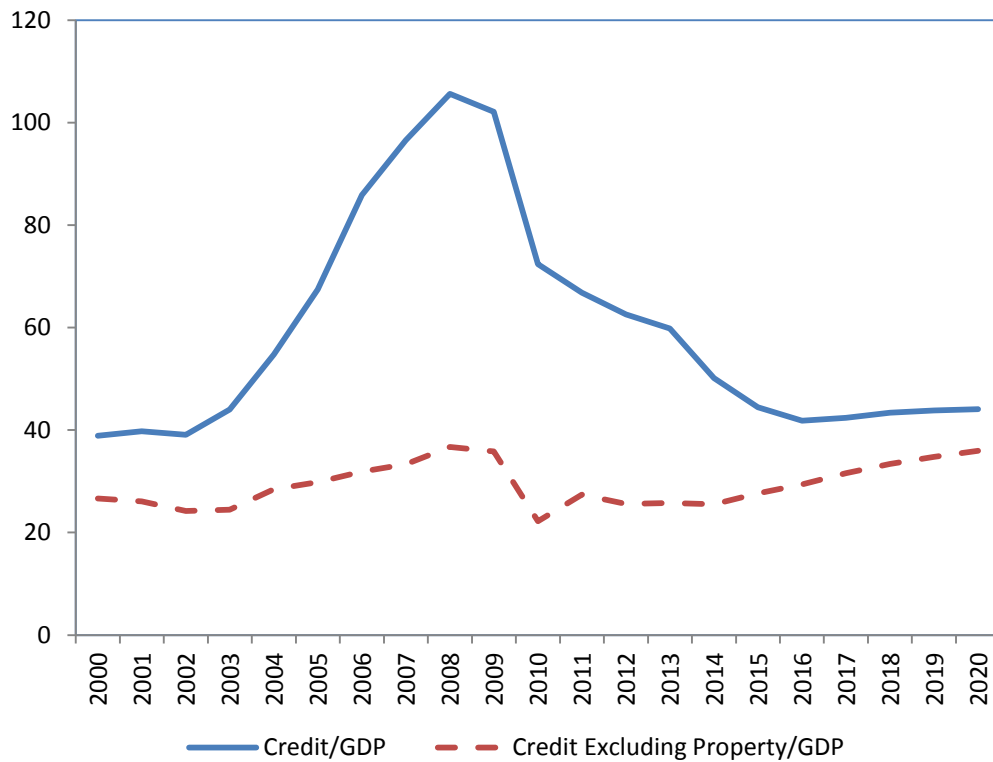
The projections for total NFC credit using the sector error-correction approach are relatively flat at the current stock. Compared to the actual credit level of €90.5 billion in 2013, the Recovery scenario gives a continuation of the current path of credit decline up until 2016 (when it reaches €71 billion) before beginning to grow and returning to a level of approximately €87 billion by 2020. The delayed adjustment and stagnation scenarios follow similar paths but with a slower rate of growth, with the lower estimate in the stagnation scenario resulting in a credit stock of €70.5 billion in 2020. These numbers are lower than those projected in the banking model earlier but the broad evolution of credit under the different scenarios follows a similar path.

**FIGURE 8** Forecast Credit – Excluding Property

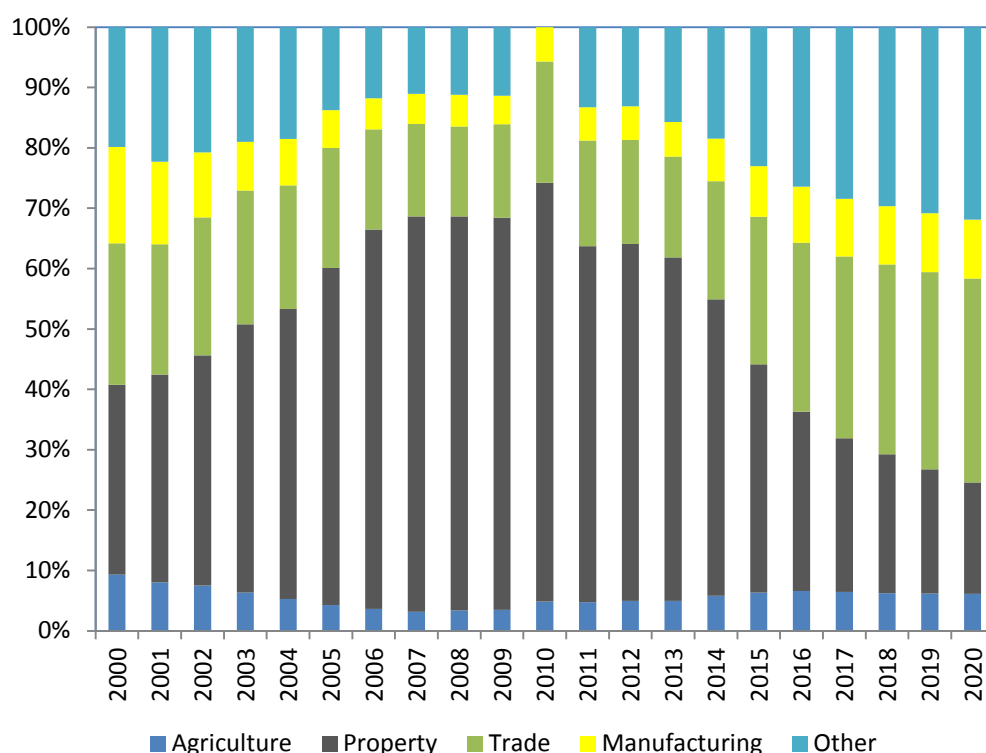
The reason for the continued fall in credit in these projects is due to the unwinding of the high levels of outstanding credit in the Property sector. When we graph the expected credit stocks of all the other sectors excluding Property in Figure 8, we see a very different picture with credit levels expected to rise steadily in the rest of the economy. The 2013 credit stock for non-property NFCs was €39 billion. Under the Recovery scenario, this is expected to reach slightly over €71 billion by 2020. The lower-bound estimate under the Stagnation scenario would also see credit expansion in the non-property sectors albeit at a slower pace, reaching €59 billion in 2020.

To place these numbers in context, Figure 9 graphs the expected Recovery scenario levels of credit (for all sectors and excluding Property) relative to GDP. This shows that the forecasted levels of credit in the NFC sector overall are expected to return to stabilise at a pre-boom level of approximately 40 per cent of GDP, with the subsequent growth in credit stocks evolving broadly in line with GDP. This graph also demonstrates the disproportionate contribution of the Property sector to the peak credit-to-GDP ratio, with credit in other sectors deviating only relatively slightly from the longer term relationship with GDP even during the mid-2000s. The peak of credit to GDP was 106 per cent reached in 2008 and this has reduced to 60 per cent in 2013.

**FIGURE 9** Firm Credit Relative to GDP (%)



The key driver of the forecasted evolution of firm credit can be summarised as a re-orientation of credit away from Property and towards other sectors of the business economy, with these offsetting effects resulting in a return to a level of credit close to historic norms as a percentage of GDP. Figure 10 shows how the forecasts for the individual sectors are expected to evolve in terms of their contributions to the stock of total credit. Property lending formed the majority share of total NFC credit throughout the boom and this is expected to reduce in importance with larger shares of credit going to Trade and other services, along with modest increases in the share of Agriculture and Manufacturing.

**FIGURE 10** Sector Contributions – Recovery Scenario

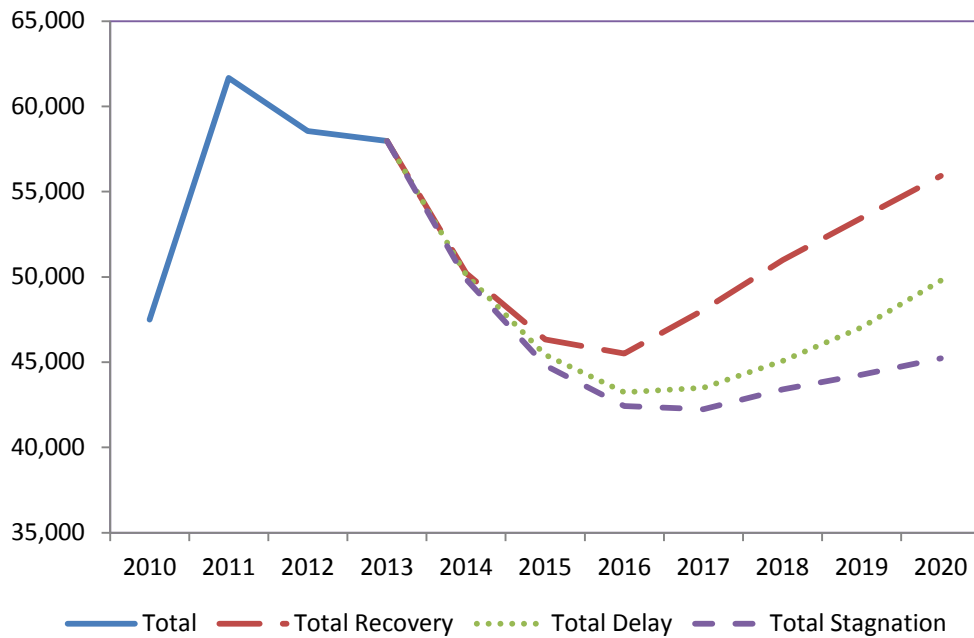
To establish long-run relationships and generate forecasts based on sector level output projections, we were obliged to use series for credit that related to the entire non-financial corporate sector. From a policy perspective, however, it is particularly the demand and availability of credit to the SME component of the economy that is of interest with larger firms typically having greater access to other sources of funding and less reliance on domestic banks. Figures 11 and 12, therefore, scale our earlier NFC forecasts to apply to the SME sector (including and excluding property respectively) assuming that the current relative shares of the SME and non-SME firms remains constant.

The broad paths of credit are by construction forecast to evolve along the same lines as total credit stocks. From a 2013 base of €58 billion in outstanding credit, these forecasts give a Recovery scenario stock of €56 billion in 2020. The range of values depending on the speed of economic growth goes from €45 billion in the Stagnation scenario, to €50 billion in the Delayed Adjustment scenario and an upper estimate of €56 billion by 2020.

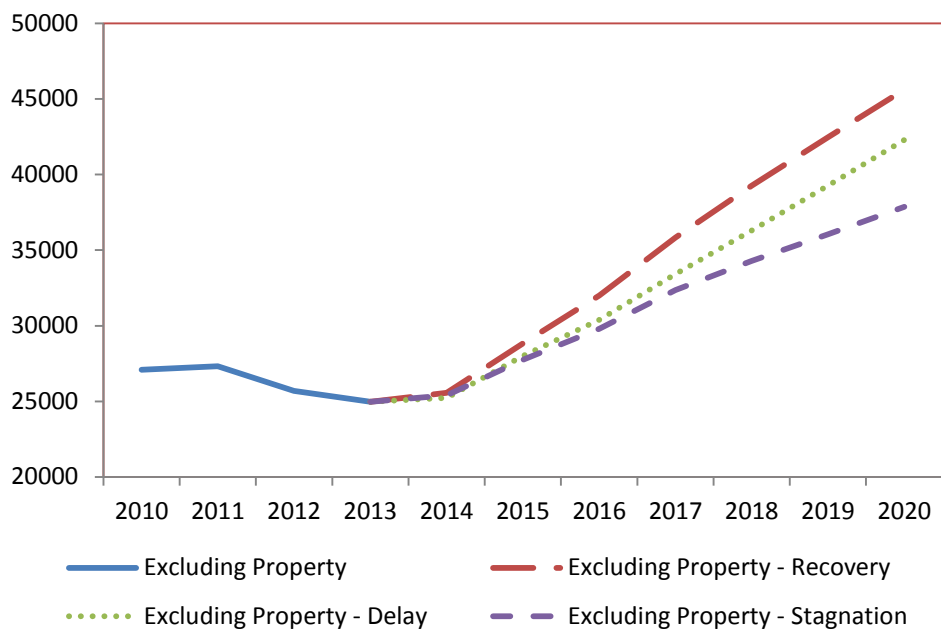
As with total NFC credit, a re-balancing of credit shares across sectors is expected at the SME level, with credit stocks growing in all sectors other than Property. Current non-Property SME credit is in the order of €25 billion and this is expected

to reach between €38 billion and €46 billion by 2020 depending on the speed of overall economic growth.

**FIGURE 11** Total SME Credit



**FIGURE 12** SME Excluding Property



## Conclusion

Given the scale of difficulties which followed the credit-fuelled bubble experienced by the Irish economy, it is incumbent on policymakers and economic researchers alike to generate new quantitative tools for key financial stability issues. Understanding likely movements in the stock of credit is a key aspect of that challenge. Accordingly, this paper uses two different empirical approaches to examine the evolution of credit amongst Irish firms over the medium term. By linking credit requirements to forecasts of total and sector level output, we generate a range of estimates for credit stocks. These projections suggest that credit stocks for non-financial corporations and SMEs will stabilise and remain relatively flat in the near term.

Although we do not find that the total volume of firm credit is likely to grow significantly over the remainder of the decade, we do find that changes in sector shares of credit are likely given the historic relationships between sector output and credit. In particular, the current share of property lending in total credit remains above the long-run fundamental level and hence the property share of total credit is expected to decline reasonably considerably between now and 2020.

It is important to stress that this does not indicate that new lending will not occur in the property sector, as credit is still required and it is important that the deleveraging pressure in this sector does not result in credit constraints for viable projects. However, the current disproportionate share of credit allocated to this single sector is expected to unwind over time.

Overall credit growth, therefore, is expected to be driven by non-property sectors. Given the overwhelming reliance on residential lending during the boom period, it is important that the financial sector is in a position to evaluate and respond to viable commercial opportunities in other areas of the domestic economy. In particular, we note that the current level of credit extended to manufacturing firms is below our estimates of its fundamental level.

As with all forecasts of economic activity, there are a number of caveats to be attached to these projections. There is continued pressure on banks to deleverage and increase capital ratios which may constrain their ability to extend new credit. The changes in market structure in banking, particularly in terms of increased concentration, may have an effect on the supply of credit. On the demand side, firms that took on debt during the past decade may also be focused on deleveraging. Given the experiences of the financial crisis and subsequent recession, there is a possibility that the risk appetite for new credit may be diminished, on the side of both banks and firms.



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# Irish Fiscal Policy in Good Times and in Bad: Its Impact During Different Stages of the Economic Cycle<sup>1</sup>

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David Cronin and Kieran McQuinn<sup>2</sup>

## Abstract

Recent international econometric analyses indicate that the impact of fiscal policy on output can vary during the economic cycle. In this paper, it is shown that a positive shock to government consumption will raise economic activity when the output gap is negative while the opposite holds when a positive output gap arises. Accordingly, the impact of fiscal policy at different stages of the economic cycle, should be borne in mind when formulating budgetary policy.

## Introduction

Since the onset of the international financial turmoil in 2008, few economies have experienced the degree of contractionary pressures on domestic demand that Ireland has. Not only was the Irish economy impacted by international events but it had also to deal with concurrent adverse developments in the domestic economy. These stemmed, mainly, from the disproportionately large role the construction sector played in the Irish economy in the early-to-mid 2000s and its collapse thereafter. Following the collapse, property values declined, the burden of private debt on the economy became evident, and the banking system became impaired as credit availability dried up and demand for it, in any case, declined substantially. The labour market experienced a loss of employment and a fall in earnings. Private domestic demand (consumption and investment) fell against this economic and financial background.

The public finances, which ordinarily might have been expected to exercise an automatic stabilising influence on domestic demand, also came under strain. This arose from two main sources. First, tax revenue collapsed owing to a loss of tax receipts from property activity (see Addison-Smyth and McQuinn, 2010) and the more general effects of the economic downturn. Secondly, state support to

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<sup>1</sup> Thanks to Frances Ruane and John FitzGerald (ESRI) and an anonymous referee for comments on an earlier draft. Any errors are the responsibility of the authors.

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the banking system added substantially to government debt. The General Government Debt ratio increased quickly, from a value of 25 per cent of GDP in 2007 to 91 per cent in 2010. In these circumstances, reductions in government expenditure and rises in taxation were enacted in the late 2000s to maintain confidence in the public finances and to keep them on a sustainable path. Annual fiscal consolidation targets were laid out with the aim of reducing the General Government Deficit to less than 3 per cent of GDP by 2015.

While this fiscal policy was necessary to maintain confidence in the sovereign in the longer term, its impact could have been expected to add to deflationary pressures within the economy. In this paper, we show that the long-run government consumption multiplier is larger than average in Ireland on the downside of the economic cycle. The implication is that the programme of fiscal consolidation, which was weighted more heavily on expenditure reductions rather than tax increases, may have had a larger-than-average contractionary impact on economic activity.

The impact of a particular fiscal policy on output then can vary depending on the stage of the economic cycle. Recent data point to improvements in the Irish economy and the expectation is for positive output growth in 2014 and stronger growth in 2015 (ESRI, 2014; Central Bank of Ireland, 2014). The programme of fiscal adjustment is also nearly complete and most commentators expect the government deficit to meet the 2015 target of being less than 3 per cent of GDP. Against this background and within the overall constraints imposed on it, fiscal policy's impact on economic activity at different stages of the economic cycle should be borne in mind when formulating budgetary policy.

The rest of the paper is structured as follows: we initially describe recent discussions on fiscal multiplier values and the vector autoregression methodologies used here in quantifying the impact of government expenditure on economic activity in Ireland. The econometric estimates are then discussed before the resultant fiscal multiplier values are considered. The main finding is that a positive shock to government consumption has a larger-than-average stimulatory effect on economic activity when the output gap is negative, but does not have the same effect when the output gap is of the opposite sign. The concluding section then discusses the import of this finding for policy.

## Fiscal Multipliers in an Irish Context

### *International and Irish Evidence*

Against a backdrop of many governments, particularly those in the Euro Area, pursuing medium-term plans of fiscal consolidation in a period of recession, the International Monetary Fund (2012) provides evidence to the effect that short-term fiscal multipliers could be higher at a time of low or negative growth. Possible implications of this finding are that fiscal austerity could be self-defeating if it caused economic growth to contract further or, alternatively, that a fiscal stimulus would help boost growth.

Both the methodology and implications of the IMF's findings have been queried, most notably by the European Commission (2012) and the European Central Bank (2012). The former suggests that caution be exercised when using data from the years 2010-11 (on which the IMF findings are based), while the latter is of the view that the policy debate should not become focused on the size of short-term fiscal multipliers but should consider the longer-term benefits of fiscal consolidation.

The international debate concerning the size of fiscal multipliers invariably casts a light on their value in Ireland. As the Irish Fiscal Advisory Council (2013, p. 81) notes, "...the literature focused on Ireland-specific multipliers remains quite limited." Multiplier estimates across a range of tax and expenditure headings and the cumulative impact of recent Budgets in Ireland have been derived from the ESRI's *HERMES* macroeconomic model (see, for example, Bergin *et al.* (2009), Kearney (2012), FitzGerald and Kearney (2013), FitzGerald (2013)). Bénétrix and Lane (2009) use a structural vector autoregression (SVAR) approach to estimate short-term fiscal multipliers. Amongst their findings are that a positive shock to government fixed investment has a positive impact on GDP whereas a shock to government consumption does not have a significant effect. They also find subcomponents of government consumption having different effects on output. For instance, wage government consumption has a negative fiscal multiplier. Pereira and De Fátima Pinho (2011) employ a VAR specification as well in investigating the effect of government investment on output. In the case of Ireland, they find an accumulated change in public investment having positive long-term effects on employment, private investment and output.

### **Methodology**

In this paper, we also employ VAR methodologies to provide fiscal multiplier measures for Ireland, as well as to consider the effects of government consumption on unemployment. Besides providing full sample estimates using a standard structural VAR (SVAR) approach, we also use a variant of that VAR

methodology – threshold VAR (TVAR) – to provide estimates of fiscal multipliers between different states of the economic cycle. This approach has been used in a number of papers in this area in recent years, notably, Baum and Koester (2011), Baum, Poplawski-Ribeiro and Weber (2012) and Caprioli and Momigliano (2013). It can provide insights into whether the impact of fiscal policy differs between alternative states of the economy, an important issue to consider at a time when Ireland has been in a prolonged down-side phase of the economic cycle.<sup>3</sup>

The structural vector autoregression (SVAR) approach is the most popular time-series-based method for estimating fiscal multipliers in the academic literature over the last twelve years or so. Blanchard and Perrotti (2002) provide the benchmark approach in applying this methodology to fiscal multiplier estimation. SVAR relies on structural identification to allow discretionary fiscal policy shocks to be identified. It is broadly followed here. Three variables are included in each VAR in the following order: government consumption, an economic activity variable (GDP or private consumption), unemployment. With this ordering, the choice of orthogonalised impulse responses ensures that the government expenditure variable does not respond to either a shock to the economic activity variable or unemployment in the initial period (a year, since annual data are being used). This reflects the view taken in the literature that discretionary fiscal policy will not respond to economic developments contemporaneously but rather with a lag. Thus, in this application, government expenditure is exogenous in year 0. This is a sensible assumption in the Irish case where the annual fiscal budget, governing discretionary outlays, is made close to the end of the calendar year and with a view to implementation in the following year. The use of annual data also helps reduce anticipated effects compared to quarterly data (Hebous, 2011).

We use annual fiscal and macroeconomic data covering the period 1965 to 2012, sourced from the European Commission's AMECO database. Due to a lack of data over a sufficiently long period for econometric estimation, we exclude government revenue from the empirical analysis. For the same reason, we are restricted to using government consumption alone as a government expenditure variable.

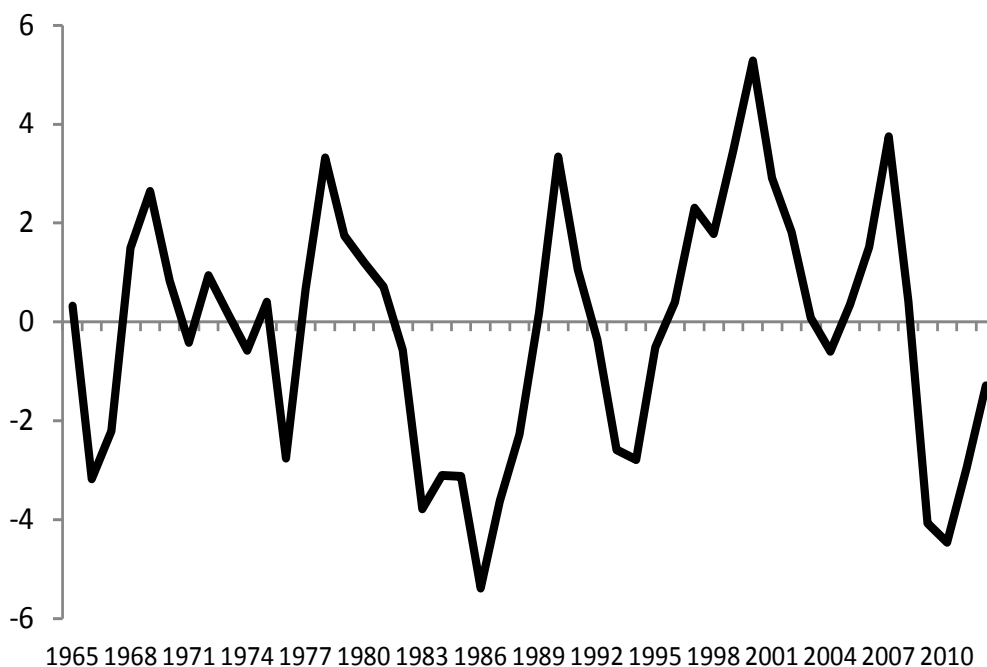
Four data series are used in the series of VAR estimations, where three variables are included in each VAR system. The first is a measure of fiscal expenditure (final consumption expenditure of general government). There are two measures of economic activity, gross domestic product (GDP) and private consumption. Fiscal and economic activity variables are measured in real terms. Total unemployment is used as a measure of labour market performance.

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<sup>3</sup> EU Commission estimates indicate there to have been a negative output gap for Ireland since 2009.

The TVAR approach requires the choice of a transition variable to differentiate between states of the economy. In this study, we choose the output gap as that variable and differentiate annual observations into two groups depending on whether the output gap is positive or negative in value. The output gap estimate used is that provided by the EU Commission, using its production function-based approach to measuring potential output. The output gap measure is plotted in Figure 1. It should be noted that this estimate of potential output, particularly in the case of a small open economy such as Ireland's, has been the subject of some criticism. Bergin and FitzGerald (2014) summarise much of this debate noting the pro-cyclical nature of the European Commission's estimate as arguably being the greatest issue.<sup>4,5</sup>

**FIGURE 1** Output Gap for Ireland, 1965-2012 (%)



Source: EU Commission AMECO database.

The stipulation of a threshold for the output gap implies that two regimes exist within the dataset: when the output gap is negative (a time when there is spare capacity in the economy) and when the gap is positive (a period of capacity constraints). Two piecewise linear models, with different autoregressive matrices in each regime, are then estimated. These models allow the impulse responses of

<sup>4</sup> The Commission also provides a second measure of the output gap based on a measure of trend output estimated using a Hodrick-Prescott filter which is not subject to the criticisms applied to the production function approach. To ensure that our results are not dependent on any one measure of potential output, we re-estimated our impulse responses using this second output gap measure as the threshold variable. The results are not significantly affected by this change in specification.

<sup>5</sup> Other criticisms are outlined in the Irish Department of Finance's *Ireland – Stability Programme December: 2003* and <http://www.bruegel.org/nc/blog/detail/article/1176-blogs-review-the-structural-balance-controversy/>

positive government consumption shocks to be analysed between both states of the economy.

### **Impulse Response Analysis**

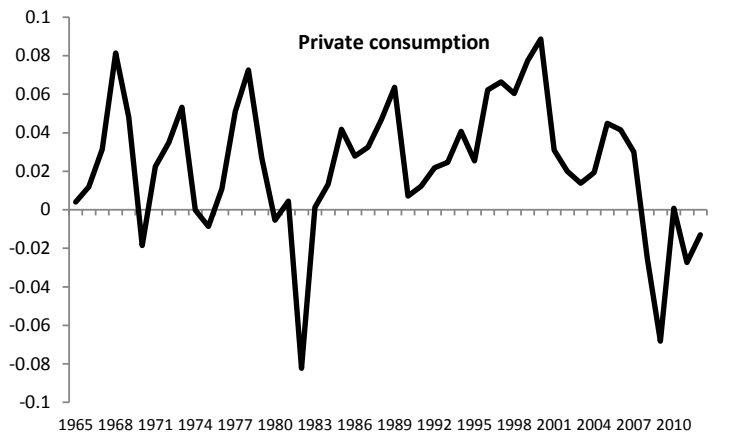
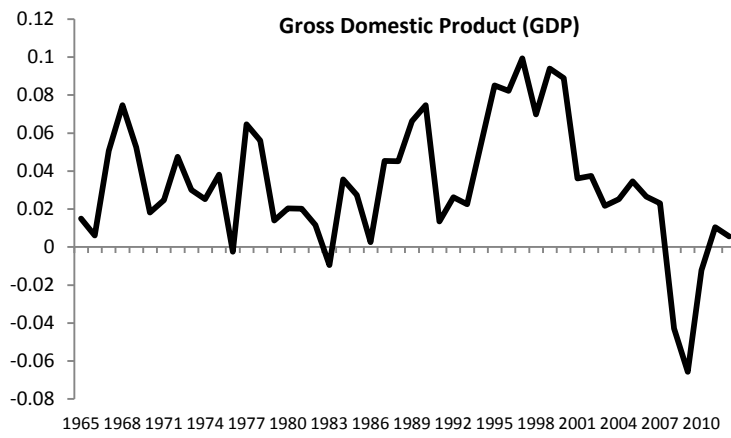
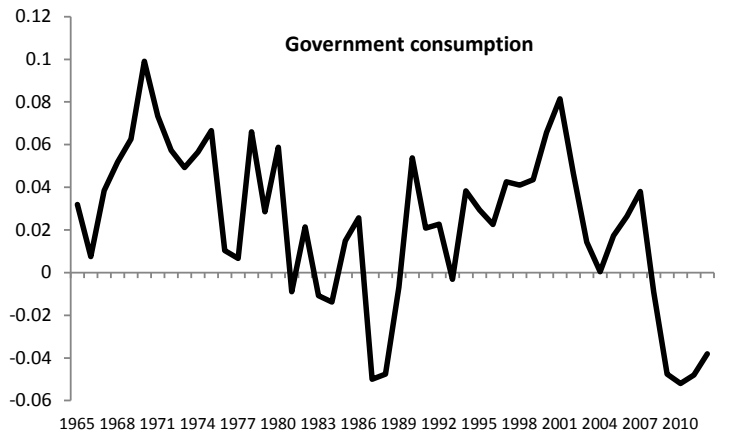
#### *Full Sample Estimates*

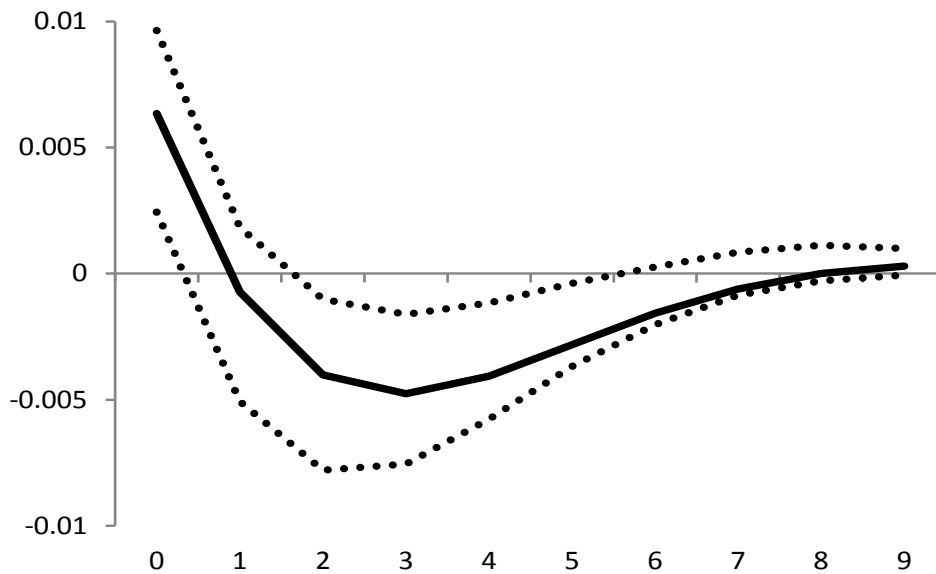
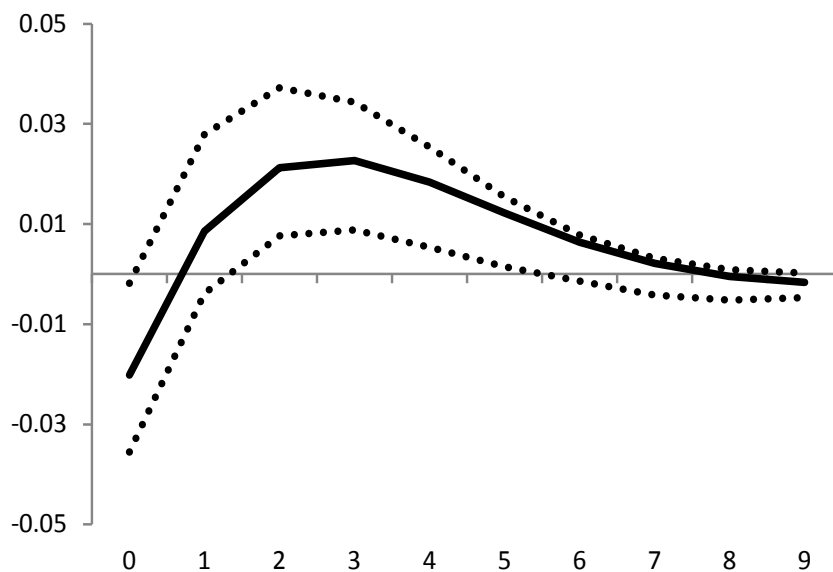
All four variables (government consumption, GDP, private consumption, total unemployment) are measured in the first-differences of the natural logarithm of the per capita amount, with the first three variables being measured in real, rather than nominal, euro amounts. The level and first-difference series are plotted in Figure 2. First-differences are chosen in the estimation process because the level series are mainly non-stationary variables and, perhaps as a result of that, the VAR output utilising first-differences are easier to interpret. The VAR estimations include a constant term and the Bayesian Information Criterion indicates that a lag length of one is appropriate. All VAR equations at this lag length have serially uncorrelated error terms according to a chi-square test.

With two measures of economic activity, two three-variable VAR systems were estimated using both the SVAR and TVAR methodologies. The particular variable combinations are in order: government consumption, GDP, total unemployment; government consumption, private consumption, total unemployment. The impulse responses from a one standard error shock to government consumption in the SVAR, which does not discriminate between different values of the output gap, are shown by solid lines in Figures 3 and 4, while the dotted lines represent standard error bands. In Figure 3, it can be seen that a government consumption shock has a significant effect on GDP upon impact and for up to five years afterwards. The impact effect (i.e., in year 0) is positive but the impulse response values turn negative subsequently. The impact of the shock on unemployment is negative, that is it serves to reduce unemployment. Significant effects on unemployment also last for years 1 to 5 but are positive in value.



**FIGURE 2** Economic Activity and Government Expenditure Variables, 1964-2012 (first-difference of natural log of per capita amount)



**FIGURE 3** Impact of a Unit Shock in Government Consumption (economic activity variable: GDP)**(a) Response of GDP****(b) Response of unemployment**

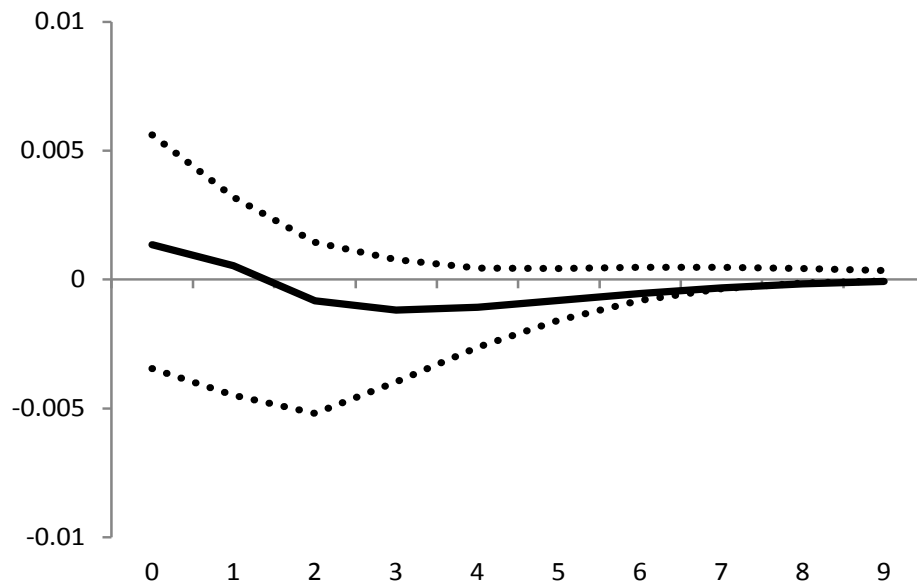
*Note:* Horizontal axis represents horizon (years). Dotted lines represent 16 per cent and 84 per cent confidence intervals.

In Figure 4, where personal consumption has been substituted for GDP, we can see in the lower panel that the quantitative effects are similar for unemployment between this Figure and Figure 3. In contrast to its effect on GDP, a government consumption shock does not have a statistically significant effect on private consumption in the impact period (year 0) or subsequently. This does not concur with a “crowding-out” effect of government consumption on its private sector counterpart (for which significant negative values would be expected) but rather

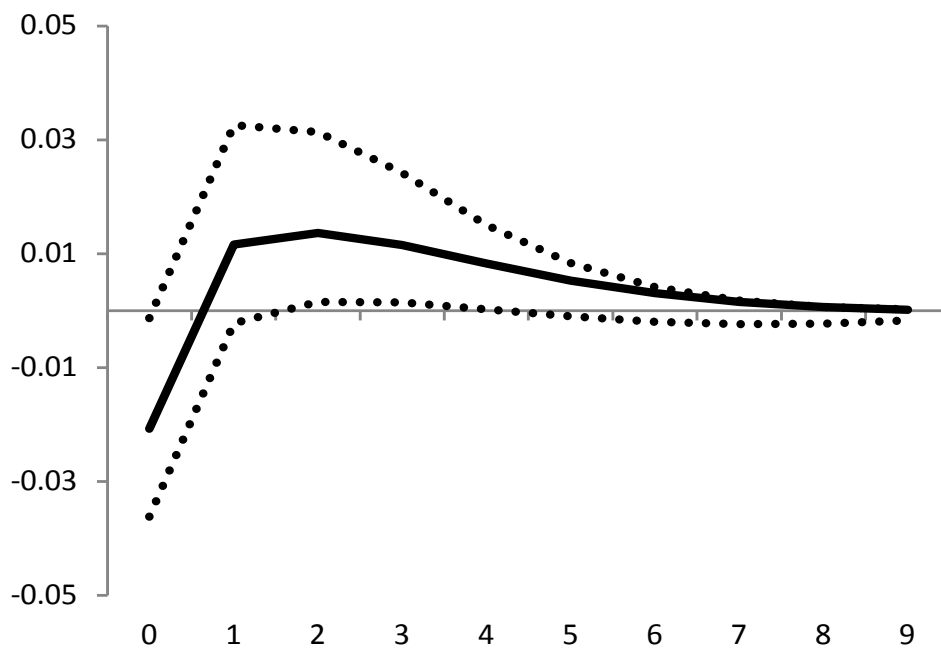
that it has no significant effect. A further discussion of the cumulative effects of the impulse responses for GDP and private consumption are considered in the form of fiscal multipliers in the next section.

**FIGURE 4** Impact of a Unit Shock in Government Consumption (economic activity variable: private consumption)

**(c) Response of private consumption**



**(d) Response of unemployment**



Note: Horizontal axis represents horizon (years). Dotted lines represent 16 per cent and 84 per cent confidence intervals.

*Threshold-Based Estimates*

The threshold variable used in the TVAR estimations is the output gap, with the transition from one regime to another dependent on the sign of the output gap. In the 48 year sample period, 1965-2012, there are 27 years in which a positive output gap is recorded and 21 years when there are negative values.

Although it is not common to report standard diagnostic results for VARs, we do report some test results in the case of the threshold estimation. In Table 1, Durbin-Watson (DW) statistics and log-likelihood estimates for the covariance model are presented for both cases in which the economy is above and below trend.

**TABLE 1** Threshold VAR select diagnostic test results

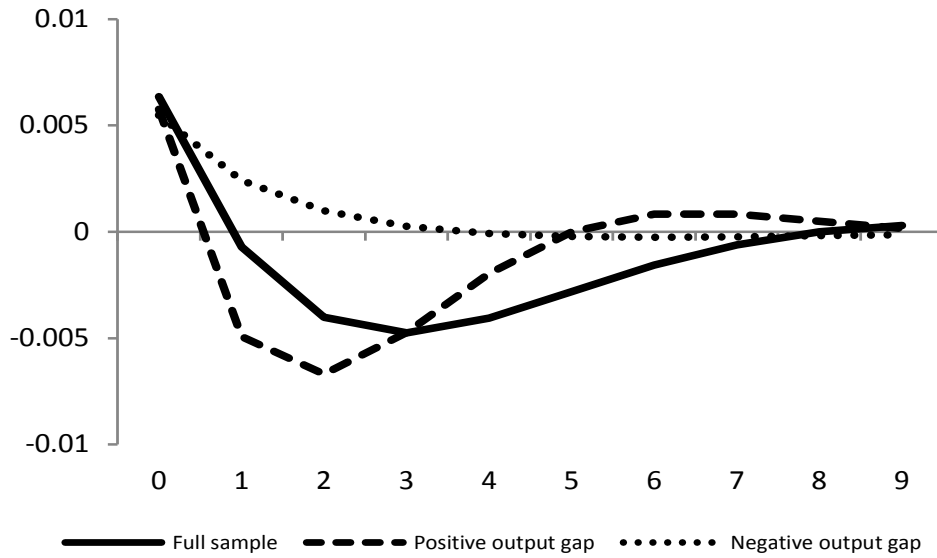
Above Trend Estimates			
Dependent variable	Government consumption	GDP	Unemployment
Durbin-Watson estimate	2.14	1.79	2.42
Covariance model log-likelihood function			
199.2			
Below Trend Estimates			
Dependent variable	Government consumption	GDP	Unemployment
Durbin-Watson estimate	2.3	2.3	2.34
Covariance model log-likelihood function			
162.5			

Source: Own estimates.

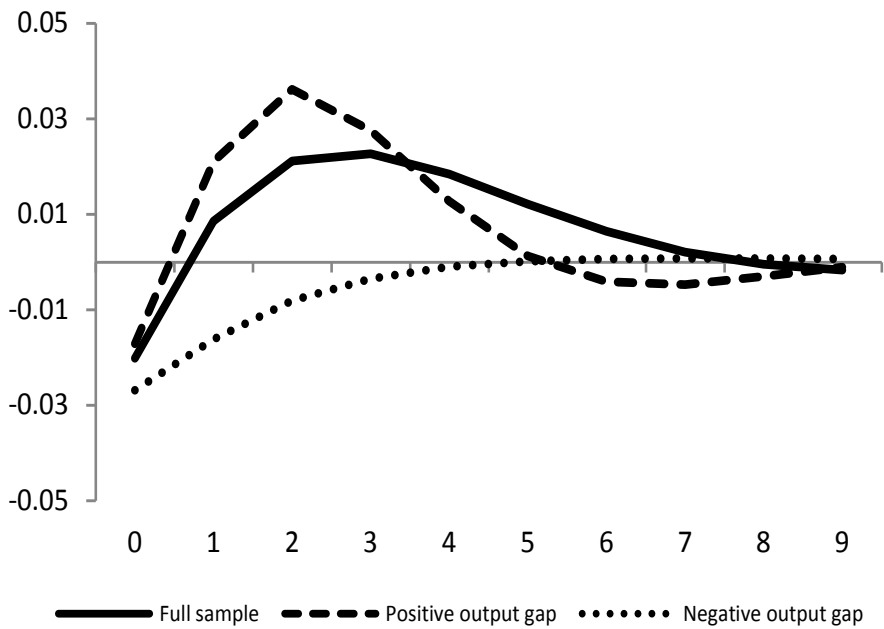
In Figures 5 and 6, the variables used in the TVAR estimations are as those in Figures 3 and 4, respectively, and the variables also have the same ordering in the estimations as in those earlier charts. These two figures show the positive-output-gap and negative-output-gap regime impulse responses. The full-sample impulse responses from Figures 3 and 4 are also included as solid lines. The impulse response values for GDP and private consumption, in panels (a) of Figures 5 and 6, feed through into fiscal multiplier values for those two variables and so most of the discussion on those is deferred to the next section.

**FIGURE 5** Impact of a Unit Shock in Government Consumption – Different States of the Economy (economic activity variable: GDP)

**(e) Response of GDP**



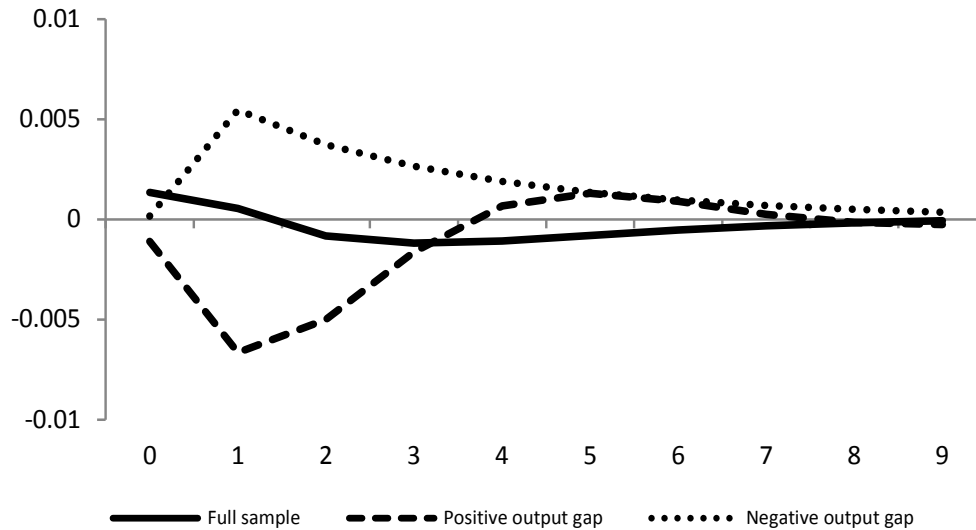
**(f) Response of unemployment**



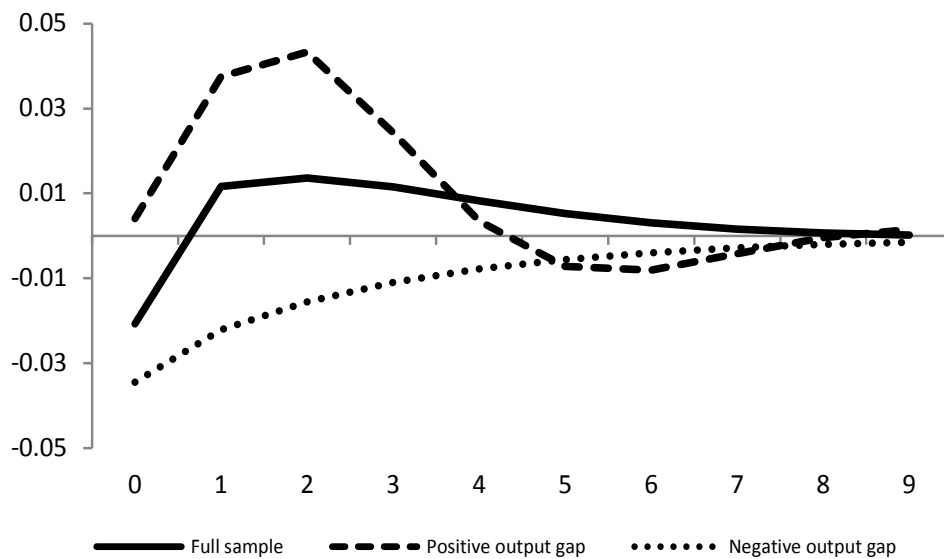
Note: Horizontal axis represents horizon (years).

**FIGURE 6** Impact of a Unit Shock in Government Consumption – Different States of the Economy (economic activity variable: private consumption)

**(g) Response of private consumption**



**(h) Response of unemployment**



Note: Horizontal axis represents horizon (years).

While the impact of a unit shock in government consumption on GDP in year 0 (Figure 5(a)) is broadly the same for the alternative states of the economy (which is confirmed by the impact multiplier values in the next section), the impulse responses differ subsequently. Positive impulse responses are maintained after year 0 in the negative output gap regime, but negative values arise when the

positive output gap prevails. With regard to private consumption, the positive value of the impulse responses increases after year 0 in the negative output gap regime and then declines towards zero. The opposite effect arises in the positive output gap regime.

With regard to unemployment, there is a negative impulse response for a number of years in the negative output gap regime (panel (b) of both figures); in other words, unemployment falls after a positive shock to government consumption. In the positive output gap regime, the impact response is either negative (Figure 5) or positive (Figure 6) but positive values are recorded in the years that follow in both charts. One possible interpretation of these results is that government consumption expenditure will serve to reduce unemployment when the economic cycle is in a downside phase but that this effect does not hold in the upside stage.

### **Fiscal Multiplier Values**

Fiscal multipliers, measured on a cumulative basis, can be calculated from the impulse response information by, first, summing up the cumulative impulse response over time of the change in GDP/private consumption over a given horizon and dividing it by the cumulative impulse response of the government expenditure category over that horizon. This, in turn, is divided by the ratio of the sample average value of the government consumption to the sample average value of GDP/private consumption to give fiscal multiplier values.

In Table 2, we show both multiplier values in the year in which the government consumption shock occurs (i.e., year 0), often referred to as the impact multiplier, and also at year 5. The latter is the final year in which the full sample fiscal impulses of government consumption to GDP are significant (Figure 3(a)). That then seems like a suitable juncture at which to take long-run fiscal multiplier values. Although the full-sample impulse response analysis does not indicate government consumption having a significant impact on private consumption, fiscal multiplier values are provided for also.

TABLE 2 Fiscal Multiplier Values

	Impact Multiplier	Long-Run Multiplier
<b>GDP</b>		
Full sample	1.26	-0.13
Positive output gap	1.27	-1.07
Negative output gap	1.13	0.84
<b>Private Consumption</b>		
Full sample	0.14	0.01
Positive output gap	-0.15	-1.38
Negative output gap	0.02	0.51

Source: Own estimates.

Looking initially at the full sample multiplier values, both the impact and long run multipliers for private consumption are close to zero. This tends to confirm the finding in the impulse response analysis that a government consumption shock does not have a significant effect on that part of private sector activity. For GDP, the impact multiplier has a value of 1.26. The long run multiplier is close to zero, reflecting the impulse to GDP turning negative in years two to five (see Figure 3(a)). An explanation for these contrasting multiplier values is that the positive shock to government consumption, a component of GDP, serves to boost GDP in the year in which it occurs. Subsequently, however, the open nature of the Irish economy causes a net leakage of the additional income out of the economy and renders a long-run multiplier close to zero. Of course, VARs by their very definition cannot account for all the relevant inter-linkages in the economy, so there may be alternative explanations for the difference in size between the impact and long-run multipliers.

Turning to the multiplier values between the alternative states of the economy, impact multiplier values for GDP are of similar magnitude to one another and to the full sample estimate. The long-run multipliers are much different to one another, however. In the positive output gap state of the economy, the long run multiplier is negative, while it is positive and close to unity in the alternative state of the world. This can be interpreted as evidence that the influence of fiscal policy on economic activity is dependent on the stage of the economic cycle.

The reason for the long run GDP multiplier having a negative value in the positive output gap state of the economy may be again, at least in part, explained by leakage from the economy. The long-run fiscal multiplier for private consumption in that state (a value of -1.38) also suggests that when the economy is operating above capacity, fiscal policy, in the form of increased government expenditure, may “crowd-out” private sector activity and this then impacts the GDP multiplier value.



Finally, the long-run multiplier for private consumption has a value of 0.51 when the output gap value is negative. This indicates a positive government expenditure shock having a beneficial impact on private sector activity when the economy is at a cyclical low and may also help explain the 0.84 value for the long run GDP multiplier when the output gap is negative. It can be noted too that the long-run multiplier value for private consumption (of 0.51) is larger than the impact multiplier. This is not the case for any other impact long-run multiplier combination.

These findings are similar to those of other applications of TVAR methodology to fiscal multiplier estimation. Using data for Germany, Baum and Koester (2011) find fiscal spending multipliers to be much larger when the output gap is negative compared to when the output gap is positive. Their dataset also allows them estimate government revenue multipliers for Germany. They find them to be smaller than their expenditure counterparts. The revenue multiplier is larger when the output gap is positive compared to its value when the output gap is negative. In their study of the G7 economies (excluding Italy), Baum, Poplawski-Ribeiro, and Weber (2012) find both fiscal spending and revenue multipliers to be larger, on average, in economic downturns than expansions.

### Conclusion

While there is some debate concerning the exact level of potential output and the output gap in the Irish economy at this time, there is evidence indicating that activity levels are still below their potential level.<sup>6</sup> That the unemployment rate, rate of investment and level of total credit extension are below their long-run averages is supportive of this view. In these circumstances, the appropriate role for fiscal policy in economic activity deserves consideration. On the one hand, it needs to support fiscal sustainability and must operate within the constraints imposed by EU fiscal rules, including in respect of the size of the budget balance. On the other hand, budgetary policy will be able to prioritise particular expenditure and taxation measures over others and could be expected to influence of the level of activity in the economy.

The main import from the empirical analysis reported here is that fiscal policy measures can have a different impact on economic activity in current circumstances, than at a point in the economic cycle where output is operating above potential. This point deserves consideration in policymaking. Particular features of the Irish economy at this time should also be brought into the analysis. It has been proposed, for instance, that fiscal policy can play a role in

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<sup>6</sup> For example, Irish GDP in 2015 is still forecast to be only 97 per cent of the maximum level observed pre-crisis in 2007 (Fitzgerald, Duffy, McQuinn, Byrne and Morley (2014)).

ameliorating the ongoing mortgage arrears crisis being experienced in Ireland. Kelly and McQuinn (2014) argue that in costing any potential fiscal stimulus which reduces unemployment (a key driver of mortgage arrears), allowance should be made for the subsequent reduction in bank capital losses which would ensue due to the lower rate of arrears.<sup>7</sup>

Looking beyond this paper, one way in which research in this area could be extended would be to examine the impact of fiscal policy during credit cycles and the latter's interaction with the overall economic cycle. Borio, Disyatat and Juselius (2013), for instance, have argued that information about the financial cycle should be incorporated into estimates of potential output and output gaps. Including such information would be highly desirable in an Irish context given the role played by the interaction of fiscal policy and developments in the credit market in the run-up to the financial crisis of 2007/08 (Honohan 2010) and the effects that the impaired credit market continues to exercise. This could improve the measurement of the economic cycle in Ireland and, by extension, inform the debate about the role of fiscal policy.

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<sup>7</sup> Examining the relationship between macroeconomic feedback effects and mortgage relief programmes is not specific to the Irish market. Recent research (Remy and Moore (2013) and CBO (2013)) highlight the relevance of the issue in the US mortgage market, where some mortgage resolution strategies are claimed to generate a small saving, in overall terms, to the government.

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# Research Note



# Nowcasting and the Need for Timely Estimates of Movements in Irish Output

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## 1. Introduction

The release of the *Quarterly National Accounts* (QNA) for Q2 2014 surprised many commentators in terms of the strength of the growth in both GDP and GNP. Preliminary estimates by the CSO indicate that GDP increased by 1.5 per cent in volume terms on a seasonally adjusted basis compared with the first quarter of 2014 while GNP increased by 0.6 per cent over the same period. Year-on-year, this suggests growth in GDP and GNP of 7.7 and 9.0 per cent respectively.

Previous *Commentaries* have highlighted certain issues with the reliability of GDP as an indicator of the change in Irish economic activity. For instance, GDP in Ireland can be significantly affected by the accounting practices of multinational firms. In forecasting, therefore, we also focus on GNP, which at times can prove to be a better measure of real economic activity in Ireland. In this Research Note we outline a forecasting methodology which produces new and more timely estimates of both GDP and GNP for the Irish economy.

While the QNA releases provide the most comprehensive available estimate of Irish economic activity, a significant issue arises with regard to the timeliness of these data releases. Currently, the release delay of official economic data is targeted to be no longer than 90 days from the end of a given quarter, meaning that GDP growth for a reference quarter is available at the very end of the following quarter. In particular, for the first two months in any given quarter, the most recent available release of GDP is for the second last quarter and it is only at the end of the third month in each quarter that releases of GDP are available for the previous quarter. Quill (2008) addresses this issue, highlighting the fact that prior to the release of the official GDP release there is a constant flow of data that provides an increasing amount of information with respect to the state of the economy in the reference quarter.

This significant release delay means that conjunctural assessment of the Irish economy would benefit from an early indicator of quarterly growth of sufficient accuracy and timeliness.

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## 2. Issues with Estimates of Quarterly Irish Output Levels

There are two issues which are typically associated with quarterly estimates of Irish output levels. The first is the high volatility, by international standards, of Irish quarterly GDP. McCarthy (2004) notes that Irish quarterly GDP has shown significantly more volatility than corresponding data for any other OECD country and points to the structure of the manufacturing sector in Ireland as one of the main reasons for this volatility.

Secondly, the revisions to Irish quarterly GDP are quite significant by international standards, a point which has been discussed in detail by Bermingham (2006) and Quill (2008). The most significant revisions take place when the detailed annual *National Income and Expenditure Accounts* are published during the middle of the year following the reference year. In this process, the initial quarterly estimates are reconciled with more comprehensive annual data. Although the latest available estimates for quarterly and annual GDP and GNP give the most reliable indications for the state of the economy at any point in time in the past, it could be argued that the first estimates of GDP and GNP have the greatest influence. By the time the later, and potentially quite significant, revisions come out, economic forecasters and policymakers may have moved on and less attention will be devoted to the estimate for that period.

A recent example of such a revision concerns the estimate of GDP growth for the final quarter of 2013. In its initial estimate, released in March 2014, the CSO reported a decline of 2.4 per cent quarter-on-quarter. However, in its first revised estimate in July 2014, the economy was judged to have shrunk by just 0.1 per cent over the same period. Significant revisions to the most recent national output figures have a number of implications, particularly, from a forecasting perspective; forecasts and the decisions based on these forecasts tend to be heavily influenced by the most recent observation of actual data. Thus, if this data are subsequently revised, then not only will the most recently observed history change but the outlook for the forecast period is also likely to be affected.

## 3. Nowcasting

In this Research Note we outline the results from the adoption of the “nowcasting” methodology as a means of addressing these issues. This approach, following the work of Giannone, Reichlin and Small (2005), enables forecasters to extract predictive information from a large panel of potentially relevant, high frequency, macroeconomic indicators to generate early estimates of economic performance. In particular we present nowcasts of both GDP and GNP in an Irish context.



A further attraction of the nowcasting approach is that it enables the use of a panel of indicator variables which may be unbalanced at the end of the sample. This is commonly known as a “jagged” edge structure and refers to indicators that are released in a non-synchronous manner and with varying publication lags. Traditional econometric models will generally only use balanced datasets, i.e., where all series would end in the same period. The nowcasting approach, however, exploits the jagged edge structure, enabling empirical models to make use of high frequency information with respect to the reference period and extract the predictive component of output from a large number of data series. This is central to the short-term forecasting process as it enables the most up to date information to be used for the current quarter estimates.

In the nowcasting model 41 variables are used to model Irish output. The dataset begins in January 1985 and is unbalanced at the end of the sample reflecting the different release delays of the indicators. In general, the series are of monthly frequency and are significantly more timely than the GDP releases. Examples of the monthly series include consumer sentiment indices, retail sales and housing market indicators. A full description of the data is contained in Table 2 of D’Agostino, McQuinn and O’Brien (2012).

In Table 1 we present quarter-on-quarter GDP growth rates for the four quarters of 2014. These include both the actual outturns for growth, as measured by the CSO, and our estimates of contemporaneous and future growth using the nowcasting methodology. The left-hand panels of the table report nowcasts estimated in June 2014, i.e., the third month of Q2, for which the most recent available data from the CSO was for Q1 (2.6 per cent growth). At that time we generated a nowcast growth of 2.1 per cent quarter-on-quarter in Q2. We also produced a forecast for growth in the third quarter.

The right-hand panels of Table 1 show a repetition of the process in September 2014, the third month of Quarter 3, after the release of the QNA for Q2. The actual outturn for Q2 was growth of 1.5 per cent, while the CSO revised the growth rate for Q1 up to 2.8 per cent. A quarterly growth rate of 2.3 per cent was forecast for the third quarter.

These results provide evidence that significant growth was emerging in the second quarter, months in advance of the release of the official figures from the CSO. The estimate for Q3, produced during the quarter, implies that growth has continued in this quarter.

**TABLE 1** Irish Quarter-on-Quarter GDP Growth Rates for Q1 2014 to Q4 2014

Period	Quarter in which the Nowcast is Estimated:			
	Q2 2014		Q3 2014	
	Nature of Estimate	GDP Estimate %	Nature of Estimate	GDP Estimate %
Q1 2014	Actual	2.6	Actual	2.8
Q2 2014	Nowcast	2.1	Actual	1.5
Q3 2014	Forecast	1.6	Nowcast	2.3

Source: CSO and own estimates.

#### 4. Concluding Comments

As can be seen from the recent example highlighted here, the value of the nowcasting approach is that it can provide evidence of significant changes in economic activity in advance of official estimates. It is, therefore, an important part of the suite of models used to assess the performance of the Irish economy. Given the importance of GNP in an Irish context, we have now expanded the nowcasting methodology to include this output concept, with a nowcast of 2.4 per cent quarter-on-quarter growth in GNP for the third quarter.

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ISSN 0376-7191