Quarterly Economic Commentary

David Duffy
Kevin Timoney

Spring 2013

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Printed by Grehan Printers.

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Research Notes

John FitzGerald, Conor O'Toole *et al*., Petra Gerlach-Kristen

Research Bulletin

13/1

A subscription to the *Quarterly Economic Commentary* costs €327 per year, including VAT and postage. This includes online access to the full text on the day of publication.

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Summary Table

	2010	2011	2012	2013	2014
Output (Real Annual Growth %)					
Private Consumer Expenditure	1.0	-2.4	-0.9	-0.4	0.4
Public Net Current Expenditure	-6.5	-4.3	-3.7	-1.0	-2.0
Investment	-22.6	-12.6	1.2	1.6	5.5
Exports	6.2	5.1	2.9	3.0	5.3
Imports	3.6	-0.3	0.3	2.3	4.3
Gross Domestic Product (GDP)	-0.8	1.4	0.9	1.8	2.7
Gross National Product (GNP)	0.9	-2.5	3.4	1.0	1.5
Prices (Annual Growth %)					
Consumer Price Index (CPI)	-1.0	2.6	1.7	1.5	1.7
Growth in Average Hourly Earnings	-1.5	0.1	1.1	1.2	1.5
Labour Market					
Employment Levels (ILO basis (000s))	1,882	1,849	1,838	1,841	1,849
Unemployment Levels (ILO basis (000s))	303	317	316	306	298
Unemployment Rate (as % of Labour Force)	13.9	14.6	14.7	14.2	13.9
Public Finance					
General Government Balance (€bn)	-48.3	-21.3	-12.5	-12.1	-8.0
General Government Balance (% of GDP)	-30.8	-13.4	-7.6	-7.2	-4.6
General Government Debt (% of GDP	92	106	118	123	119
External Trade					
Balance of Payments Current Account (€bn)	1.8	1.8	8.1	8.8	9.7
Current Account (% of GNP)	1.4	1.4	6.1	6.4	6.9
Demand					
Final Demand	1.3	1.2	1.0	2.0	3.4
Domestic Demand	-4.2	-3.7	-1.5	0.7	0.7
Domestic Demand (excl. Stocks)	-4.9	-4.3	-1.2	-0.2	0.6

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

Summary

The Irish economy stabilised in broad terms in 2012, despite a challenging international context and ongoing difficulties in the eurozone in particular. Mainly due to a strong services exports performance, GDP grew by just under 1 per cent in 2012. GNP expanded by 3.4 per cent, although closer inspection reveals that this figure overstates the underlying growth activity (see FitzGerald, this issue). Domestic demand contracted once again, although the pace of contraction was much less severe than in any year since 2008. The unemployment rate averaged 14.7 per cent in 2012 while the fall in employment continued.

As a small open economy, Irish economic prospects are primarily determined by world economic activity. While growth has remained subdued for many of Ireland's main trading partners, there continue to be better prospects for global economic activity later in 2013 and into 2014, mainly driven by US expansion. Although challenges remain for many countries, other economies including that of the US have proven relatively resilient in recent years.

GDP for 2013 is expected to grow by 1.8 per cent, with growth of 2.7 per cent forecast for 2014. GNP is now forecast to grow by 1.0 per cent this year, before increasing a further 1.5 per cent next year, partly due to an improved outlook for domestic demand. Continued growth in the contribution from net exports underpin this year's expected improvement, while an increase in growth in investment and the domestic economy will also contribute next year. The labour market will show moderate improvement over the forecast horizon, with the unemployment rate expected to decrease to 14.2 per cent this year and 13.9 per cent next year, albeit mainly as a result of continued net emigration.

Positive developments for the Irish economy in recent months have included the deals to swap the promissory notes for long-dated government bonds, and the extension of maturities of EU/IMF programme loans. While these developments are not expected to affect budget targets for 2013, they contribute to our expectation that the government's overall fiscal target will be met in 2013 and 2014. Planned consolidation measures should be introduced as much uncertainty remains for domestic and international growth. Analysis shows that when account is taken of profit flows from redomiciled plcs, economic growth, as measured by GNP, has been weaker than had been estimated. In addition, any boost to growth from a fall in the balance of payments surplus will be smaller than previously anticipated.

National Accounts 2012

A: Expenditure on Gross National Product

	2011	2012	Change in 2012		
	€bn	€bn	Value	Price	Volume
Private Consumer Expenditure	81.3	82.0	0.8	1.8	-0.9
Public Net Current Expenditure	25.4	24.8	-2.6	1.2	-3.7
Gross Fixed Capital Formation	16.1	16.4	1.7	0.5	1.2
Exports of Goods and Services	166.8	177.1	6.2	3.2	2.9
Physical Changes in Stocks	0.2	-0.1			
Final Demand	**289.8**	**300.2**	**3.6**	**2.5**	**1.0**
less:					
Imports of Goods and Services (M)	131.9	137.6	4.4	4.1	0.3
Statistical Discrepancy	1.0	1.0			
GDP at Market Prices	**159.0**	**163.6**	**2.9**	**1.9**	**0.9**
Net Factor Payments (F)	-32.0	-30.2			
GNP at Market Prices	**127.0**	**133.4**	**5.0**	**1.5**	**3.4**

B: Gross National Product by Origin

	2011	2012	Change in 2012	
	€bn	€bn	€bn	%
Agriculture	3.2	3.0	-0.3	-8.0
Non-Agriculture: Wages, etc.	67.8	68.1	0.4	0.6
Other	58.1	62.5	4.4	7.6
Adjustments: Stock Appreciation	-0.6	-0.6		
Statistical Discrepancy	-1.0	-1.0		
Net Domestic Product	**127.4**	**132.0**	**4.6**	**3.6**
Net Factor Payments	-32.0	-30.2	1.8	-5.6
National Income	**95.5**	**101.8**	**6.3**	**6.6**
Depreciation	15.8	15.5	-0.3	-2.0
GNP at Factor Cost	**111.3**	**117.3**	**6.0**	**5.4**
Taxes less Subsidies	15.8	16.1	0.3	2.0
GNP at Market Prices	**127.0**	**133.4**	**6.3**	**5.0**

C: Balance of Payments on Current Account

	2011	2012	Change in 2012
	€bn	€bn	€bn
X – M	34.8	39.3	4.6
F	-32.0	-30.2	1.8
Net Transfers	-1.2	-1.2	-0.1
Balance on Current Account	**1.8**	**8.1**	**6.3**
as % of GNP	1.4	6.1	4.7

National Accounts 2013

A: Expenditure on Gross National Product

	2012	2013	Change in 2013		
	€bn	€bn	Value	Price	Volume
Private Consumer Expenditure	82.0	82.7	0.9	1.3	-0.4
Public Net Current Expenditure	24.8	24.8	0.2	1.2	-1.0
Gross Fixed Capital Formation	16.4	17.0	3.5	1.9	1.6
Exports of Goods and Services	177.1	185.9	4.9	1.9	3.0
Physical Changes in Stocks	-0.1	1.0			
Final Demand	**300.2**	**311.4**	**3.7**	**1.7**	**2.0**
less:					
Imports of Goods and Services (M)	137.6	143.3	4.1	1.8	2.3
Statistical Discrepancy	1.0	0.9			
GDP at Market Prices	**163.6**	**169.0**	**3.3**	**1.5**	**1.8**
Net Factor Payments (F)	-30.2	-32.5			
GNP at Market Prices	**133.4**	**136.5**	**2.3**	**1.4**	**1.0**

B: Gross National Product by Origin

	2012	2013	Change in 2013	
	€bn	€bn	€bn	%
Agriculture	3.0	3.2	0.2	7.5
Non-Agriculture: Wages, etc.	68.1	69.4	1.2	1.8
Other	62.5	65.6	3.1	5.0
Adjustments: Stock Appreciation	-0.6	-0.6		
Statistical Discrepancy	-1.0	-0.9		
Net Domestic Product	**132.0**	**136.7**	**4.7**	**3.5**
Net Factor Payments	-30.2	-32.5	-2.3	7.8
National Income	**101.8**	**104.1**	**2.3**	**2.3**
Depreciation	15.5	15.5		
GNP at Factor Cost	**117.3**	**119.6**	**2.4**	**2.0**
Taxes less Subsidies	16.1	16.8	0.8	4.9
GNP at Market Prices	**133.4**	**136.5**	**3.1**	**2.3**

C: Balance of Payments on Current Account

	2012	2013	Change in 2013
	€bn	€bn	€bn
X – M	39.3	42.4	3.1
F	-30.2	-32.5	-2.3
Net Transfers	-1.2	-1.3	-0.1
Balance on Current Account	**8.1**	**8.8**	**0.7**
as % of GNP	6.1	6.4	0.5

National Accounts 2014

A: Expenditure on Gross National Product

	2013	2014	Change in 2014		
	€bn	€bn	Value	Price	Volume
Private Consumer Expenditure	82.7	84.3	1.9	1.5	0.4
Public Net Current Expenditure	24.8	24.2	-2.4	0.8	-2.0
Gross Fixed Capital Formation	17.0	18.3	7.8	2.2	5.5
Exports of Goods and Services	185.9	198.9	7.0	1.5	5.3
Physical Changes in Stocks	1.0	1.0			
Final Demand	**311.4**	**326.6**	**4.9**	**1.4**	**3.4**
less:					
Imports of Goods and Services (M)	143.3	152.2	6.2	1.8	4.3
Statistical Discrepancy	0.9	1.1			
GDP at Market Prices	**169.0**	**175.3**	**3.7**	**1.0**	**2.7**
Net Factor Payments (F)	-32.5	-36.3			
GNP at Market Prices	**136.5**	**139.6**	**2.3**	**0.8**	**1.5**

B: Gross National Product by Origin

	2013	2014	Change in 2014	
	€bn	€bn	€bn	%
Agriculture	3.2	3.5	0.3	8.5
Non-Agriculture: Wages, etc.	69.4	70.9	1.6	2.1
Other	65.6	68.4	2.8	4.2
Adjustments: Stock Appreciation	-0.6	-0.6		
Statistical Discrepancy	-0.9	-0.9		
Net Domestic Product	**136.7**	**141.3**	**4.6**	**3.4**
Net Factor Payments	-32.5	-35.7	-3.1	9.6
National Income	**104.1**	**105.6**	**1.8**	**1.8**
Depreciation	15.5	16.0	0.5	3.2
GNP at Factor Cost	**119.6**	**121.6**	**2.0**	**1.7**
Taxes less Subsidies	16.8	18.0	1.2	6.8
GNP at Market Prices	**136.5**	**139.6**	**3.2**	**2.3**

C: Balance of Payments on Current Account

	2013	2014	Change in 2014
	€bn	€bn	€bn
X – M	42.4	46.5	4.0
F	-32.5	-35.7	-3.1
Net Transfers	-1.3	-1.3	0.0
Balance on Current Account	**8.8**	**9.7**	**0.9**
as % of GNP	6.4	6.9	0.6

1

The International Economy

The outlook for global economic activity in 2013 and 2014 remains mixed, in particular from the viewpoint of Ireland's external demand. While growth recoveries are forecast for 2014 in the US, eurozone and the UK, this year is expected to be more challenging for the eurozone and the UK. There was a sharp slowdown of growth across Ireland's main trading partners in the fourth quarter of 2012, and the risk of further negative impacts from shocks to the global economy remains high. The most pressing matter at present concerns the need to implement policies to facilitate recovery in the eurozone.

Following a surprisingly weak growth performance in the fourth quarter of last year, several indicators in the US economy suggest a better start to 2013. Uncertainty arising from the spectre of fiscal tightening is likely to have contributed to the slowdown in growth at the end of 2012. However, in the early months of this year there have been encouraging improvements in retail spending levels and employment data, with more construction employment and housing sector gains assisting the upturn. Although GDP grew by 2.5 per cent in the first quarter of this year on an annual basis, the introduction of additional taxation for higher earners and federal spending reductions are expected to decrease the growth figures in the second quarter. Meanwhile, the Federal Reserve continues to engage in quantitative easing, with the federal funds rate targeted in the range of 0-0.25 per cent, as long as the unemployment rate remains high (above 6.5 per cent) and while short-term inflation expectations are not higher than 2.5 per cent. This accommodative policy will be maintained with agency mortgage-backed securities purchases of $40 billion per month and longer-term treasury securities at $45 billion per month. Overall, US GDP growth is expected to remain just above 2 per cent for 2013, before increasing to 3 per cent in 2014.

Turning to the eurozone, the fall in GDP of 0.5 per cent in 2012 is expected to stabilise this year, before expanding to 1.1 per cent next year. In March, the conclusion of protracted negotiations between the government of Cyprus and the troika of international lenders resulted in the imposition of capital controls and levies on large deposits. Despite these potentially destabilising outcomes, there has been little to suggest any negative repurcussions have spread to other eurozone countries. Nonetheless, further progress towards establishing a centralised banking union to safeguard the currency union is still required, and the commitment to decouple bank debt from sovereign debt must be rigorously

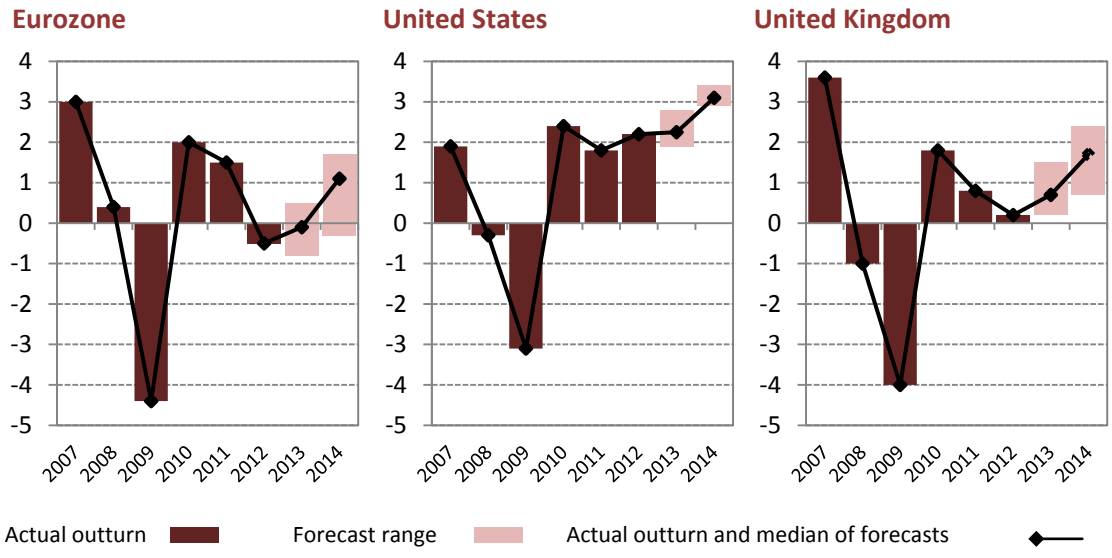
pursued in order to reduce exposure to future banking crises. Encouragingly, EU institutions have recently agreed to establish a single supervisory mechanism (SSM) allowing large eurozone banks to be regulated at European Central Bank (ECB)-level, rather than by national central banks. The challenging objective remains to enable centralised recapitalisations of financial institutions with solvency issues, and irrespective of the eurozone achieving economic recovery in coming years, this goal should be prioritised. The increased demand for peripheral sovereign debt seen in recent months suggests that the ECB's announcement of outright monetary transactions in September 2012 continues to support creditworthiness of eurozone member states, despite ongoing difficulties in terms of high unemployment and fragile recovery prospects. However, heightened uncertainty, mainly due to the outcome of negotiations in Cyprus and the questionable ability of the eurozone to achieve necessary reforms, is likely to hamper growth in early 2013, as consumers and businesses continue to be cautious.

Unemployment levels continue to rise across the common currency area, and the ongoing fiscal tightening has contributed to falling domestic demand in many countries. Output for the eurozone has been weak, with industrial production falling 2.4 per cent last year, as France, Germany, Italy and Spain experienced annual declines in output. As with GDP, overall industrial production is expected to fall again this year, before returning to growth in 2014. Trade activity has been particularly volatile in the eurozone in recent years. Imports for the eurozone fell last year by 0.4 per cent, and trade volume is likely to remain subdued for the first half of this year. Meanwhile, economic growth in 2013 is expected to be flat or negative in three of the four largest eurozone economies (France, Spain and Italy). Data to the first quarter of this year show France re-entered recession with consecutive quarterly GDP contractions of 0.2 per cent, while marginal GDP growth in Germany could not spare the eurozone of its 0.2 per cent contraction. As argued in the previous *Commentary*, there appears to be insufficient demand at present to support multiple export-led recoveries in the single market.

For several years, the UK economy has been in a state of flux between growth and contraction, to the extent that a "triple-dip" recession has become a subject of increasing speculation. Following a contraction in the final quarter of last year, UK GDP grew better than expected at 0.3 per cent in the first quarter of 2013, but remains broadly stagnant, and since mid-2010 the economy has expanded by less than 1 per cent. Meanwhile, labour productivity has been in decline, as economic growth was broadly unchanged despite expanding employment levels. Efforts to

address the rising budget deficit (which fell to 6.3 per cent of GDP in 2012[1]) have held back domestic demand, and in combination with the expanding trade deficit (hampered by a weak external demand channel), the ability to engineer economic growth has proven difficult. Despite these considerable headwinds, UK GDP is forecast to increase by 0.7 per cent this year, and 1.7 per cent in 2014, primarily driven by stronger investment and exports growth. The *Funding for Lending Scheme* has improved credit availability conditions for businesses and households. While there is little evidence so far to suggest that lending activity has subsequently increased,[2] the availability may add stability to growth recovery in future. Other schemes have been introduced to assist growth in property transactions and residential investment, including the *Help to Buy Scheme* and the *Mortgage Equity Guarantee*. Measures of consumer and business confidence have shown tentative improvements in the early months of 2013, while employment levels have grown above forecast, rising each quarter since mid-2011. Of particular relevance to the Irish economy, UK personal consumption expenditure returned to growth last year, and imports are expected to maintain their growth over the forecast period. However, if the depreciation of the pound seen to date in 2013 continues, there will be scope for terms of trade gains for the UK.

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



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

1 See Eurostat release, 19th April 2013: http://epp.eurostat.ec.europa.eu/portal/page/portal/government_finance_statistics/documents/SIF-fin_crisis_impact-EDP.pdf

2 For more on UK lending activity, see the March 2013 *Economic and Fiscal Outlook* prepared by the UK Office for Budget Responsibility.

Following a much-reduced trade volume for the second half of 2012, the outlook for global trade for the coming years is more favourable, according to the World Trade Organisation. Forecasts for trade expansions are mainly based on growing domestic demand in the more developed countries, but an expanding domestic sector in China and other emerging markets has also fuelled rising imports for the world's second largest economy.

The international economy remains fragile, but the reduced risk of further crises in the eurozone following the European Central Bank (ECB's) September 2012 intervention has added considerably more stability than had prevailed since 2008. Indeed, stock indices have enjoyed considerable gains in recent months, many surpassing their pre-crisis peaks. However, it remains to be seen whether these levels will be sustained if quantitative easing and broadly accommodative monetary policy are scaled back. In its recent economic outlook, the OECD examined the growing disconnect between real activity and asset prices for OECD countries, possibly indicating an elevated appetite for risk.[3] These concerns highlight the potential for increased volatility of demand from trading partners, which could arise from overpriced equity markets overseas. This possible vulnerability is a particular concern for a small open economy such as Ireland's.

[3] For more on recent financial market developments, see OECD (2013), "What is the near-term global economic outlook?", http://www.oecd.org/eco/outlook/Economic-Outlook-Handout.pdf

2

Exports of Goods and Services

Preliminary National Accounts from the CSO for 2012 show that exports of goods and services grew by 2.9 per cent in volume terms and by 6.2 per cent in value, implying a price deflator of 3.2 per cent for the year. Quarterly data show that the growth in exports was driven by service export growth, with goods exports declining in volume terms for most of the year, with an annual decline of 2.8 per cent. Although there was some moderation in growth for the second half of the year service export growth averaged 8.9 per cent in 2012.

In value terms, exports of agricultural, forestry and fishing products rose by 1.8 per cent, and industrial exports rose by just 0.5 per cent. Based on Balance of Payments data, tourism receipts declined last year by 3.2 per cent and exports of other services rose by 11.4 per cent in value terms.

As noted above, goods exports in volume terms were on a downward trend in the second half of 2012, reflecting in part the impact of the "pharma cliff" on industrial output from the modern sector. We believe this has continued into 2013, with traditional manufactured exports being adversely affected by sterling weakness. However, if the European economy picks up in the second half of the year some moderation in this trend is anticipated. Thus, in volume terms we expect goods exports to be unchanged in 2013 when compared with 2012. If activity in Europe continues to gather momentum in 2014, we expect goods exports to grow by 2.3 per cent.

The volume of service exports exceeded that of goods in 2012. With continued flows of service sector Foreign Direct Investment (FDI) into Ireland this extra capacity is expected to result in continued strong growth in service exports, with volume growth of 5.7 per cent forecast for 2013 and 8.0 per cent in 2014.

Overall, exports of goods and services are expected to grow by 3.0 per cent in volume in 2013. If the forecast growth in world trade for 2014 is realised then growth of Irish exports of goods and services should increase to 5.3 per cent next year – 2014.

TABLE 1 Exports of Goods and Services

	2011	2011	2012	2013	2014
	Value	Volume Change			
	€ billion	%	%	%	%
Merchandise	84.9	2.7	-2.8	0.0	2.3
Services:					
Tourism	3.3	4.0	-4.9	2.0	3.8
Other Services	78.2	7.9	9.3	5.9	8.2
Total Services	81.5	7.7	8.6	5.7	8.0
Exports of Goods and Services	**166.8**	**5.1**	**2.9**	**3.0**	**5.3**

Note: Value of total exports of goods and services includes FISM adjustment.
Source: Central Statistics Office and ESRI Forecasts.

3

Investment

Having contracted each year between 2008 and 2011, preliminary CSO data indicate that overall investment grew by 1.2 per cent in 2012 in volume terms. With value growth recorded at 2.2 per cent this implies that the investment price deflator remains moderate at 1 per cent. While the volume of construction continued to decline, investment in machinery and equipment grew, even when investment in aircraft is excluded.

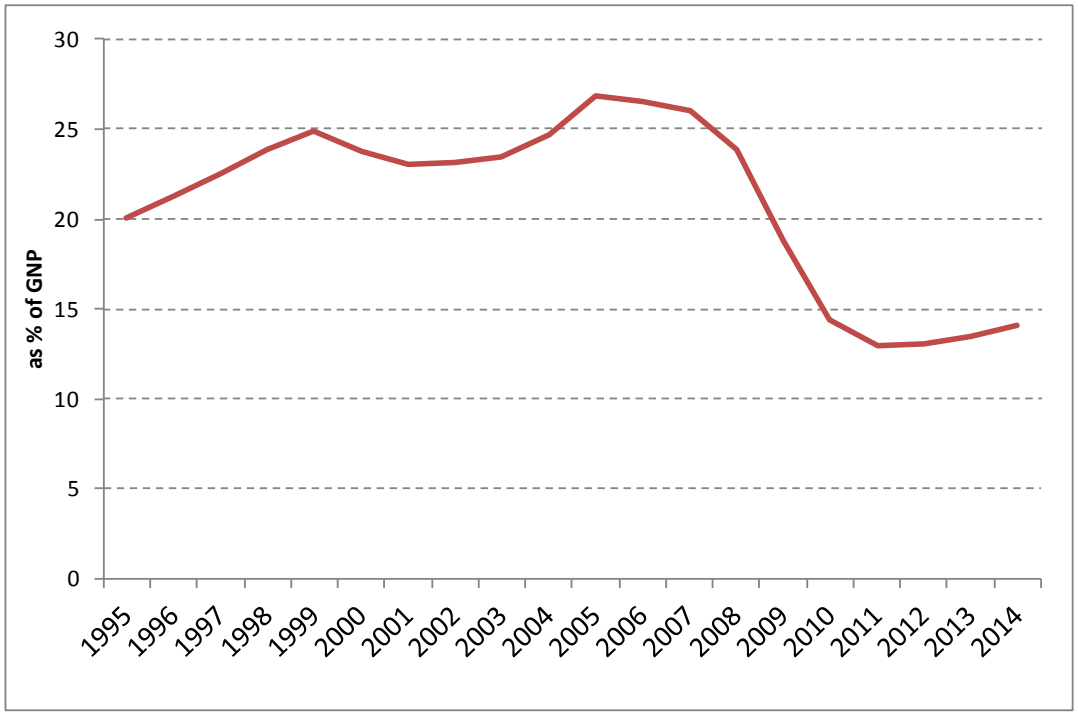
TABLE 2 Gross Fixed Capital Formation, % Change in Volume

	2011	2011	2012	2013	2014
	Value	Volume Change			
	€ billion	%	%	%	%
Housing	3.9	-11.9	-16.8	-5.7	6.3
Other Building	4.9	-21.8	2.5	3.0	5.2
Total Building and Construction	**8.8**	**-15.8**	**-5.6**	**-0.4**	**5.7**
Machinery and Equipment	7.3	-8.3	9.6	3.8	5.4
Total	**16.1**	**-12.6**	**1.2**	**1.6**	**5.5**

Source: Central Statistics Office and ESRI Forecasts.

Investment is one of the more difficult components of the economy to forecast. It can vary substantially from year to year and can be driven by the announcement of a single large-scale construction project or the purchase of new aircraft. Based on available indicators and trends to date we expect that, having declined for the past number of years, investment in housing will stabilise this year and show some moderate growth in 2014. This will primarily be driven by residential building improvements and extensions rather than by new units. With Ireland continuing to attract foreign direct investment, it seems likely that growth in other building and construction investment will recommence in 2013. When this is coupled with a number of large-scale investment projects it could result in an increase of over 5 per cent in other building and construction in 2014. Based on these we would expect that overall building and construction will contract by 0.4 per cent in 2013 but grow by 5.7 per cent in 2014.

FIGURE 2 Investment levels, as a % of GNP, constant prices



Sources: CSO data and ESRI Forecasts.

With domestic activity forecast to improve gradually and an improvement in export markets, particularly in 2014, we expect that investment in machinery and equipment will grow by close to 4 per cent this year and by over 5 per cent in 2014. On the basis of these forecasts overall investment will grow by 1.6 per cent this year and by 5.5 per cent in 2014. Although some recovery is forecast investment levels in the economy are still well below previous levels, see Figure 2.

4

Incomes, Prices and Consumption

Earnings and Labour Costs data published by the CSO show that overall hourly earnings were broadly stable in 2012, with some sectors experiencing increases and others experiencing declines. If there is, as we anticipate, some recovery in the labour market over the next two years then we expect that there will be some moderate increases in average annual earnings at an aggregate level.

This is reflected in our forecasts for non-agricultural income. As we set out in Section 6, overall employment is forecast to show an increase in 2013 and again in 2014. Coupled with our forecasts of moderate growth in earnings this leads us to expect an increase in aggregate non-agricultural wages of approximately 1.8 per cent in 2013, and a further 2.3 per cent in 2014.

With direct personal taxation growing at a faster rate than incomes, growth in personal disposable income will be more moderate, at 1.1 per cent this year and 2.2 per cent in 2014. When combined with our forecasts for consumption the implication is that the savings ratio will remain between 5.7 and 6.0 per cent in 2013 and 2014.

TABLE 3 Personal Disposable Income

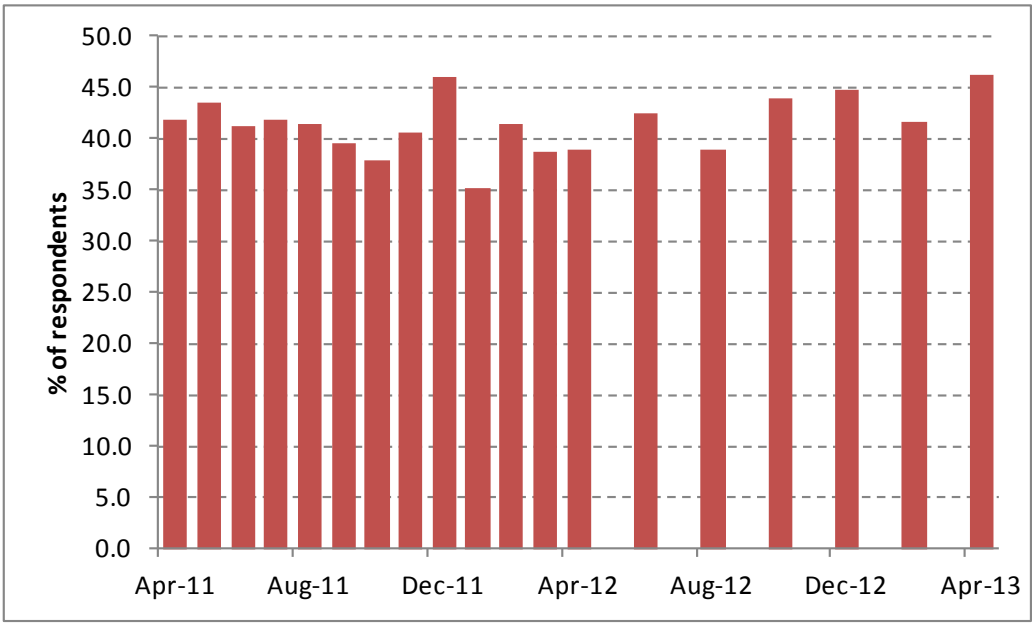
	2011	2012	2013	2014
	€bn	€bn	€bn	€bn
Agriculture, etc.	3.2	3.0	3.2	3.5
Non-Agricultural Wages	67.8	68.1	69.4	70.9
Other Non-Agricultural Income	11.5	13.5	13.9	15.0
Total Income Received	82.5	84.6	86.4	89.4
Current Transfers	25.8	25.2	25.1	25.1
Gross Personal Income	108.4	109.8	111.5	114.5
Direct Personal Taxes	22.4	23.0	23.8	24.8
Personal Disposable Income	85.9	86.8	87.8	89.7
Consumption	81.3	82.0	82.7	84.3
Personal Savings	4.6	4.8	5.0	5.4
Savings Ratio	5.4	5.6	5.7	6.0
Average Personal Tax Rate	20.7	20.9	21.3	21.7

Source: Central Statistics Office and ESRI Forecasts.

The preliminary *National Accounts* for 2012 show that the volume of personal consumption continued to decline, down by 0.9 per cent compared with 2011. Analysis by Gerlach-Kristen, in an accompanying *Research Note* of the consumption patterns of younger and older households in the crisis, finds that the drop in consumption has been mainly concentrated in younger households. The value of personal consumption was marginally higher, although the increase, at 0.8 per cent, was modest. The personal consumption deflator grew by 1.7 per cent.

The volume of personal consumption is expected to decline marginally in 2013 and to show marginal growth in 2014. Although consumer confidence has improved in recent months, it currently remains below its long-run average. Retail sales data for the first quarter of the year indicate that the volume of sales remains weak. Although it now seems there will be some increase in earnings over the next two years uncertainty regarding the economic outlook and the continued high level of unemployment is likely to result in households continuing to save for precautionary reasons, see Figure 3. In addition, households are continuing to deleverage. It seems likely that inflation and the personal consumption deflator will remain moderate, with the consumption deflator at around 1.5 per cent per annum. Thus, the value of personal consumption will grow at just 1 per cent in 2013 and by close to 2 per cent in 2014.

FIGURE 3 Saving for Unexpected Expenses, % of respondents



Note: From April 2012 the survey questions were asked every second month.
Sources: Based on data from Nationwide (UK) Ireland Savings Index.

TABLE 4 Inflation Measures

	2011	2012	2013	2014
	Annual Change			
	%	%	%	%
Consumer Price Index	2.6	1.7	1.5	1.7
Personal Consumption Deflator	1.5	1.8	1.3	1.5
HICP	1.1	2.0	1.7	1.9

Source: Central Statistics Office and ESRI Forecasts.

5

Public Finances

The outlook for the public finances has improved on the back of the sale of some government investments and the promissory note deal. In the short term the impact will be most obvious on the exchequer borrowing requirement. However, it is the outlook for the general government balance that is much more important. The new *Government Finance Statistics* release from the CSO, which will provide quarterly details on the General Government Balance (GGB), will be a useful aid to forecasting the public finances in a way that is consistent with the national accounts. This new release shows that the GGB in 2012 was €12.5 billion, equivalent to 7.6 per cent of nominal GDP. Based on these numbers the fiscal target was exceeded by 1 percentage point last year. The new release also contains data on the general government debt. At the end of last year the debt stood at €192.5 billion, 117.6 per cent of GDP.

Since the last *Commentary,* a deal on the promissory notes was agreed in February 2013. The transaction replaces the promissory notes with long-term government bonds. This represents a significant alleviation of short-term funding requirements for Ireland and should enhance debt sustainability. Overall, the deal has a small negative impact on the public finances in 2013. For 2013, costs associated with the liquidation of Irish Bank Resolution Corporation (IBRC) and accrued interest on the promissory notes are expected to be marginally higher than the net interest savings of €1.1 billion brought by the deal. Since the repayment schedule for the promissory notes involved various payments between state institutions, the bulk of interest payments involved would ultimately have been returned to the exchequer. However, the funding requirements of the promissory notes payment schedule were substantial, and despite the circular nature of the interest payments to the IBRC, the interest expenditure was counted in the headline General Government Balance each year. The impact is expected to be more substantial in 2014 and subsequent years, reducing the general government deficit by approximately €1 billion.

Taking account of the promissory note deal and based on our forecast for economic growth next year, it looks likely that the target budget deficit of 7.5 per cent will be met with a final general government deficit in the order of 7.2 per cent. This should continue into 2014 with a forecast deficit of 4.6 per cent, compared with a target of 5.1 per cent.

TABLE 5 Public Finances, National Accounts

	2010	2011	2012	2013	2014
	€ bn	€ bn	€ bn	€ bn	€ bn
Revenue	55.1	55.4	56.6	57.5	59.8
Expenditure	103.4	76.5	68.8	69.6	67.8
General Govt. Balance	-48.3	-21.3	-12.5	-12.1	-8.0
As % of GDP	-30.8	-13.4	-7.6	-7.2	-4.6

Source: Central Statistics Office, *Government Finance Statistics* and own forecasts.

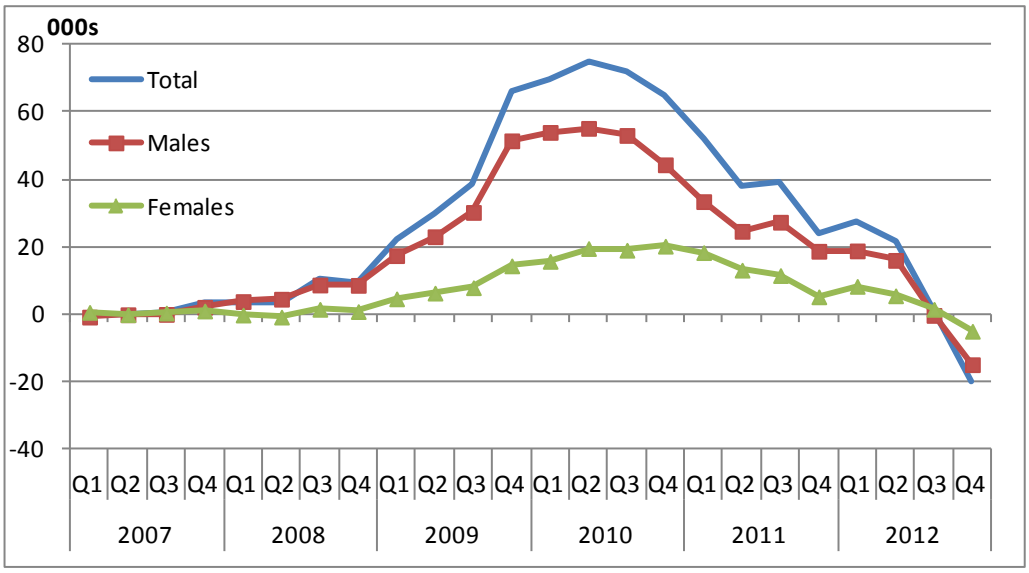
6

The Labour Market

Signs of moderate improvements in the labour market have been emerging in recent months, but the underlying changes suggest continued stabilisation rather than a shift of momentum. Updated labour market data from the third quarter of 2012 saw the unemployment rate revised down slightly to 14.6 per cent, before falling further to 14.2 per cent for the final three months. While net emigration remains the primary driver of reduced unemployment at present, the latest *Quarterly National Household Survey (QNHS)* included the first annual increase of employment in over four years. However, the increase was small (0.1 per cent), and on a seasonally adjusted basis there was a marginal decrease compared to the same period in 2011.

Indications of improvement were stronger for unemployment, where an annual fall in seasonally adjusted unemployment for the third quarter was revised up to 4,300. Significantly, this was followed by 18,600 fewer people unemployed in the final quarter, compared to the same period in 2011. As shown in Figure 4, long-term unemployment fell in Quarter 4, 2012, by just under 20,000 – encouragingly, this exceeded the corresponding total fall in unemployment.

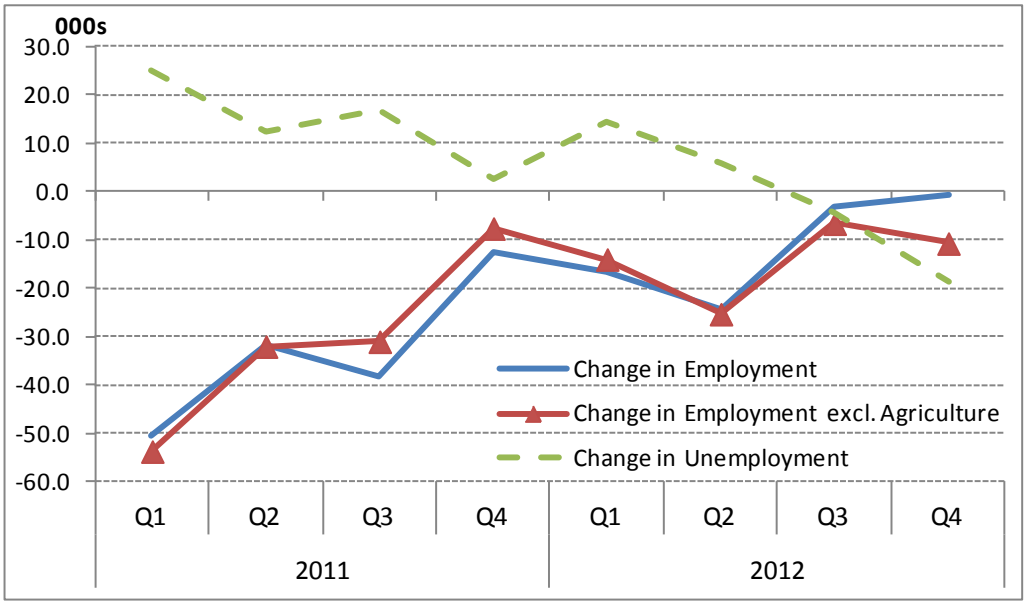
FIGURE 4 Annual Change in Long-term Unemployment, 2006 Q1 – 2012 Q4



Source: Central Statistics Office.

Some caution is due in relation to the latest *QNHS* data, however, as it is the first survey conducted using a partly adjusted sample of households, based on the *2011 Census of Population*. This incremental adjustment ensures that the survey remains representative, and is phased in over time. Based on past sensitivity to such changes, the last *QNHS* notes that estimates for agricultural employment may have been particularly affected. The survey shows this sector growing by 6,000 (7.1 per cent) compared to the previous quarter. Excluding agriculture entirely, the annual fall in total employment for the fourth quarter of 2012 was 10,600 on a seasonally adjusted basis, as shown in Figure 5. The continued underlying fall in non-agricultural employment is a less encouraging finding than the main results suggest.

FIGURE 5 Annual Change in Employment and Unemployment, 2011 Q1 – 2012 Q4



Source: Central Statistics Office.

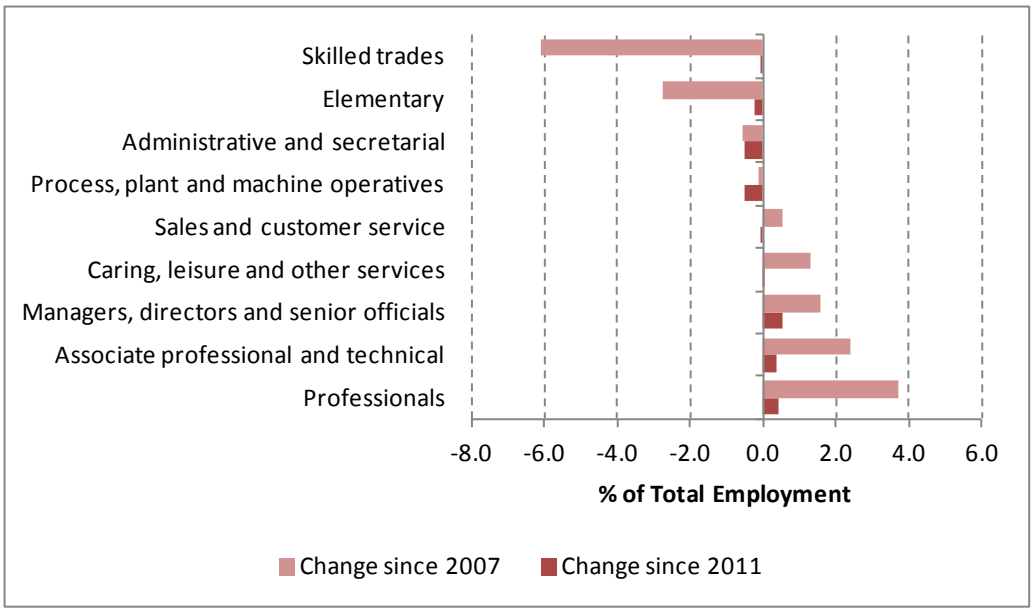
Employment and unemployment last year fell by 11,200 and 600, respectively. The labour force contracted by 12,000, while the participation rate fell from 60.2 per cent to 59.9 per cent. Overall, we forecast the labour market to improve in 2013, with the annual rate of unemployment falling to 14.2 per cent. Looking ahead to next year, we expect continued emigration to reduce both the level of unemployment and the size of the labour force, with the unemployment rate falling further to below 14 per cent (Table 6).

2012 saw the largest falls for construction and industry employment, with the biggest increases by sector in information and communication, accommodation and food, and health and social work activities. We expect some tentative recovery for industry and construction this year and next year, while health and social work,

which has increased employment by 27,400 since 2007, is not expected to continue to expand.

By broad occupational group, shares of total employment increased moderately for professionals, managers, directors and senior officials, and associate professionals and technical employment during 2012. As shown in Figure 6, many of the changes seen since 2007 were amplified last year, while a disproportionate reduction has been ongoing for skilled trades and elementary employment during the last five years.

FIGURE 6 Change in Percentage of Total Employment, by Broad Occupational Group



Source: Central Statistics Office.

Table 6 summarises the labour market profile for 2011-2014, with total employment expected to increase in 2013 by over 3,400, before increasing by a further 6,600 in 2014. The downward path of unemployment that began in the third quarter of 2012 is forecast to continue in 2013 and 2014, falling to below 300,000 next year. Following a decrease of 11,000 in 2012, the labour force is forecast to continue to decline at a slower rate, while the labour force participation rate is expected to remain below 60 per cent.

TABLE 6 Employment and Unemployment

	Annual Averages, 000s			
	2011	**2012**	**2013**	**2014**
Agriculture	83	86	84	84
Industry	348	336	338	344
of which: Construction	108	102	102	104
Services	1,414	1,415	1,418	1,420
Total at work	1,849	1,839	1,842	1,849
of which: non-agri. employees	1,534	1,526	1,534	1,546
self employed	293	289	285	280
Unemployed	317	316	305	298
Labour Force	2,166	2,155	2,148	2,147
Unemployment Rate, %	14.6	14.7	14.2	13.9
Participation Rate, %	60.4	60.2	59.9	59.9
Net Migration	-27.4	-34.4	-32.0	-22.0

Source: Central Statistics Office and ESRI Forecasts.

7

Imports and the Balance of Payments

Imports

The weakness of domestic economic activity is reflected in import growth. *Quarterly National Accounts* from the CSO show that imports grew by 0.3 per cent in 2012 in volume and by 4.4 per cent in value. Thus, the deflator for imports of goods and services was 4.1 per cent. The data also show a similar pattern to that of exports – imports of goods remained flat for most of 2012, resulting in an annual average decline of 2.8 per cent. In contrast, imports of services averaged 2 per cent growth in 2012.

Goods imports are forecast to grow moderately this year, at 1.0 per cent, as activity in the domestic economy starts to improve. With personal consumption continuing to be weak, growth in goods imports will reflect increasing imports of capital goods and of materials. With households continuing to deleverage and to save, and with growth in incomes remaining low it seems likely that tourism spending abroad will be unchanged in 2013 before starting to grow again in 2014. Other service imports are forecast to show strong growth, broadly in line with service export growth. Thus, we are forecasting that overall growth in imports of goods and services will amount to 2.3 per cent in 2013 and 4.3 per cent in 2014.

TABLE 7 Imports of Goods and Services, Percentage Change, Volume

	2011	2011	2012	2013	2014
	Value, €bn	%	%	%	%
Merchandise	48.3	-2.3	-2.8	1.0	3.0
Services:					
Tourism	5.0	-7.2	0.5	0.0	1.0
Other Services	78.2	1.4	2.0	3.2	5.3
Total Services	83.2	0.8	2.0	3.0	5.0
Imports of goods and services	**131.9**	**-0.3**	**0.3**	**2.3**	**4.3**

Note: Value of total imports of goods and services includes FISM adjustment.
Source: Central Statistics Office and ESRI Forecasts.

Balance of Payments

Official estimates indicate that the balance of payments surplus was at €8.1 billion in 2012. This represents a sizable surplus though the underlying surplus is smaller than this, as the overall figure includes the inflow of profits from overseas

multinationals which relocated their Head Office to Ireland, but none of their productive activities.

TABLE 8 Balance of Payments

	2011	2012	2013	2014
	€bn	€bn	€bn	€bn
Exports of goods and services	166.8	177.1	185.9	198.9
Imports of goods and services	131.9	137.6	143.3	152.0
Net factor payments	-31.8	-30.0	-32.4	-35.4
Net transfers	-1.2	-1.2	-1.3	-1.3
Balance on current account	1.8	8.1	8.8	9.7
as a % of GNP	1.4	6.1	6.4	6.9

Source: Central Statistics Office and ESRI Forecasts.

The forecasts for exports and imports indicate that the surplus on trade in goods and services will grow moderately, especially in 2013. Taking account of our forecasts for the various inflows and outflows that comprise the balance of payments, which includes higher national debt interest, we are expecting that the current account surplus will amount to 8.8 billion this year and 9.7 billion next year. This is equivalent to 6.4 and 6.9 per cent of GNP in 2013 and 2014 respectively.

As outlined in the previous *Commentary* and in the accompanying *Research Note* (FitzGerald, this issue), net profit flows from redomiciled plcs have had a substantial impact on the current account surplus and once account is taken of these a very different picture emerges of the Irish economy. This issue is explored in the General Assessment.

8

Monetary Sector Developments

Bank Funding

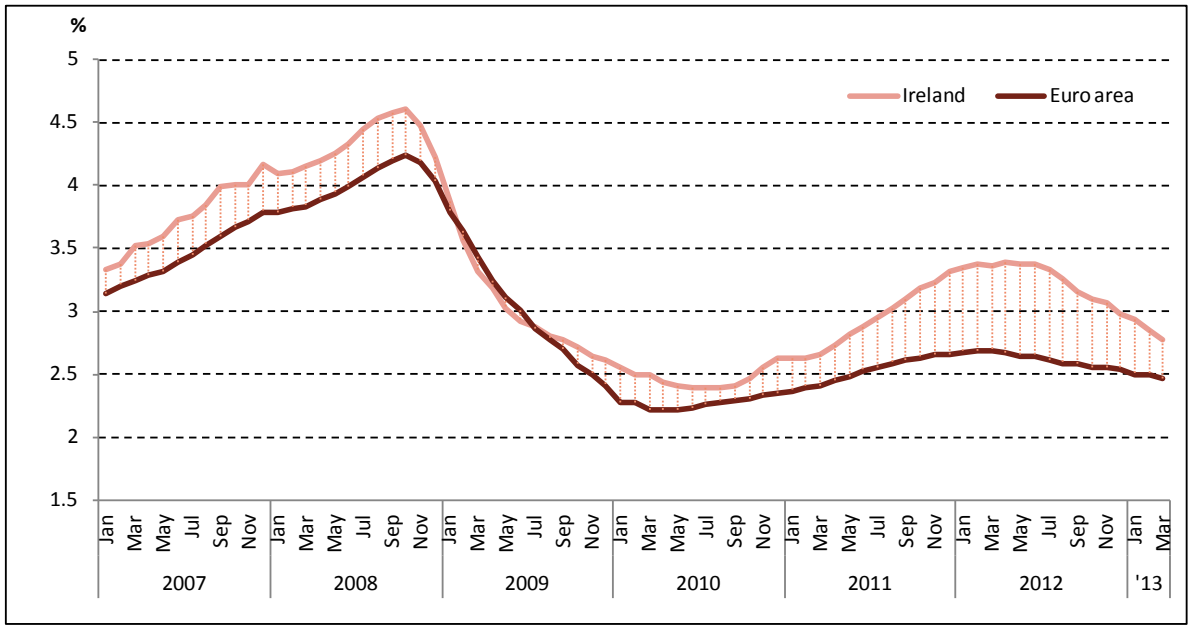
Despite ongoing issues with the eurozone banking system that remain unresolved, the funding environment for Irish banks has been easing somewhat. The September 2012 intervention by the European Central Bank (ECB) outlining its facility for outright monetary transactions has been a catalyst for strengthening sovereign bond markets throughout Europe. Analysis of the domestic banking sector data suggests that bank funding on the deposit side has continued its improvements into early 2013. Some progress towards necessary reforms at European level has been made to date, and the EU's decision to establish a single supervisory mechanism in March has aided the improved funding conditions.

Improvements in confidence assisted the continued stability in deposit funding at the covered Irish banks throughout 2012 and in early 2013. Customer deposits (both resident and non-resident) increased in the final three months of 2012, to just under €160 billion in value, some €10 billion above the level at end-2011. The weighted average interest rate of term deposits for households and Non-Financial Corporations (NFCs) in Irish resident banks has fallen by 62 basis points between April 2012 and March this year, as shown in Figure 7. The spread between Irish resident banks' interest rates and eurozone counterparts on such deposits has more than halved compared to the first half of 2012, down to 31 basis points.

In February, a transaction was undertaken to effectively replace Emergency Liquidity Assistance (ELA) with long-dated government bonds, facilitated by the special liquidation process of the Irish Bank Resolution Corporation (IBRC) and retirement of the government-issued Promissory Notes.[1] This transaction has resulted in the halving of total liquidity assistance as reported in the *Money and Banking Statistics* of the Central Bank of Ireland (see Figure 8). Total Eurosystem borrowing is down to €43 billion as of February, and while still substantial, this represents a reduction of 73 per cent from the €159 billion peak two years before, in part due to the removal of ELA, however the non-ELA component has also been decreasing, down by 54 per cent from peak in January 2011.

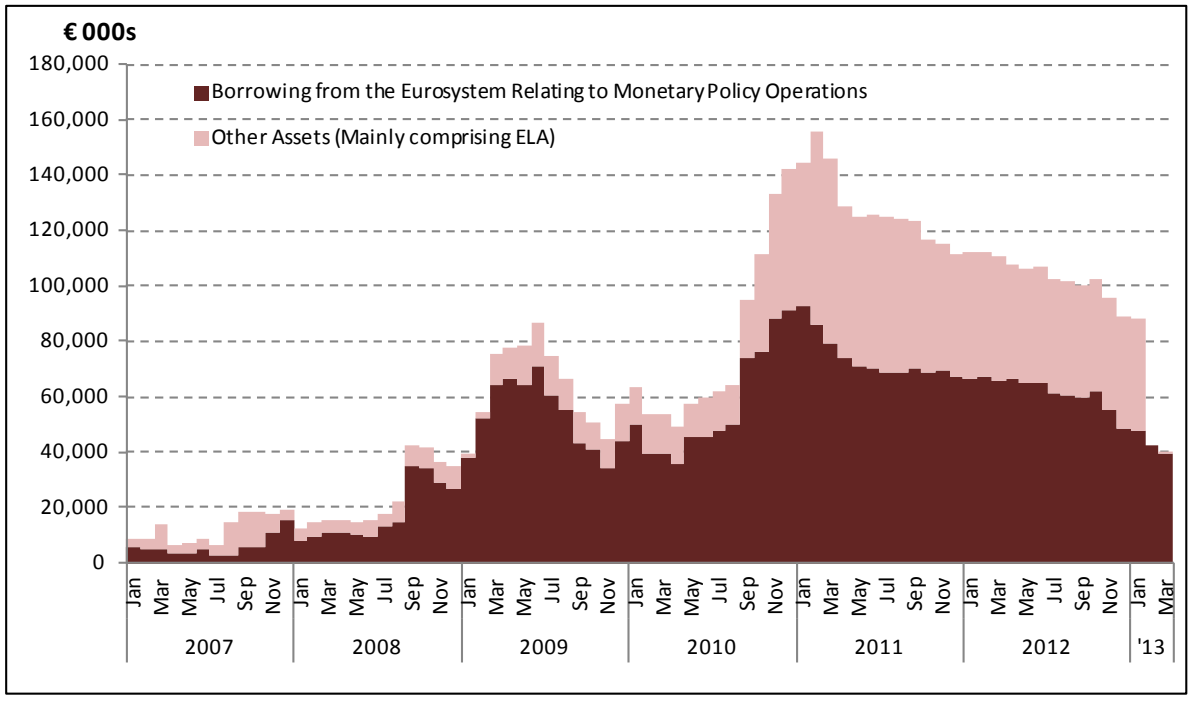
[1] For details of this transaction, see the Department of Finance's February release of "Transaction Overview": http://www.finance.gov.ie/documents/publications/presentation/2013/newjmpres.pdf

FIGURE 7 Average Household and NFC Deposit Rates*



* Average for deposits outstanding with agreed maturity.
Source: ECB Bank Lending Survey 2012.

FIGURE 8 Emergency Liquidity Measures



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

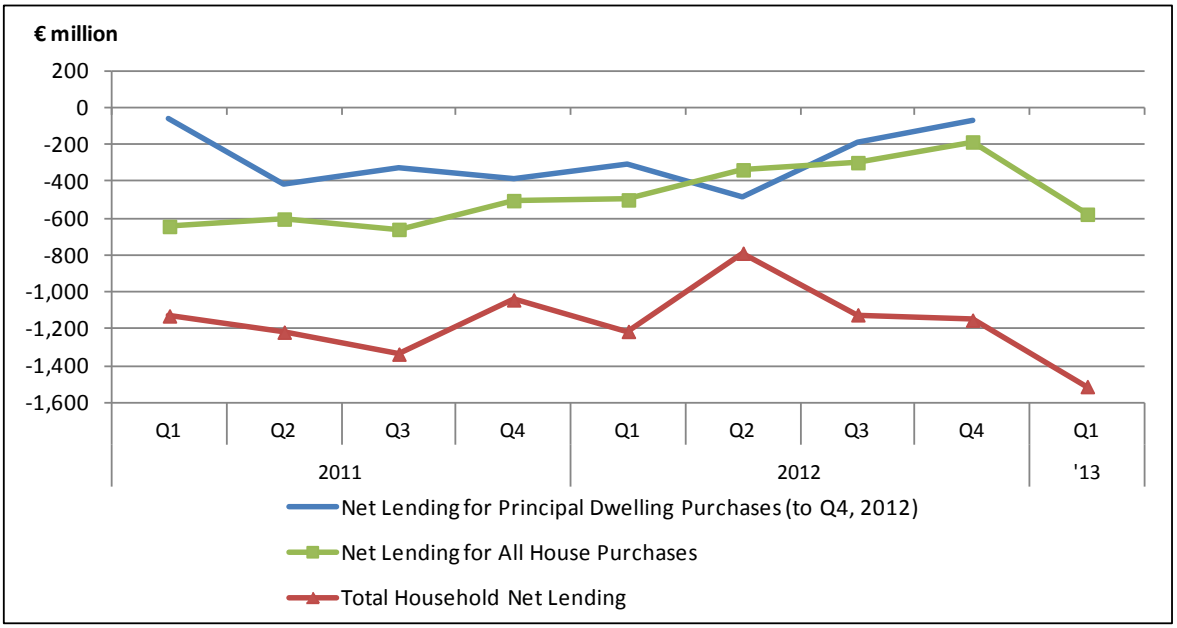
An increasing ability of Irish banks to obtain conventional market funding is improving the prospects for a phased reduction in usage of Eurosystem facilities, and this effort has been boosted by February's transaction involving the IBRC liquidation. Parallel efforts to gradually re-enter markets with timely government bond issuances have been mutually beneficial for both the banks' and the sovereign's creditworthiness. The covered banks have demonstrated their market access through the issue of covered bonds and term repos. Elsewhere, banks have continued to reduce costs aside from those related to wholesale funding channels. The costly Eligible Liabilities Guarantee Scheme (ELG) was discontinued since end-March of this year, and this may lead to a reduction in net interest margins. Reduced operating costs are also progressing and deleveraging targets look likely to be met in 2013.

Despite some positive developments for funding, a growing challenge for profitability faced by banks concerns the increasing volume of non-performing loans and rising mortgage arrears, and the subject has become a focus of intense scrutiny in recent months (see Gerlach-Kristen, this issue). Officials from the Central Bank of Ireland have been particularly vocal in their criticism of banks' efforts to contain the growth of lending arrears, amid concerns that the incentives encouraging strategic default are not being addressed. The underlying issue remains difficult to address without improvement in the domestic economy, as growth in employment and earnings would likely assist households and businesses to meet their loan repayments. In the present context, many factors are holding back recovery for the banking sector. The likely extent of further recapitalisations required will be revealed in the coming year when the results of the next Prudential Capital Assessment Review (PCAR) are published.

Recent Lending Developments

Quarterly data on net lending to households, adjusted for non-transaction related effects (relating to valuation/exchange rate changes and reclassifications), show households' net lending for all house purchases fell by €1.3 billion year-on-year in 2012, compared to a fall of €2.4 billion year-on-year in 2011. By quarters, 2012 saw such net lending fall by €500 million in the first quarter, moderating to a fall of €185 million by the fourth quarter. This moderation has not carried through to early 2013, however, as net lending to households for house purchases fell by €577 million for the first quarter of this year. Net lending for principal dwellings also moderated in the latter half of 2012, as shown in Figure 9, falling by just €67 million in the fourth quarter.

FIGURE 9 Net Lending to Households, 2011 Q1 – 2013 Q1: Total net lending, net lending for all house purchases, and for net lending principal dwelling purchases



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

One explanation for this pattern of deleveraging in lending for house purchases is the discontinuation of mortgage interest tax relief at the end of 2012. Prospective housebuyers seeking to avail of this facility before its withdrawal would have put upward pressure on net lending for house purchases, despite the broad delevaraging that has been ongoing for households and businesses (Table 10).

Data on lending to Irish resident Small and Medium Enterprises (SMEs) shows continued reductions throughout 2012. The most recent data shows a 2.8 per cent fall for the final quarter last year, and the average for the year as a whole also showed a decline of 2.8 per cent, the pace of reduction moderated from 6.6 per cent average annual decline in 2011. 'Core' lending saw a 5.0 per cent fall in the fourth quarter of 2012, as lending to the sectors outside of financial intermediation, construction and real estate activities continues to decrease faster than the total. As with the total, these figures show a slowing pace of decline relative to the falls seen in 2011, but the picture remains one of continuing decline in SME lending activity, although some degree of variation by sector is evident, as discussed further in a *Research Note* (O'Toole, Gerlach-Kristen and O'Connell, this issue).

TABLE 10 Lending to Irish Households and Irish Resident SMEs (% Change, Year-on-Year)

	Irish Household Lending				Small and Medium Enterprise Lending		
	End-Month	All Lending	For House Purchases	Consumer Credit	Total	Total excl. Financial Intermediation	Total excl. Financial Intermediation & Property Related Sectors
2010	Mar	-2.0	0.6	-10.6	-	-	-
	Jun	-3.1	-0.1	-11.7	-	-	-
	Sep	-3.7	-0.9	-12.7	-	-	-
	Dec	-4.7	-1.4	-19.9	-	-	-
2011	Mar	-4.2	-2.0	-13.7	-8.8	-11.3	-9.2
	Jun	-3.9	-2.2	-14.4	-9.1	-12.5	-10.6
	Sep	-4.0	-2.5	-13.7	-5.4	-8.2	-8.9
	Dec	-3.6	-2.5	-6.9	-3.0	-5.4	-6.2
2012	Mar	-3.9	-2.4	-11.6	-3.9	-4.9	-6.3
	Jun	-3.7	-2.2	-11.1	-1.7	-2.9	-4.6
	Sep	-3.7	-2.0	-10.7	-2.7	-4.1	-4.9
	Dec	- 3.9	- 1.6	- 11.9	-2.8	-4.1	-5.0
2013	Jan	- 4.0	- 1.8	- 12.3			
	Feb	- 4.2	- 1.8	- 11.9			
	Mar	- 4.1	- 1.7	- 12.1			

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

9

General Assessment of the Irish Economy

The preliminary National Accounts for 2012 show that real GDP grew by 0.9 per cent in the year. As has been the case over the past number of years, this growth was due to increased exports. Furthermore, within this component we have seen export growth in recent years driven predominately by the service sector. There were some indications of an improvement in the labour market in the latter half of 2012 and inflation has remained low.

Despite some remaining uncertainties about the strength of the international economy, it seems likely that growth in output and employment in Ireland will continue in 2013 and 2014, with real GDP projected to grow by 1.8 per cent this year and by 2.7 per cent in 2014. On the assumption that these growth rates are realised, we expect that employment will increase in both 2013 and 2014, leading to a reduction in the unemployment rate to an annual average just below 14 per cent in 2014. Indeed, unemployment (both short and long term) began to fall towards the end of last year, although our analysis of employment levels suggests an underlying fall has persisted until now.

Forecasts of growth in the Irish economy are based on forecasts showing the European economy returning to growth in 2014. This is a crucial assumption for our forecast as exports are the main contributor to Irish economic growth at present. In recent years forecasts for economic growth in Ireland's main trading partners has been consistently revised downwards. For example, over the course of the past two years, forecasts for world economic growth have been revised from expected growth of approximately 4 per cent in 2013 to current forecasts of 3.3 per cent. As outlined in the International section, the expectation at present is that growth in the world economy will pick up in 2014. Associated with this is a pick-up in import volumes which should underpin the forecast growth in Irish exports. If the anticipated international upturn does not occur, then the outlook for the Irish economy is less positive than we have forecast in this *Commentary*.

The outturn in the public finances in 2012 was better than anticipated, although the deficit remains high – in 2012 the deficit was over €12 billion. Further improvements are forecast in the public finances with the targets for the general government deficit being met in 2013 and 2014. While this has been aided by the recent promissory note and bank debt deals, it also reflects the gradual upturn in

Irish economic activity and assumes that the planned consolidation is implemented. Even at the end of the consolidation process a deficit will remain, and in addition measures are needed to reduce the general government debt, estimated at 123 per cent of GDP in 2013 with associated interest costs of €8.2 billion. As we have emphasised above, the Irish economy remains reliant on the international environment as a driver of growth. Given the uncertainty that surrounds the international outlook it remains necessary to implement the consolidation measures as planned in forthcoming budgets. By doing so the deficit will be reduced and the public finance contraction will not weigh as heavily on the domestic economy.

Although the outlook is for an upturn in growth, we continue to have some concerns about the weakness in the domestic economy. O'Toole *et al.* (this issue) analyse the impact of credit constraints on Irish SMEs and find that, by the latter half of last year, credit constraints were affecting only one in nine Irish SMEs. However, if economic growth starts to pick-up as forecast there is a concern that the capacity of the banking system will not be adequate to deal with an upturn in demand for credit by Irish SMEs.

The analysis in the accompanying research note (FitzGerald, this issue) suggests a somewhat different performance by the Irish economy in recent years than has been previously estimated. This is the result of a number of international companies redomiciling into Ireland. Although these companies have only a limited presence in Ireland, their profits earned outside Ireland represent a significant income inflow. This has the effect of reducing the negative net factor income flow (profit outflows from multinationals based in Ireland), which in turn raises the current account surplus and GNP growth rate. Adjusting GNP to take account of the impact of these redomiciled plcs indicates that the contraction in the Irish economy was deeper in 2009 that previous measures indicated. Furthermore it indicates that the Irish economy actually contracted in 2010, rather than showing moderate GNP growth. GNP growth in 2012 was correspondingly lower than official estimates, by approximately 1 percentage point. If the pattern persists then adjusted GNP growth in 2013 and 2014 will be lower that the forecasts set out in this *Commentary*.

Taking account of the profit flows from redomiciled plcs also has an impact on the Balance of Payments, resulting in a reduced surplus. A surplus on the Balance of Payments indicates that the economy is saving more than it is spending or investing. Generally large current account surpluses, or deficits, are not sustained and a large surplus would indicate that at some point in the future domestic demand should increase as savings are reduced and domestic spending and

investment increase. The analysis in FitzGerald (this issue) indicates an adjusted current account surplus that is closer to 1 per cent of GNP in 2012 rather than a estimated 6 per cent, suggesting that any boost to growth from a fall in the balance of payments surplus will be smaller than had been previously anticipated.

Detailed Forecast Tables

FORECAST TABLE A1 Exports of Goods and Services

	2011	% change in 2012		2012	% change in 2013		2013	% change in 2014		2014
	€ bn	Value	Volume	€ bn	Value	Volume	€ bn	Value	Volume	€ bn
Merchandise	84.9	1.8	-2.8	86.4	2.0	0.0	88.1	3.6	2.3	91.3
Tourism	3.3	-3.2	-4.9	3.2	3.3	2.0	3.3	5.4	3.8	3.5
Other Services	78.2	11.4	9.3	87.0	7.9	5.9	93.9	10.1	8.2	103.5
Exports Of Goods and Services	166.3	6.2	2.9	176.6	4.9	3.0	185.3	7.0	5.3	198.2
FISM Adjustment	0.5			0.5			0.6	0.0		0.6
Adjusted Exports	166.8	6.2	2.9	177.1	4.9	3.0	185.9	7.0	5.3	198.9

FORECAST TABLE A2 Investment

	2011	% change in 2012		2012	% change in 2013		2013	% change in 2014		2014
	€ bn	Value	Volume	€ bn	Value	Volume	€ bn	Value	Volume	€ bn
Housing	3.9	-17.9	-16.8	3.2	-3.9	-5.7	3.1	10.5	6.3	3.4
Other Building	4.5	3.8	2.5	4.7	4.6	3.0	4.9	6.8	5.2	5.3
Transfer Costs	0.4	18.6	12.8	0.4	7.1	3.0	0.5	10.2	6.0	0.5
Building and Construction	8.8	-5.2	-5.6	8.3	1.5	-0.4	8.5	8.4	5.7	9.2
Machinery and Equipment	7.3	11.0	9.6	8.1	5.6	3.8	8.6	7.3	5.4	9.2
Total Investment	16.1	2.2	1.2	16.5	3.5	1.6	17.0	7.8	5.5	18.4

FORECAST TABLE A3 Personal Income

	2011	% change in 2012		2012	% change in 2013		2013	% change in 2014		2014
	€ bn	%	€bn	€ bn	%	€bn	€ bn	%	€bn	€ bn
Agriculture, etc	3.2	-8.0	-0.3	3.2	7.5	0.2	3.2	8.5	0.3	3.5
Non-Agricultural Wages	67.8	0.6	0.4	68.1	1.8	1.2	69.4	2.3	1.6	70.9
Other Non-Agricultural Income	11.5	17.0	2.0	13.9	3.2	0.4	13.9	8.0	1.1	15.0
Total Income Received	82.5	2.5	2.1	84.6	2.2	1.9	86.5	3.4	3.0	89.5
Current Transfers	25.8	-2.5	-0.6	25.2	-0.4	-0.1	25.1	-0.1	0.0	25.1
Gross Personal Income	108.4	1.3	1.4	109.8	1.6	1.8	111.5	2.6	3.0	114.5
Direct Personal Taxes	22.4	2.4	0.5	23.0	3.5	0.8	23.8	4.3	1.0	24.8
Personal Disposable Income	85.9	1.1	0.9	86.8	1.1	0.9	87.8	2.2	1.9	89.7
Consumption	81.3	0.8	0.7	82.0	0.9	0.7	82.7	1.9	1.5	84.3
Personal Savings	4.6	5.0	0.2	4.9	4.3	0.2	5.1	7.7	0.4	5.5
Savings Ratio	5.4			5.6			5.8			6.1
Average Personal Tax Rate	20.7			20.9			21.3			21.7

FORECAST TABLE A4 IMPORTS OF GOODS AND SERVICES

	2011	% change in 2012		2012	% change in 2013		2013	% change in 2014		2014
	€ bn	Value	Volume	€ bn	Value	Volume	€ bn	Value	Volume	€ bn
Merchandise	48.3	3.6	-2.8	50.0	3.0	1.0	51.5	5.1	3.0	54.1
Tourism	5.0	-0.9	0.5	5.0	1.5	0.0	5.1	3.5	1.0	5.2
Other Services	78.2	5.2	2.0	82.3	4.9	3.2	86.3	7.1	5.3	92.4
Imports of Goods and Services	131.5	4.4	0.3	137.3	4.1	2.3	142.9	6.2	4.3	151.8
FISM Adjustment	0.3			0.4			0.4			0.4
Adjusted Imports	131.9	4.4	0.3	137.6	4.1	2.3	143.3	6.2	4.3	152.2

FORECAST TABLE A5 Balance of Payments

	2011	2012	2013	2014
	€ bn	€ bn	€ bn	€ bn
Exports of Goods and Services	166.8	177.1	185.9	198.9
Imports of Goods and Services	131.9	137.6	143.3	152.2
Net Factor Payments	-31.8	-30.0	-32.4	-35.4
Net Transfers	-1.2	-1.2	-1.3	-1.3
Balance on Current Account	1.8	8.1	8.8	9.7
As a % of GNP	1.4	6.1	6.4	6.9

FORECAST TABLE A6 Employment and Unemployment, Annual Average

	2011	2012	2013	2014
	000s	000s	000s	000s
Agriculture	83	86	84	84
Industry	348	336	338	344
Of which: Construction	108	102	102	104
Services	1414	1415	1418	1420
Total at Work	1849	1839	1842	1849
Unemployed	317	316	305	298
Labour Force	2166	2155	2148	2147
Unemployment Rate, %	14.6	14.7	14.2	13.9

Research Notes

The Effect of Redomiciled Plcs on GNP and the Irish Balance of Payments

John FitzGerald*

Introduction

Over the last few years a number of companies have relocated their headquarters to Ireland without generating any real activity in the economy in terms of employment or purchases of domestic inputs. These companies, referred to technically as redomiciled plcs, hold major investments elsewhere in the world but they have established a legal presence in Ireland. This means that their profits are paid to them in Ireland even though, under double taxation agreements, their tax liability arises in other jurisdictions. While they receive large profits in Ireland, because they are headquartered here, they pay out only some of these profits to their shareholders abroad when they declare a dividend. The retained earnings in Ireland enhance the value of the companies. As a result, the recorded inflows into the economy which these firms generate are much larger than the recorded outflows[1]. However, the benefits of the retained profits of redomiciled plcs are attributed to their foreign owners – there is no benefit to the Irish economy. Nonetheless, this has the effect of raising the measured current account surplus in the Balance of Payments and increasing the level of nominal GNP arising in Ireland.

National Accounting Treatment

The treatment of these redomiciled plcs in the national accounts differs from the treatment of the profits of many of the multinationals already operating in the Irish economy in the manufacturing or services sector because, crucially, these latter multinationals are not headquartered in Ireland. These latter multinational firms also generate very substantial profits in Ireland; however, these profits are entirely attributed to their foreign owners. They also generate major activity in the economy through employment, payment of tax and purchase of Irish goods and services. Even if the profits of the multinationals operating in manufacturing or services do not flow back out as dividends, but are instead retained as earnings, they are still treated as an outflow in the current account of the balance of payments (as reinvested earnings). Thus, while the profits of these companies raise GDP, the "reinvested earnings" are deducted to calculate GNP. This means that the substantial benefit to the Irish economy which arises from the activities of these companies as employers or taxpayers is fully accounted for but the

1 This does not preclude a change in behaviour by these firms at some future date.

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profits, which are due to their foreign owners, are excluded from GNP and the current account balance.

As discussed in the winter 2012 *Quarterly Economic Commentary,* redomiciled plcs, which are engaged in investing in global financial assets, have grown very rapidly in importance from a relatively low level in 2008. This growth may have been partly driven by expectations of changes in the tax code in other jurisdictions. Whatever the reason, they are now exerting a major impact on the Irish national accounts and on the current account of the balance of payments.

TABLE 1 Net Profit Flows for Redomiciled Plcs., € million

	2009	2010	2011	2012
Undistributed Profits	1563	5177	5715	7396
As % of GDP	1.0	3.3	3.6	4.5
As % of GNP	1.2	4.0	4.5	5.5

Source: Author's calculations based on CSO Balance of Payments data and consultations with the CSO.

Set out in Table 1 is an estimate of the undistributed profits of these companies between 2009 and 2012. As can be seen from the Table, from 2009 onwards there was a dramatic rise in the profits of these companies. While the dividends paid out have averaged just under 30 per cent of the total, these retained earnings are very large. As shown in Table 1, by 2012 they amounted to 5.5 per cent of GNP.

FIGURE 1 GNP adjusted for undistributed profits of redomiciled Plcs.

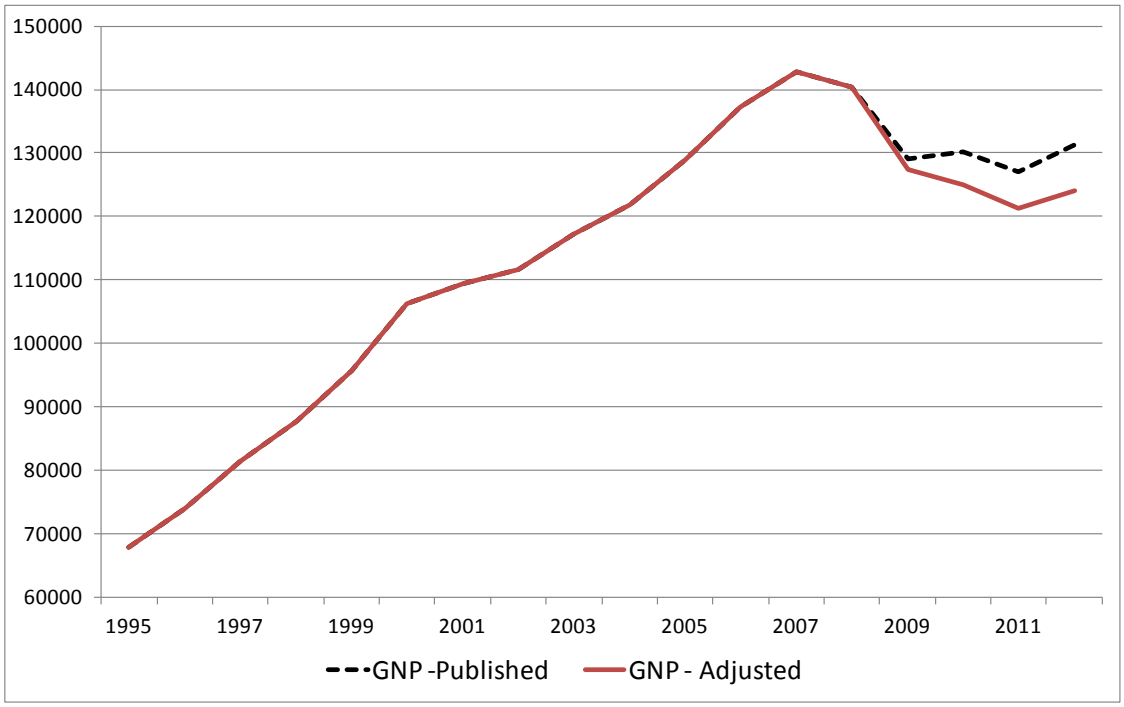

TABLE 2 Effect on Current account and real GNP

	2009	2010	2011	2012
	% of GNP			
Current account before adjustment	-2.8	1.4	1.4	6.1
Current account after adjustment	-4.1	-2.7	-3.2	0.6
Difference, percentage points	1.2	4.1	4.6	5.5
	Growth Rate, %			
GNP, volume, before adjustment	-8.1	0.9	-2.5	3.4
GNP, volume, after adjustment	-9.2	-1.9	-3.0	2.3
Difference, percentage points	1.1	2.9	0.5	1.1

Source: Author's calculations based on CSO Balance of Payments data and consultations with the CSO.

The change in the undistributed profits as a share of GNP is a measure of the extent to which the measurement of GNP has been inflated by the activity of these firms over the last five years, without a compensating reduction affecting GNP through increased factor outflows. As shown in Table 2, while the latest National Accounts estimates for 2012 suggest that GNP grew by around 3.4 per cent on the previous year, if allowance is made for the undistributed profits of the redomiciled plcs, the growth rate would be around 2.3 per cent. With very substantial growth in 2010 in these undistributed profits, the growth rate of GNP for that year, which is shown in the National Accounts as having been just under 1 per cent, would be transformed into a fall in GNP of around 1.9 per cent when these payments are taken into account. Because all of the flows into and out of Ireland occur as factor income there is no impact on the figures for GDP.

Figure 1 shows the path of GNP as published and the path as adjusted for the undistributed profits of redomiciled plcs. When this adjustment is made it can be seen that output fell more rapidly than had previously been thought in 2010, with a further fall in 2011. It is only in 2012 that a turnaround occurred when the economy saw a return to quite significant growth in underlying GNP, as well as in GNP as conventionally measured.

There is also a corresponding implied adjustment needed in the official current account figures, as shown in Table 2. This would imply that, instead of having a current account surplus of around 6.1 per cent of GNP in 2012, the underlying surplus was closer to 0.6 per cent of GNP.

When these undistributed profits or retained earnings are taken into account, it makes a big difference to the headline numbers for Ireland for 2012. A current account surplus of close to 6 per cent of GNP would imply that there was

considerable scope for domestic demand to increase in the future, once deleveraging ends. However, if the true figure is closer to 0.6 per cent of GNP the scope for such an increase in domestic demand in coming years is more limited.

The fact that the underlying value of GNP is also lower than measured in the national accounts means that the burden of debt, when expressed as a percentage of GNP, is higher than we had thought.

A final implication of these data is that the large retained earnings of the redomiciled plcs raise Gross National Income – the base on which Irish contributions to the EU Budget are calculated. Thus, while these companies confer no significant benefit on the Irish economy in terms of employment or taxes, they do give rise to a higher EU budgetary contribution.

Measuring Credit Constraints for Irish SMEs

*Conor O'Toole, Petra Gerlach-Kristen and Brian O'Connell

Introduction

Small- and medium-sized enterprises (SMEs), firms with less than 250 employees, are the backbone of the Irish business economy. The most recent CSO Business in Ireland survey (2010) indicates that SMEs constitute 99.8 per cent of active enterprises, 69.1 per cent of persons engaged, 51.5 per cent of turnover and 46.8 per cent of gross value added in the non-financial business economy[1]. Determining the factors that support or hinder SME performance, and developing a supportive business environment for their successful operation, is critical to a sustained, employment-intensive, recovery. Within this context and given the scale of the banking sector crisis in Ireland, there has been considerable research, both academic and policy oriented, which has identified access to credit as a core constraint to SME performance (Forfás, 2012; Holton et al., 2012; Holton & McCann, 2012; Lawless & McCann, 2011 and 2012; NESC, 2012). As a policy response, a number of measures have been undertaken to date including SME lending targets for the main pillar banks, AIB and Bank of Ireland, the establishment of the Credit Review Office, the continued development of non-bank financing initiatives, and the detailed measures presented in the *Action Plan for Jobs* 2012 and 2013.

This research Note builds on the ongoing ESRI work in the area of SME financing. We first review what fraction of firms in Ireland view access to finance as a growth impediment. We then discuss what establishes a credit constraint and estimate the share of affected firms using survey data. Correctly establishing the degree to which constraints are binding is necessary to estimate the effect of constraints on the macro economy as well as evaluating the credit requirements to support economic recovery.

Problems facing Irish SMEs

There are many factors that determine the profitability and success of SMEs, of which access to finance is only one aspect. From a policy development perspective, determining the relative importance and the impact of these factors is essential to target the correct response. In this section, we review data from

[1] These statistics are calculated by the CSO as a share of the business economy. Not included are agriculture, financial intermediation, insurance and the public sector.

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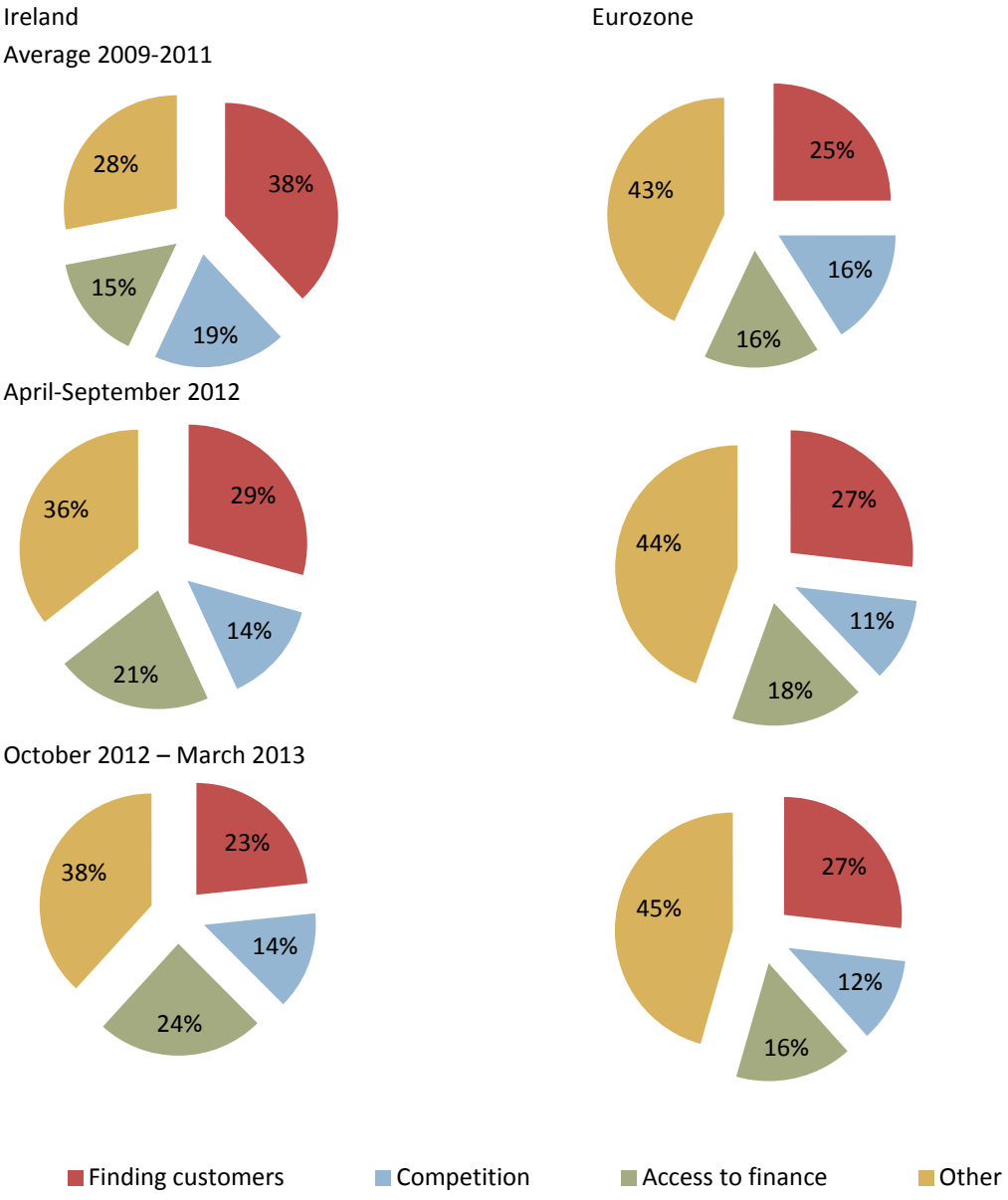
the ECB SAFE survey to gain a sense what SMEs view as the largest obstacle to their growth and development.

In SAFE, firms are asked to identify which of the following issues is the greatest challenge they face: finding customers, competition, access to finance, cost of production or labour, availability of skilled staff or experienced managers, regulation or other factors. Figure 1.1 outlines the results reported by firms in Ireland and the Eurozone for three time periods: 1) average between 2009 and 2011, 2) April 2012-September 2012, and 3) the most recent SAFE data, October 2012-March 2013.

FIGURE 1.1 Problems facing SMEs in Ireland and the Eurozone since 2009



Source: Authors' calculations using ECB SAFE Data.

The figures indicate that, on average, the main problem that firms have faced since the onset of the crisis in Ireland (until September 2012) has been finding customers for their products and services. Over the period 2009-2011, nearly 40 per cent of firms indicated that finding customers was the biggest problem they faced. Between April 2012 and September 2012, finding customers was again noted as the biggest problem that firms reported (29 percent of firms). Both of these figures are higher than the Eurozone average. Given the scale of the decline in aggregate Irish household consumption, and the fact that the majority of SMEs are solely reliant on domestic demand, this is unsurprising. Recent research by O'Connell, O'Toole and Žnuderl (2013) estimate the peak to trough fall in aggregate consumption in Ireland at nearly 20 per cent. This is much larger than experienced by all other Eurozone countries.

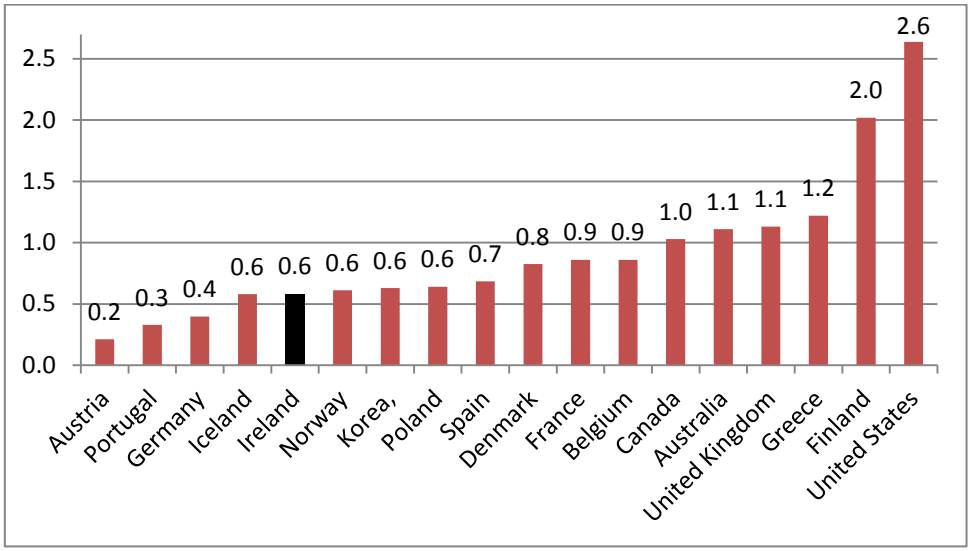
Access to finance has been the third most reported problem facing firms in Ireland on average between 2009 and 2011. Circa 16 per cent of firms indicated it as the biggest obstacle to their growth. This increased slightly in the period April 2012 – September 2012 to 21 per cent, and to 24 per cent for October 2012 – March 2013. This upward trend suggests either that it may be becoming easier for Irish SMEs to find customers, or that the access to finance has become more difficult, or both.

Bank credit for Irish SMEs

While external financing options for firms contain a range of bank and non-bank alternatives, Irish SMEs have traditionally been heavily reliant on bank-based lending. Figure 1.2 presents for a range of countries the ratio of stock market capitalisation to bank credit over the period 1996 to 2006. A ratio of one implies that stock market funds and bank loans are equally important. The smaller the ratio, the more dominant are bank loans as financing source.

The value for Ireland is one of the lowest of the countries presented and highlights the fact that for formal external finance, bank credit is the most important source for Irish firms. This is also highlighted in forthcoming research by Lawless, McCann, and O'Toole (2013) who find that, of the mix of available external financing used by firms in Ireland, bank credit is the most important source for SME investment and the second most important for SME working capital (behind trade credit).

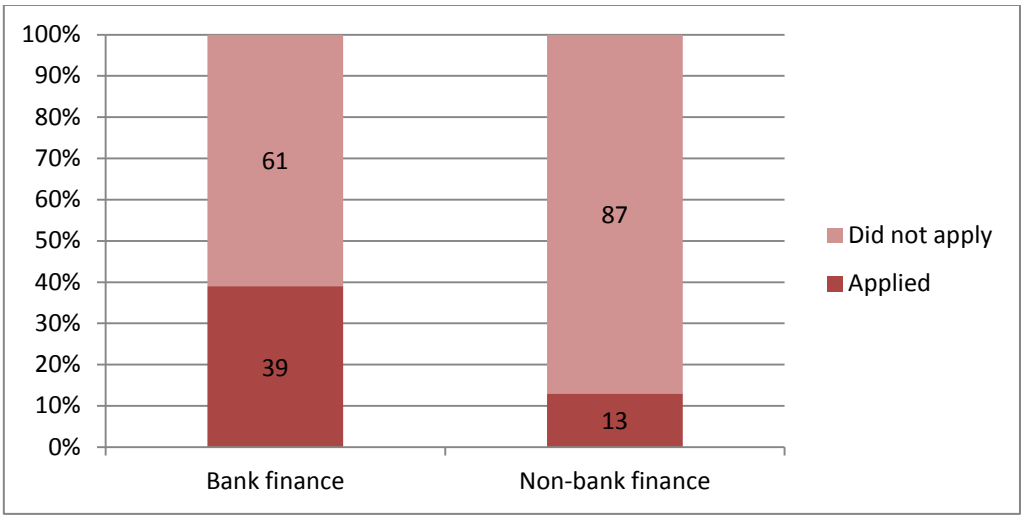
FIGURE 1.2 Stock market capitalisation-to-bank credit ratio – Average 1996-2006 – Selected Countries



Source: Authors' calculations using World Bank Financial Development Indicators database.
Note: Ratio is calculated as in Levine (2005).

Reviewing more recent data, this importance of bank credit for Irish firms is reflected in the application rates across financing type in the recent RedC/Department of Finance data presented in Figure 1.3. In the most recent survey, April-September 2012, 39 per cent of SMEs applied for bank finance which is considerably higher than the 13 per cent applications for non-bank finance. Non-bank finance includes government financial support, loans/equity from family or friends, or business partners, venture capital and business angels. This highlights the importance of bank credit relative to such alternatives.

FIGURE 1.3 Application rates for bank and non-bank finance for SMEs in Ireland

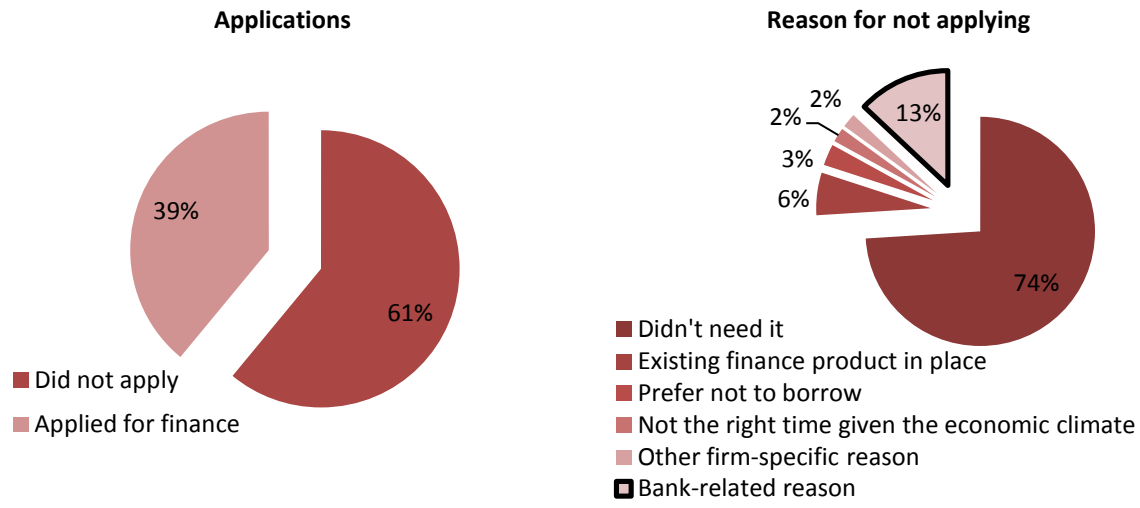


Source: Authors' calculations using DoF/RedC data for survey period April 2012-September 2012.

The recent RedC/Department of Finance data indicate that 39 per cent of firms applied for bank finance and 61 per cent made no application. Given the scale of the decline in the domestic economy, it is pertinent to evaluate both the reasons for not applying as well as the outcome of applications to get a sense of both credit supply and demand sides.

Figure 1.4 presents the share of firms that applied and did not apply for finance as well as a breakdown of the reasons given by those that did not apply. Of the non-applicants, 74 per cent of firms noted that they just did not need finance. This equates to just over 50 per cent of all firms in the sample: one in every two firms did not apply for finance because they didn't need it. This low credit demand may reflect the difficult trading conditions and the lack of aggregate demand for SME products and services.[2] Of interest to our discussion of credit constraints, 13 per cent of non-applicants noted that they did not apply for bank-related reason. We return to this group in the next section.

FIGURE 1.4 Application rates and reason for not applying – April 2012 – September 2012



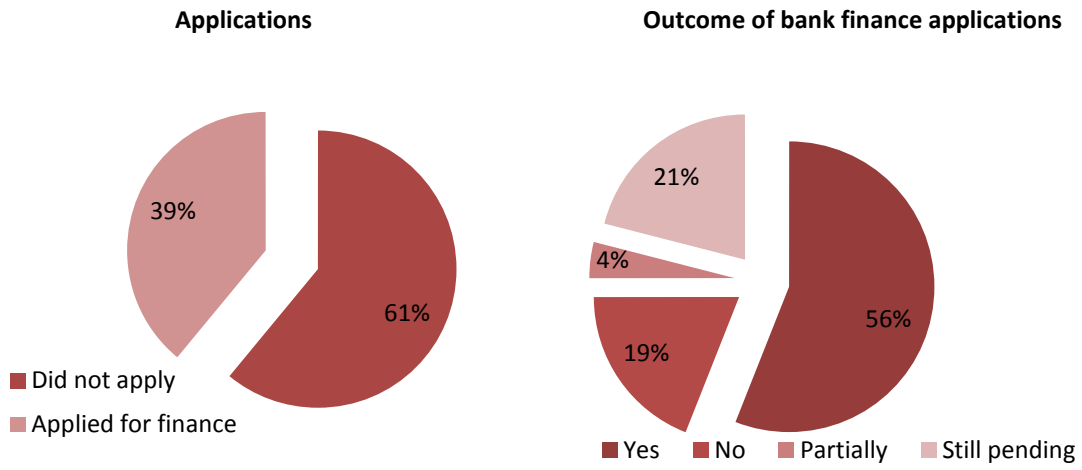
Source: Authors' calculations using DoF/RedC data for survey period April 2012-September 2012.

Figure 1.5 sheds light on credit supply. Of the 39 per cent of firms that applied for credit, 56 per cent were completely successful. A further 4 per cent were partially successful and 19 per cent were rejected in full. Our concern in relation to credit constraints lies with the group of firms rejected outright or only partially

[2] In the RedC/Department of Finance survey, firms were also asked whether or not they thought they would apply for finance in the next six months. Of this group we find again the majority (68 per cent) indicated that they would not be applying for finance with no need being the biggest reason provided.

successful. We now examine what share of these rejections was due to credit constraints.

FIGURE 1.5 Success rates for financial applications – April 2012 – September 2012



Source: Authors' calculations using DoF/RedC data for survey period April 2012-September 2012.

Credit constraints

There is considerable debate in the international literature concerning how to identify if a firm is credit constrained. In a functioning market system of efficient capital allocation, a banks' function is to channel credit to firms with profitable operations and investment opportunities and to reject credit to those without. The bank should, therefore, evaluate each credit application on its own merits and make its allocation decisions on borrower-based factors such as profitability. An application should be successful if the firm has either a) a profitable investment opportunity that has a positive net present value at the current market cost of capital or b) a profitable ongoing operation which requires normal credit facilities. If such a firm is denied finance, it must be to a bank-related reason, such as a policy not to invest in certain sectors. We refer to this kind of credit constraint as credit rationing.

A second kind of credit constraint exists if firms do not apply for credit due to a bank-related factor, such as their belief that the banks are not lending. The literature refers to this group of SMEs as discouraged borrowers.

We apply this logic to the RedC/Department of Finance survey data and identify the two types of credit constraints using the categorisations spelt out in Table 1.

TABLE 1 Overview of SME credit constraint definitions

Constraint	Definition
Denied finance (credit rationed)	Constrained if applied for bank finance, were refused finance or received less than 70 per cent of the amount sought and refusal was a bank-related reason, i.e. • Change in bank's lending policy; • No longer a sector/business the banks lends too; • Granted a lower level than requested; or • Lack of collateral.
Did not apply (discouraged borrowers)	Did not apply due to a bank-related reason i.e.: • No trust in banks; • Believe banks not lending; or • Turned down before/possible or fear of rejection • Procedure too difficult or slow/too many terms and conditions
Overall credit constrained	Denied finance + did not apply for bank finance

Source: Authors' calculations.

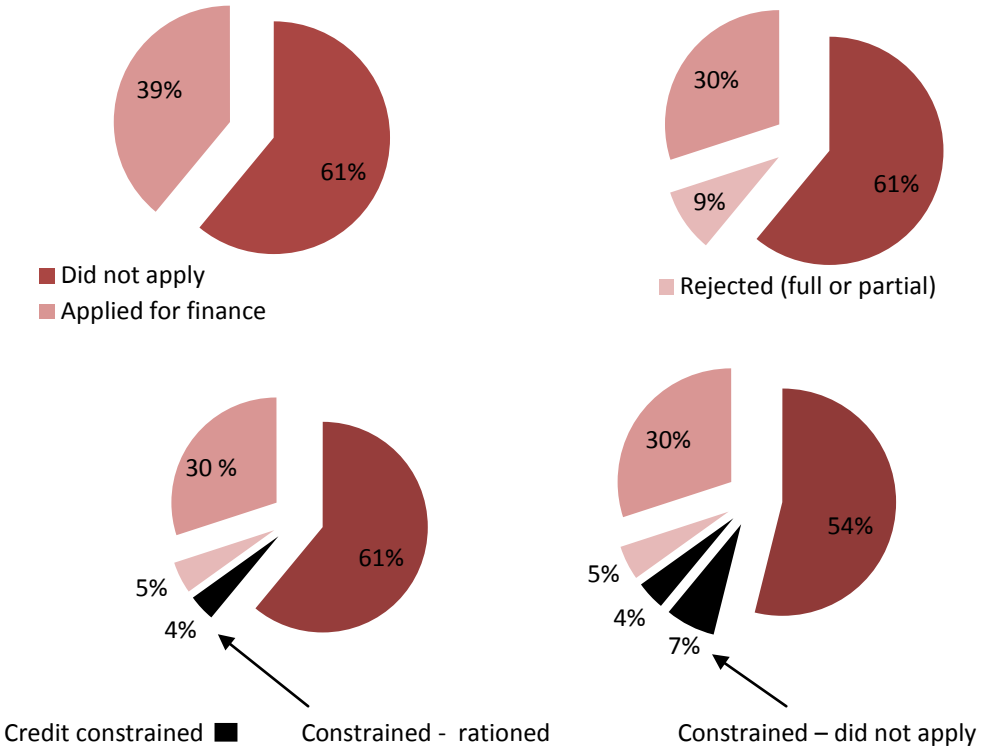
Note: All variables are binary indicators taking the value of one if the firm is constrained by that definition and 0 otherwise.

We count as credit rationing cases where a loan application was rejected for a bank-related reason. For instance, if the bank decides to change its lending policies and not to provide loans to certain sectors anymore, a case of rationing exists. Rationing also captures cases in which the bank only grants a fraction of the requested loan. If the bank thinks an application is worthwhile, it should grant the requested loan in full, possibly at a higher interest rate. Not granting the full amount requested means the bank is rationing. Similarly, we count loan rejections on the grounds of poor collateral as credit rationing, because in normal circumstances the bank simply should charge a higher interest rate to take account of the relevant risk.[3]

[3] We do not include firms who did not take up the finance because the interest rate offered was too high. To be constrained, firms must be able to deliver the project or finance current operations at the market cost of capital. Therefore this group of firms, given they were offered credit in the market, are demonstrating they cannot work the capital at this price.

Figure 1.6 presents our estimates of credit constraints using the above definitions. Starting with credit applications, while 39 per cent of firms applied for bank finance, 20 per cent of those were rejected in full or partially. This represents approximately 9 per cent of all firms. If we apply our definition above on credit rationing, we estimate that under half of this group or 4 per cent of all firms are constrained by this measure. We can add to this the group of firms who did not apply for a bank-based reason which is 13 per cent of the non-applications or 7 per cent of all firms. This provides an estimate of credit constraints in the Irish economy of approximately 11 per cent of, or one in nine, firms.[4]

FIGURE 1.6 Estimating credit constraints in Ireland – April 2012 – September 2012



Source: Authors' calculations using DoF/RedC data for survey period April 2012-September 2012.

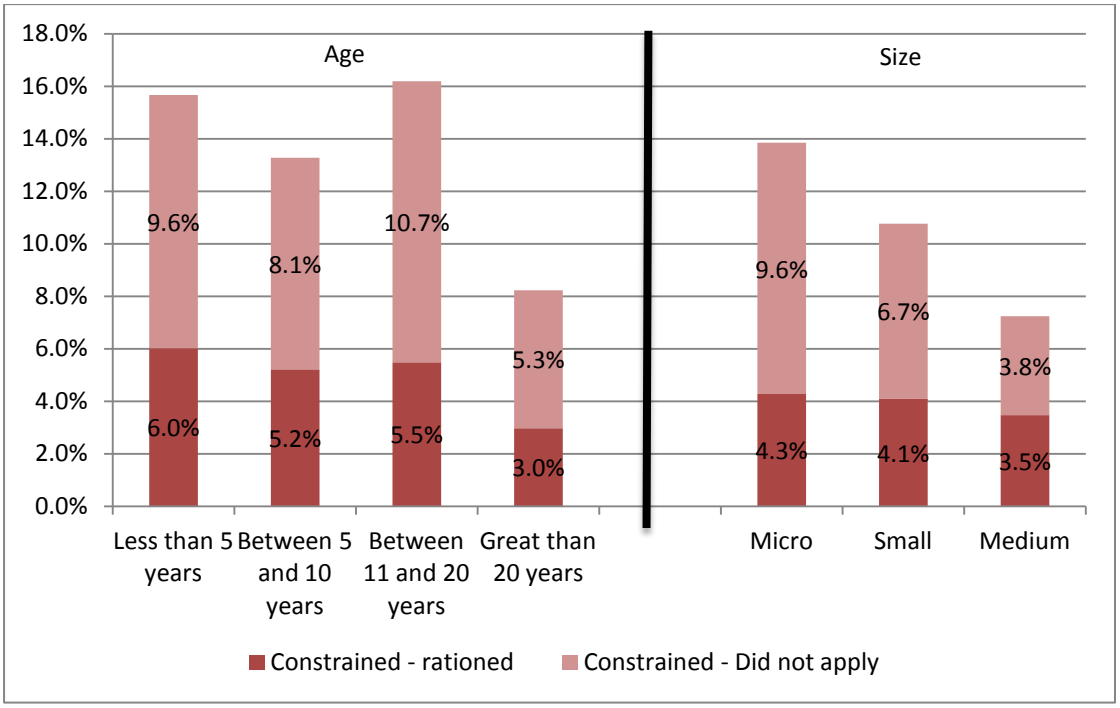
Breakdown of constraints by age, size, sector and exporting

Figure 1.7 illustrates the breakdown of credit constraints by firm age. The youngest firms appear to be the most credit rationed, while firms between 11 and 20 years old appear to constitute the largest portion of discouraged

[4] If we exclude the group of firms that provide turned down before as a reason for not applying, the share of constrained firms drop from 7.1 per cent to 6.5 per cent of all firms.

borrowers. The oldest firms, those more than 20 years old, display the lowest portion of credit rationed and discouraged borrowers and so constitute the least overall credit constrained age bracket. This would conform to our theoretical expectations of older firms having a longer banking relationship with their lender, which may work in their favour once rationing sets in.

FIGURE 1.7 Share of constrained firms by firm age and size – April 2012 – September 2012



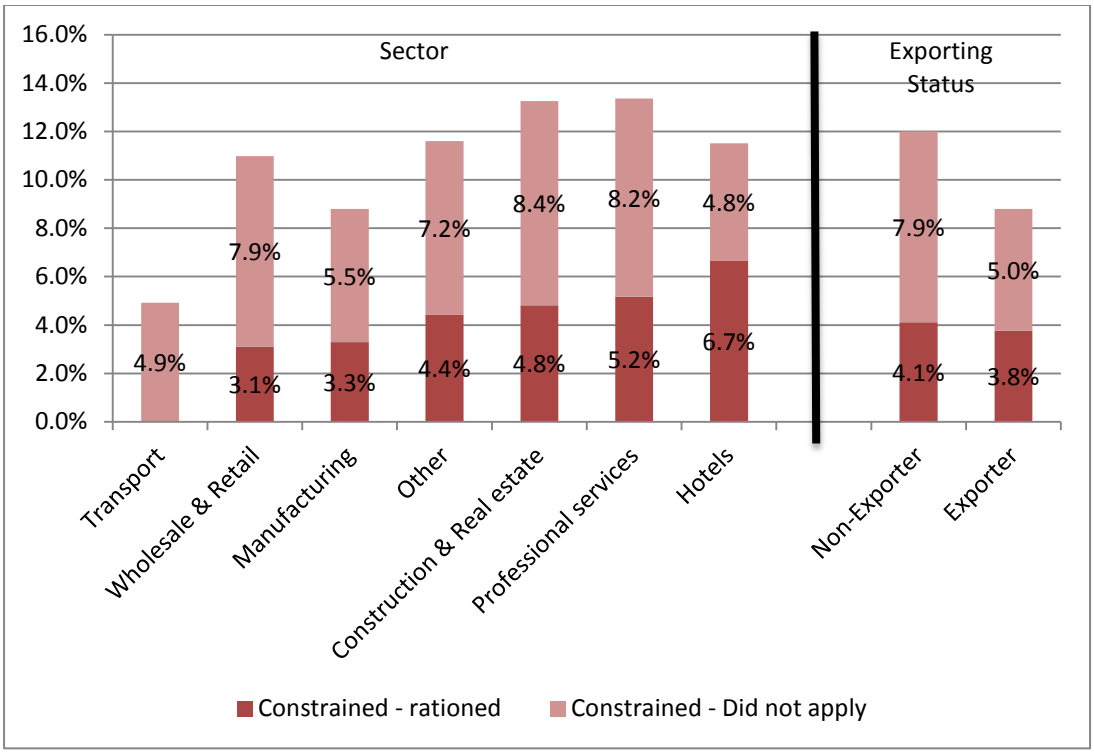
Source: Authors' calculations using data from Department of Finance/Red C survey. Micro-sized firms are defined as in Red C as having less than 10 employee's, small-sized firms have between 10 and 50 employee's and medium-sized firms have between 50 and 250 employee's.

Figure 1.7 also outlines the breakdown of credit constraints by firm size. By both measures, medium sized firms appear to be the least constrained. Micro- and small-sized firms appear to be suffering from credit rationing to more or less the same degree. Micro-firms however display by far the largest proportion of discouraged firms. This may be due to a tightening of banks' application procedures since the end of the boom, which very small firms with little financial manpower find difficult to master.

Figure 1.8 illustrates the prevalence of credit constraints across the different sectors of the economy populated by SMEs. As expected, construction and real estate represents one of the most constrained sectors and is the sector with the highest portion of discouraged firms. The most constrained sector overall appears to be professional services. The hotels sector represents the sector suffering most from credit rationing. The constraints faced by firms in the construction industry

and the hotel sector are unsurprising considering the high exposure banks had built during the boom.

FIGURE 1.8 Share of constrained firms by sector and exporting status – April 2012 – September 2012



Source: Authors' calculations using data from Department of Finance/Red C survey. Note: Other sector refers to firms in primary agriculture, human, health and social work and administration and support services. We have not included the firms in the financial intermediation and insurance sectors.

One of the least constrained sectors in Figure 1.8 appears to be manufacturing. The relatively strong performance of manufacturing firms may reflect their access to finance abroad.[5] This is also confirmed by Figure 1.8, which displays the breakdown of constraints between exporting and non-exporting firms. The non-exporting firms appear to be significantly more credit constrained than their exporting counterparts. Exporting firms have a marginally smaller proportion of credit rationed firms and a significantly smaller proportion of discouraged firms. However, this could be due to a potential selection bias whereby exporting firms are, from the outset, more productive and profitable.

Conclusions

Since 2009 Irish SMEs have reported that finding customers has represented the biggest challenge faced by their business. However, an ECB survey that uses data

[5] The low level of constraints in the transport sector is something of an anomaly and may be associated with the relatively small number of firms surveyed from that sector.

up to March 2013 suggests that this problem's relative importance is declining, with access to finance concerns becoming equally important.

Using Irish survey data collected up to September 2012, we estimate that only one in nine Irish SMEs seems credit constrained. We count as constrained both firms that are suffering from credit rationing by lenders and those that are discouraged from application for credit in the first place. We find that constraints are most prevalent for both younger and smaller firms and for firms operating in the construction and real estate sector and the hotels sector. Conversely, exporting firms are less likely to be credit constrained, perhaps due to selection bias whereby exporting firms are more profitable and productive.

The shift in the concerns of Irish SMEs away from finding customers and towards access to finance may be an important indicator for the future of SME performance in Ireland. As the economy recovers, demand for credit is likely to grow as well. This expansion in credit demand would come at a time when the banking sector still is undergoing major restructuring and balance sheet consolidation. Policy responses such as SME lending targets for the pillar banks and the establishment of the Credit Review Office have tried to ensure an adequate flow of credit to the SME sector to date. Whether further policy actions need to be taken as recovery takes hold, and if so, which, is a key issue. As such, optimal credit provision in a recovery scenario is a vital area of future research.

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Younger and older households in the crisis

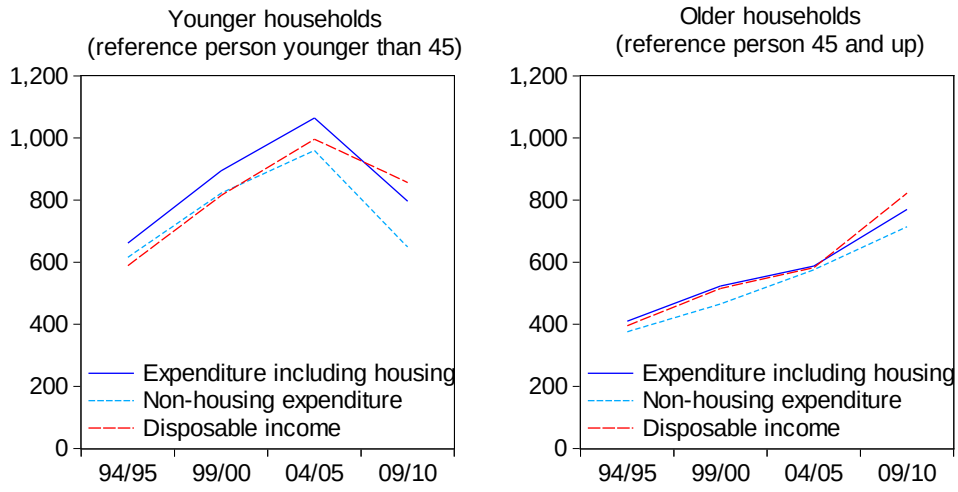
Petra Gerlach-Kristen*

This Note analyses how the financial crisis has affected younger and older households in Ireland. Using data from the Household Budget Survey, for which the Central Statistics Office has recently released the data collected in 2009/10, we examine how household consumption has responded and show that the financial crisis has affected younger households much more than older ones. We then go on to analyse why consumption of young households has declined so dramatically. The data show that unemployment, arrears and negative equity affect younger households more than older households. This may make it more difficult for them to smooth consumption.

Consumption

Figure 1 presents average weekly income and consumption for households with a head below 45 years of age in the left plot and for households with a head aged 45 and up in the right plot. By choosing a split at 45, we capture almost exactly half of the Irish households in each of the plots. The data cover the last four HBS waves and are inflation adjusted to the 2010 price level. We plot both expenditure including and excluding housing costs.

FIGURE 1 Weekly income and consumption by age group, 1994/95 to 2009/10



Note: Values in 2010 prices, age of the household reference person. Consumption excludes housing expenditure. Average income and consumption by group, taking into account the grossing factors capturing the representativeness of the individual households interviewed in the HBS.

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The contrast between the two population groups is striking. Income and consumption increase roughly steadily for the average household over the age of 45 from 1994/95 to 2009/10. To a certain extent, this increase is due to a rise in the average education level of older households. While in 1994/95, the average household reference person over the age of 45 had a primary school education only, by 2009/10 he/she had higher secondary education.[1]

In sharp contrast to the increase in earning and expenditure of older households over the last two decades, there has been a large drop in income and consumption for the younger average household in the crisis. Between the 2004/05 survey and that of 2009/10, real disposable income decreased by 14 per cent, real consumption including housing by 25 per cent and excluding housing by 32 per cent.

This decline in the consumption by young households is large, both by international standards and in a historical comparison.[2] Also, the fact that consumption has declined by more than income stands in contrast with standard economic theory, which predicts that consumption evolves more smoothly than income (see Friedman, 1957, on the permanent income hypothesis). If in a severe crisis permanent income expectations decline, consumption adjusts downwards.[3] However, the drop of actual income in the crisis will virtually always be larger than the decline in permanent income. Consequently, consumption should decline less than actual income and be smoothed instead.

Theory offers two explanations for why households may not smooth consumption. First, they may not be able to access loans or have earlier savings that help them maintain consumption when income temporarily decreases. The literature refers to a household that finds access to bank finance impossible as facing credit constraints. Second, they may build up savings in anticipation of future problems in accessing credit. The literature calls these buffer-stock savings (see e.g. Deaton, 1991, and Carroll, 1992). These savings can be used either to finance future consumption or to reduce the likelihood of credit constraints binding in the future, for instance by deleveraging.

Credit constraints arise for households that represent a large risk for banks. For instance, banks will be hesitant to approve loans for households with a history of

1 Callan *et al*. (2013) examine the impact of the crisis on the Irish income distribution and also find that older households have suffered least. In part, this reflects that state social welfare pensions were not cut, whereas pay-cuts for active workers have been more common.

2 For an international comparison of declines in consumption during the crisis, see O'Connell *et al.* (2013).

3 It is possible that younger households, not having known earlier hardship, corrected their permanent income expectations by more than older households.

payment problems, i.e. households that have been in arrears. Households that have little collateral to offer, such as those in negative equity, also represent credit risk for banks. Finally, banks are cautious approving loans for households that have become unemployed but would like to avoid a major reduction in their consumption levels.

The question then is: Is the decline in consumption of younger households related to their being more exposed to unemployment, arrears and negative equity? This Note suggests that this seems to be the case. Gerlach-Kristen (2013) presents a formal analysis.

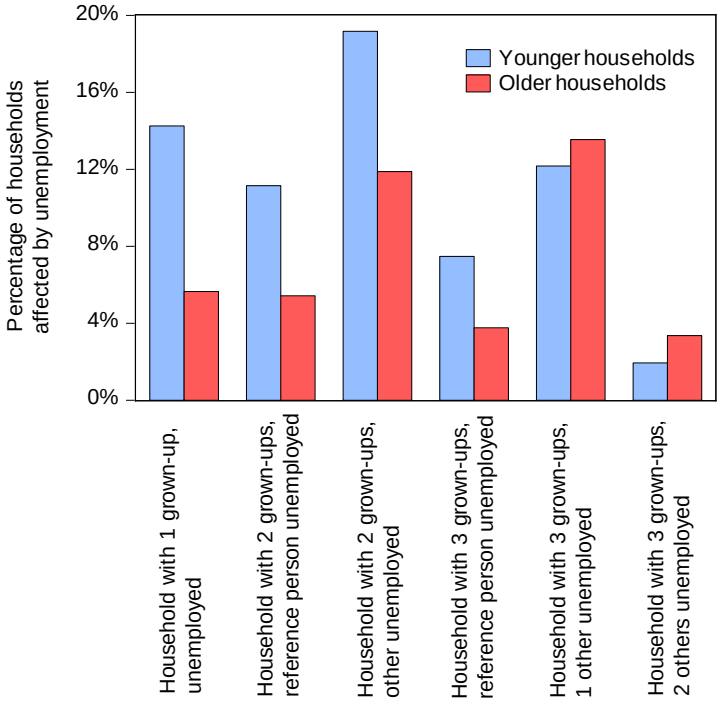
Unemployment

The Quarterly National Household Survey records for the period in which the 2009/10 HBS interviews were conducted an overall unemployment rate rising from 12.9 per cent to 14.1 per cent. The HBS provides data that allow a detailed analysis by household characteristics.

Figure 2 shows what fraction of households are affected by unemployment. We perform this analysis by household age and size and by whether the head or other household members are unemployed. The first two columns show the unemployment rate for single households by age group. Singles under the age of 45 had an unemployment rate of 14.2 per cent in 2009/10. The rate for older singles was less than half of that, namely 5.6 per cent. It is not surprising that younger individuals more often become unemployed, since they have less experience. Also, firms tend to lay off first those employees whom they hired last, who are typically younger than the average staff member.

In households with two grown-up members, unemployment is again more common for younger households (11.1 per cent for the household reference person, 19.2 per cent for the second grown-up, versus 5.4 per cent and 11.9 per cent for older households). For households with three grown-ups, the unemployment rate for the household reference person is again higher for the younger population group. However, the rate of unemployment of the second and third household member is higher in older households. Arguably, this reflects unemployed grown-up children staying or moving back in with their parents, and sibling in-laws sharing house to manage costs.

FIGURE 2 Unemployment by age group and household size, 2009/10 HBS



Note: Analysis accounts for grossing factors capturing the representativeness of the individual households. n denotes the number of household members over the age of 13.

Overall, younger household reference persons are more likely to be unemployed than older heads. Since the head's income in a household typically is the highest, his/her unemployment has in most cases the largest effect on a household's finances. If credit constraints make a smoothing of consumption impossible and if there are no previous savings to draw down, the higher unemployment rate of young household reference persons may explain part of the drop in consumption for this population group. Moreover, if young households realise that they are particularly likely to become unemployed, buffer-stock savings to prepare for this eventuality reduce aggregate consumption further.

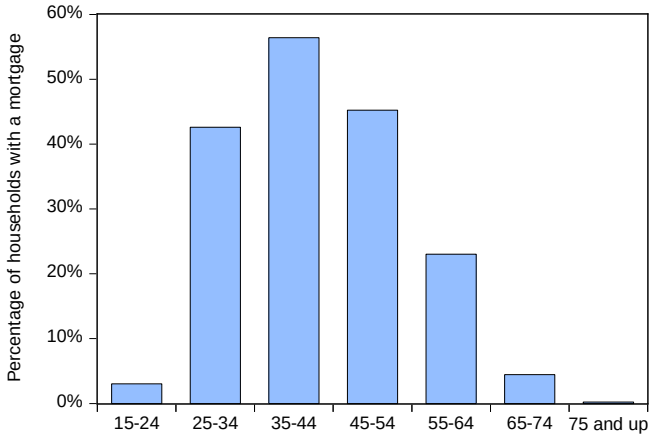
Arrears and negative equity

The collapse of Irish house prices has put mortgage households under pressure. Figure 3 helps gain a sense on how common mortgages are across age groups. Mortgages are most prevalent in the 35-44 year bracket, with more than half of households in this group having a mortgage. About 43 per cent of the households aged 25 to 34, and 45 per cent of those aged 45 to 54 are mortgage holders as well. There are few households in retirement age that have a mortgage.[4] Given

[4] The outstanding mortgage amount also is likely to differ by age group, with old households having paid back much of the original mortgage. The 2009/10 HBS does not give information on outstanding mortgages. In the 2004/05 data, younger households' outstanding principal was on average three times larger than that of older households.

this age profile, it seems likely that arrears and negative equity are concentrated in the younger part of the population as well.

FIGURE 3 Age profile of households with mortgages, 2009/10 HBS

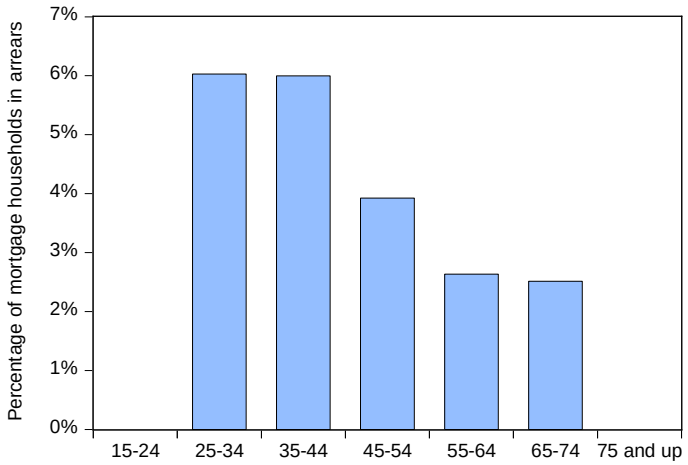


Note: Analysis accounts for grossing factors capturing the representativeness of the individual households interviewed.

Kennedy and McIndoe Calder (2011) report for the end of 2010 a 30-days arrears rate of 12.3 per cent. The HBS questionnaire does not ask interviewees if they are in mortgage arrears. However, it asks mortgage households how large a mortgage payment they made in the month of the HBS interview. By construction, mortgage households that made no payment are in arrears. However, the measure of arrears constructed this way does not capture households that made only a partial payment or those that paid in the interview month but not earlier. This approach therefore underestimates the incidence of arrears.

Figure 4 shows that arrears are most common for mortgage households with a head between 25 and 44 years of age. 6.0 per cent of the households in these age groups made no mortgage payment at all in the month of the HBS interview. The group with the next highest arrears rate are the 45 to 54-year olds. Arrears are rare for households older than that.

FIGURE 4 Age profile of mortgage households in arrears, 2009/10 HBS



Note: Arrears capture only mortgage households that made no mortgage payment at all in the interview month. Analysis accounts for grossing factors capturing the representativeness of the individual households interviewed.

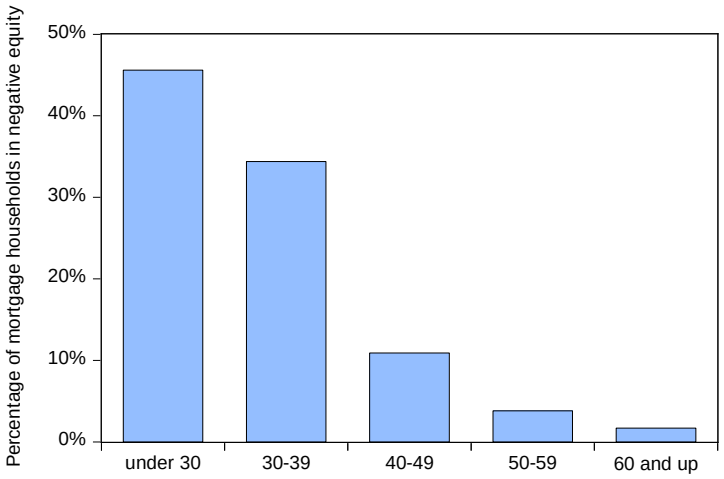
It is possible that the high incidence of arrears among young households is related to unemployment.[5] Households get mortgages while in work and typically assuming constant or growing incomes. If the household reference person loses his/her job, the mortgage payments often exceed income, and arrears result. Gerlach-Kristen (2013) shows that large pay-cuts, which again may mainly affect younger individuals that are less established in their job more than older staff, also can cause arrears. Compatible with this, McCarthy and McQuinn (2011) find that the mortgage repayment-to-income ratio is particularly high for young households.

Is negative equity more common among young households, too? Kennedy and McIndoe Calder (2011) report that 30.6 per cent of all mortgage holders were in negative equity at the end of 2010. The HBS does not contain a variable capturing negative equity, but Duffy and O'Hanlon (2013) analyse data from the Census 2011 by household age. Figure 5 replicates their numbers, which use a slightly different definition of age brackets. It can be seen that negative equity is most common for households in the under 30 bracket, followed by those aged between 30 and 39.

The finding that young households are most likely to be in negative equity is not surprising given that households that purchase a house/apartment tend to be young and that the fall in prices affects those households first that bought most recently.

5 Central Bank of Ireland (2012) shows in Box 6 that households in arrears are more often unemployed than those that make their mortgage payments.

FIGURE 5 Age profile of mortgage households in negative equity, from Duffy and O'Hanlon (2013)



Note: Negative equity estimates by age group, from Duffy and O'Hanlon (2013), derived from Census 2011 data.

Conclusions

Households typically smooth consumption. This means that they try to maintain their standard of living if income declines temporarily. Even if longer-term income expectations decline, consumption does normally not decrease by more than income. However, young households in Ireland dramatically reduced their consumption below income after the onset of the financial crisis.

This Note shows that this drop in consumption stands in contrast to the experience of older households, whose average expenditure did not decline. Younger and older households earned and spent about the same sums in 2009/10. While some of this may represent a natural convergence given the rise in average education levels of the older half of the population, we argue that it is also due to young households facing credit constraints and building up savings in anticipation of these. In particular, credit constraints are likely to bind for households that are unemployed, in arrears or in negative equity. Using household budget data, we construct age profiles and show that young households are indeed more likely to be facing credit constraints than older ones.

From a policy perspective, the analysis suggests that the main burden of the crisis is borne by the younger half of the Irish population, both because young households have been particularly likely to become unemployed in the crisis and because many of them purchased a house/apartment prior to the crash. While unemployed young households are likely to find new jobs relatively quickly once the economy recovers, this Note nevertheless raises the question how policy can

best address the disproportionate impact the crisis has had on Ireland's young households.

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Research Bulletin

How much does it cost the economy when essential services are interrupted?

*Seán Lyons and Edgar Morgenroth

While the focus of policies tends to be on improving output or employment of a sector, i.e. policies aimed at positive change, avoiding negative changes can be an important aim of policies too. For example, an unexpected disruption in sectors that supply essential services can impose high costs on the wider economy. Being essential means there are few substitutes for these services, so an outage stops other activities from taking place as planned. Typical examples of such services include water, energy and broadband services, but one might also think of sectors like food distribution, payment systems, emergency services and some transport networks. Unpredictability tends to compound the problem as this limits the options for those affected. If you know the lights are going to go out tomorrow night, you can plan around it, but if your dinner guests have arrived there is less you can do.

The economic effects of these rare but high impact events are less well understood than many other influences on the economy. Because decisions by public bodies and private sector suppliers can affect the risk, scale, duration and geographical footprint of outages, it is useful to explore how costly they may be to the economy and how the cost may vary by geographical areas and user segments. Since suppliers generally do not bear the full economic cost of outages themselves (in economic terms: these events create externalities), there is a role for public policy to help ensure measures are in place to give appropriate weight to wider economic and social interests.

ESRI researchers have recently undertaken a series of studies on the economic costs for Ireland of hypothetical outages in three essential services (electricity, natural gas and fixed line telecoms). The potential costs are indeed high.

The economic cost of telecoms outages was examined in a recent (2013) paper by Lyons, Morgenroth and Tol. A hypothetical outage of the biggest fixed line

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telecoms network in the country (Eircom's) was estimated to cost the economy at least €70-80 million per day (€42–50 per household) directly. This is probably a substantial underestimate, because it does not include secondary impacts from disruption of retail payments systems and emergency services or effects on mobile operators that use Eircom's network to link up parts of their networks. Because economic activity and population are concentrated in some parts of the country, even localised interruptions can impose significant costs if they happen in a critical location. The paper found that an outage affecting a single important local exchange could cost the economy up to €1 million per day.

Of course, losing the largest fixed line telecoms network for any length of time is an extreme scenario. Outages in other telecoms networks would likely be less costly for the economy because there is some degree of competition among networks, and many firms and even households use more than one network (e.g. a different fixed line and mobile operator), which might provide some back-up if one went down. Nevertheless, the methods used in this example can be applied to estimate the costs for outages among other networks or services.

In contrast to a single telecoms network, there are very few short-term substitutes for electricity or natural gas, so economic costs from outages in these sectors could be even higher (one can switch fuels or buy a generator, but such changes take time).

Moreover, much of Ireland's electricity is generated in gas-fired power stations. A major gas outage would disrupt the supply of electricity. A 2012 paper by Leahy, Devitt, Lyons and Tol considered this scenario, building on research published in 2011 by Leahy and Tol on the value of lost load in electricity.

Energy disruptions tend to be more costly in the winter than in the summer in Ireland, mainly because of additional demand for heating. Depending upon the time of year and the way the disruption is managed, the economic cost may vary considerably. For example, the estimated daily economic cost for Ireland of a natural gas outage in 2008 ranges from €350 million to €640 million depending upon the season, day of the week and availability of electricity plants on the system. The loss of electricity services due to the gas outage dominates these figures, making up about 80% of the estimated cost. The 2011 paper emphasises that the economic cost of a unit of lost electricity load is likely to be higher for residential customers than for businesses, implying industrial users should be rationed before households.

While these papers considered the sectoral incidence and geographical footprint of outages, and how substitution or complementarity impacts on costs, they did not consider the impact of duration of outages and the scope for backup arrangements. Also, there are other essential services that might benefit from research attention, such as payment systems, water services and transport networks.

In addition to estimating the cost of service interruption, the type of analysis described can contribute to policy in several ways. Facilities that are of critical value to the economy can be identified and prioritised for additional protective measures (e.g. enhanced security, flood prevention, backup arrangements, etc.). Options for mitigating outages in some services, such as natural gas storage, can be evaluated. Linkages among different services can be identified and the risk of cascading failures can be assessed. Methods of managing partial outages can be designed to minimise economic costs, for example by protecting the highest value uses as far as possible. The possible damage from high level operational risks such as industrial relations disputes or corporate insolvency can be estimated and taken into account by policymakers. More generally, to assess the economic value of risk reduction measures one must have a feel for the economic costs of outages.

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ISSN 0376-7191