

Quarterly Economic Commentary

Joseph Durkan
David Duffy
Cormac O'Sullivan

Autumn 2011



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Special Articles

David Duffy
John FitzGerald and Ide Kearney

Research Bulletin

11/3

Editor: **Tim Callan**

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Summary Table

	2009	2010	2011(f)	2012(f)
OUTPUT				
(Real Annual Growth %)				
Private Consumer Expenditure	-6.9	-0.8	-1.8	-1.5
Public Net Current Expenditure	-4.5	-3.8	-3.0	-4.0
Investment	-28.7	-24.9	-7.8	-2.3
Exports	-4.2	6.3	6.0	4.7
Imports	-9.3	2.7	3.1	3.0
Gross Domestic Product (GDP)	-7.0	-0.4	2.2	0.9
Gross National Product (GNP)	-9.8	0.3	1.2	-0.3
PRICES				
(Annual Growth %)				
Harmonised Index of Consumer Prices (HICP)	-1.7	-1.6	1.2	1.9
Consumer Price Index (CPI)	-4.5	-1.0	2.6	2.0
Wage Growth	-2.0	-2.9	-0.5	0.0
LABOUR MARKET				
Employment Levels (ILO basis (000s))	1,929	1,848	1,807	1,785
Unemployment Levels (ILO basis (000s))	259	292	300	303
Unemployment Rate (as % of Labour Force)	11.8	13.6	14.2	14.5
PUBLIC FINANCE				
Exchequer Balance (€bn)	-24.6	-18.7	-25.4	-16.8
General Government Balance (€bn)	-22.8	-48.8	-16.0	-13.1
General Government Balance (% of GDP)	-14.2	-31.3	-10.3	-8.3
Excluding once off bank bailout monies	-11.7	-11.5	-10.3	-8.3
General Government Debt (% of GDP)	65.2	92.6	105.5	114.8

Summary

The situation in the international economy has deteriorated in recent months. The eurozone debt crisis has not been resolved, rather it has spread, and now two major economies, France and Italy, are pursuing restrictive policies to contain budget deficits, in tandem with contractionary policies in Spain, Greece, Portugal and Ireland. As a consequence, output in the eurozone economy will perform very poorly and may contract year-on-year and is certainly likely to contract from the end of 2011 to the end of 2012. This will have the effect of making it difficult for all eurozone countries to meet fiscal targets. This outcome will also hamper the restructuring of the UK economy and reduce its growth prospects. The US economy now seems to have recovered from the poor performance that began in the fourth quarter of 2011. Given this very unfavourable background the Irish economy is likely to experience very limited growth – less than 1 per cent for GDP and a fall in GNP next year. Three months ago the possibility of building on an improved performance in 2011 made us reasonably optimistic about growth in the economy and growth in employment. The deterioration in the eurozone economy makes that unlikely now, though the fiscal targets set for next year are achievable.

If the eurozone were an economy with a fiscal and monetary authority, the present situation would call for an expansionary fiscal policy and a looser monetary policy accompanied by a realistic level of restructuring of the banking system. In the absence of such a structure, coordinated action is the obvious approach, yet the structures are not there to achieve this and the ECB has resolutely set its stance against a much more activist approach. The present situation contains elements reminiscent of policy during the Great Depression, when a mounting crisis was confronted by an orthodoxy that resulted in great poverty that could have been avoided. Without decisive intervention the eurozone economies will be seriously constrained, will grow very poorly and make the resolution of the debt crisis more difficult.

We now expect export growth and the level of investment to be less in 2012 than previously forecast. Total final demand will grow only by about 1.9 per cent and domestic demand will fall again. Employment will weaken further and we expect the labour force to decline as participation rates fall and people emigrate.

The Troika targets are likely to be realised this year, though perhaps not to the extent we had hoped. For 2012 the targets are also likely to be realised, in spite of the deteriorating international situation.

NATIONAL ACCOUNTS 2010 (Estimate)

A: Expenditure on Gross National Product

	2009	2010	Change in 2010		
	Estimate €bn	Estimate €bn	Value	Price %	Volume
Private Consumer Expenditure	85.2	82.6	-3.1	-2.3	-0.8
Public Net Current Expenditure	28.5	26.2	-8.0	-4.3	-3.8
Gross Fixed Capital Formation	25.3	18.1	-28.5	-4.8	-24.9
Exports of Goods and Services (X)	145.9	157.7	8.1	1.7	6.3
Physical Changes in Stocks	-2.3	-0.9	-	-	-
Final Demand	282.6	283.7	0.4	-0.5	0.9
less:					
Imports of Goods and Services (M)	121.0	127.9	5.7	2.9	2.7
Statistical Discrepancy	1.0	-0.2	-	-	-
GDP at Market Prices	160.6	156.0	-2.9	-2.4	-0.4
less:					
Net Factor Payments (F)	28.4	27.8	-	-	-
GNP at Market Prices	132.2	128.2	-3.0	-3.3	0.3

B: Gross National Product by Origin

	2009	2010	Change in 2010	
	Estimate €bn	Estimate €bn	€bn	%
Agriculture, Forestry, Fishing	2.2	2.7	0.5	24.9
Non-Agricultural: Wages, etc.	73.6	68.8	-4.9	-6.6
Other:	49.5	53.2	3.7	7.5
Adjustments: Stock Appreciation	1.0	-0.3	-	-
Statistical Discrepancy	1.0	-0.2	-	-
Net Domestic Product	127.3	124.2	-3.2	-2.5
less:				
Net Factor Payments	28.4	27.8	0.6	-
National Income	99.0	96.4	-2.6	-2.6
Depreciation	17.3	16.2	-1.2	-
GNP at Factor Cost	116.2	112.6	-3.8	-3.3
Taxes less Subsidies	16.0	15.6	-0.2	-
GNP at Market Prices	132.2	128.2	-4.0	-3.0

C: Balance of Payments on Current Account

	2009	2010	Change in 2010
	Estimate €bn	Estimate €bn	€bn
Exports (X) less Imports (M)	24.9	29.8	+4.9
Net Factor Payments (F)	-28.4	-27.8	-0.6
Net Transfers	-1.2	-1.2	0.0
Balance on Current Account	-4.7	0.8	+5.5
as % of GNP	-3.6	0.6	+4.2

FORECAST NATIONAL ACCOUNTS 2011

A: Expenditure on Gross National Product

	2010 Estimate €bn	2011 Estimate €bn	Change in 2011		
			Value	% Price	Volume
Private Consumer Expenditure	82.6	82.2	-0.5	1.3	-1.8
Public Net Current Expenditure	26.2	25.3	-3.7	-0.7	-3.0
Gross Fixed Capital Formation	18.1	16.5	-8.7	-1.0	-7.8
Exports of Goods and Services (X)	157.7	167.7	6.4	0.3	6.0
Physical Changes in Stocks	-0.9	-0.5	-	-	-
Final Demand	283.7	291.2	2.6	0.4	2.2
less:					
Imports of Goods and Services (M)	127.9	135.9	6.3	3.1	3.1
Statistical Discrepancy	-0.2	-0.1	-	-	-
GDP at Market Prices	156.0	155.3	-0.4	-2.5	2.2
less:					
Net Factor Payments (F)	27.8	29.8	-	-	-
GNP at Market Prices	128.2	125.5	-2.1	-3.2	1.2

B: Gross National Product by Origin

	2010 Estimate €bn	2011 Forecast €bn	Change in 2011	
			€bn	%
Agriculture, Forestry, Fishing	2.7	3.0	0.3	9.8
Non-Agricultural: Wages, etc.	68.8	67.6	-1.2	-1.8
Other:	53.2	54.6	1.5	2.8
Adjustments: Stock Appreciation	-0.3	-0.3	-	-
Statistical Discrepancy	-0.2	-0.1	-	-
Net Domestic Product	124.2	124.8	0.6	0.5
less:				
Net Factor Payments	27.8	29.8	-2.0	-
National Income	96.4	95.0	-1.4	-1.5
Depreciation	16.2	14.7	-1.5	-
GNP at Factor Cost	112.6	109.7	-2.9	-2.5
Taxes less Subsidies	15.6	15.8	0.2	-
GNP at Market Prices	128.2	125.5	-2.7	-2.0

C: Balance of Payments on Current Account

	2010 Estimate €bn	2011 Forecast €bn	Change in 2011
			€bn
Exports (X) less Imports (M)	29.8	31.8	2.0
Net Factor Payments (F)	-27.8	-29.8	-2.0
Net Transfers	-1.2	-1.0	0.2
Balance on Current Account	0.8	1.0	0.2
as % of GNP	0.6	0.8	0.2

FORECAST NATIONAL ACCOUNTS 2012

A: Expenditure on Gross National Product

	2011	2012	Change in 2012		
	Estimate €bn	Estimate €bn	Value	% Price	Volume
Private Consumer Expenditure	82.2	81.7	-0.5	1.0	-1.5
Public Net Current Expenditure	25.3	24.3	-4.0	0.0	-4.0
Gross Fixed Capital Formation	16.5	16.1	-2.2	0.1	-2.3
Exports of Goods and Services (X)	167.7	177.0	5.5	0.8	4.7
Physical Changes in Stocks	-0.5	0.0	-	-	-
Final Demand	291.2	299.1	2.7	0.8	1.9
less:					
Imports of Goods and Services (M)	135.9	140.8	3.6	0.5	3.0
Statistical Discrepancy	-0.1	-0.1	-	-	-
GDP at Market Prices	155.3	158.4	2.0	1.0	0.9
less:					
Net Factor Payments (F)	29.8	31.9	-	-	-
GNP at Market Prices	125.5	126.4	0.8	1.0	-0.3

B: Gross National Product by Origin

	2011	2012	Change in 2012	
	Estimate €bn	Forecast €bn	€bn	%
Agriculture, Forestry, Fishing	3.0	3.3	0.3	10.0
Non-Agricultural: Wages, etc.	67.6	66.9	-0.7	-1.0
Other:	54.6	57.1	2.5	4.5
Adjustments: Stock Appreciation	-0.3	-0.3	-	-
Statistical Discrepancy	-0.1	-0.1	-	-
Net Domestic Product	124.8	126.9	2.1	1.8
less:				
Net Factor Payments	29.8	31.9	-2.1	-
National Income	95.0	95.0	0.0	0.0
Depreciation	14.7	14.9	0.2	-
GNP at Factor Cost	109.7	109.9	0.3	0.3
Taxes less Subsidies	15.8	16.5	0.7	-
GNP at Market Prices	125.5	126.4	1.0	0.8

C: Balance of Payments on Current Account

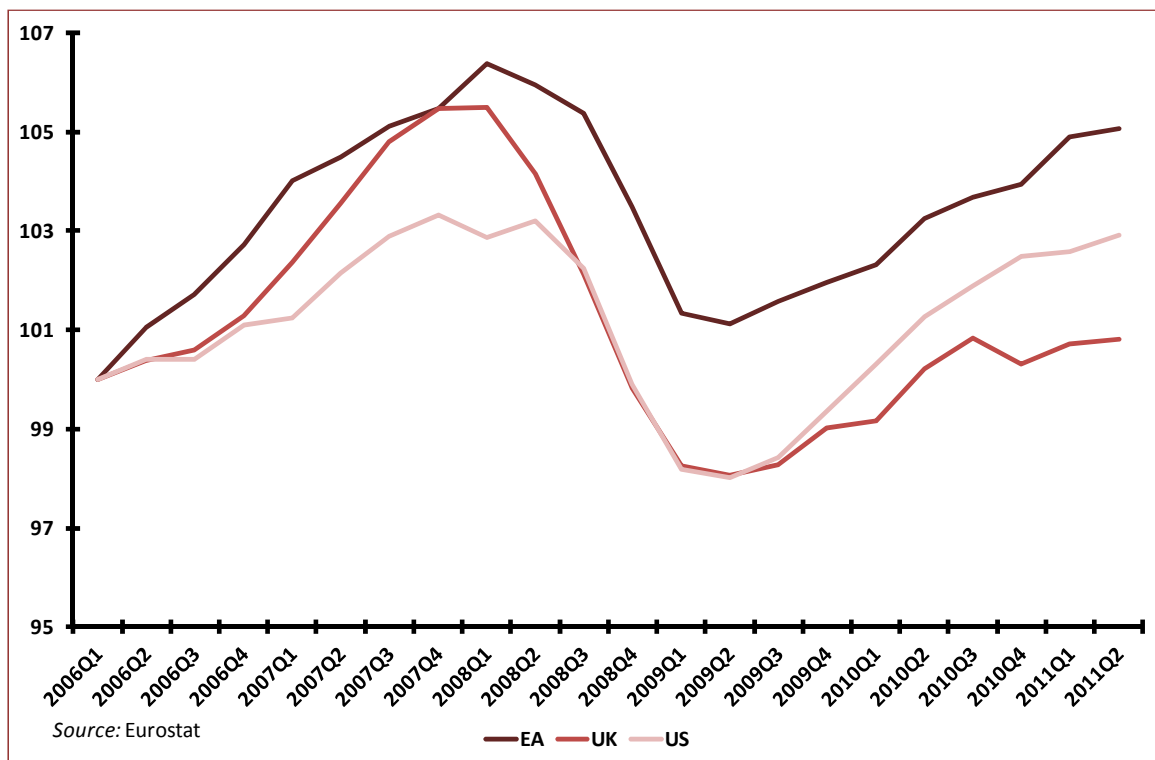
	2011	2012	Change in 2012
	Estimate €bn	Forecast €bn	€bn
Exports (X) less Imports (M)	31.8	36.2	4.3
Net Factor Payments (F)	-29.8	-31.9	-2.1
Net Transfers	-1.0	-1.0	0.0
Balance on Current Account	1.0	3.2	2.2
as % of GNP	0.8	2.5	1.8

1. Introduction

There has been a significant deterioration in the outlook for the world economy in recent months, stemming from the uncertainty about the resolution of the eurozone debt crisis.

The performance of the eurozone economy in the 2008-2010 period was better than that in the US and the UK, but is flattered by the fact that the US and the UK have already met upfront the costs necessary to shore up their banking systems. The eurozone on the other hand is only beginning to face up to this task and is now facing into a period of slow to negative growth.

Figure 1: Index of Quarterly GDP, 2006Q1=100



As things stand, the eurozone area is likely to experience a decline in output during the next year. Two major economies, Italy and France, have introduced austerity programmes, driven by the governance failure referred to earlier. Meanwhile Spain, another major economy, has an austerity package in place – as

do the smaller economies of Greece, Portugal and Ireland. Even though Germany has recently introduced a very modest stimulatory package, the overall impact of fiscal policy in the eurozone is negative. We expect, under current policies, a decline in output from end-2011 to end-2012. The poor growth of the eurozone economies will also impact very unfavourably on other economies and constrain the recovery worldwide.

Current forecasts for the eurozone economy suggest a growth rate of about 1 per cent for 2012. However, it is worth noting that the third quarter 2011 level of output, if maintained to end 2012, would imply a growth rate of just above 1 per cent in 2012. The conclusion is that output is expected to fall from present levels.

UNITED STATES

In the case of the US, output growth has been much slower in this recovery than in previous recoveries. Growth stalled towards the end of 2010, but seems to have finally picked up in the third quarter of this year. Growth this year may be 1½ to 1¾ per cent against earlier projections of 2½ to 3 per cent. For 2012 growth forecasts from the Federal Reserve (FED) suggest a range from 2½ to 3 per cent – again very much less than in previous recoveries. As a consequence unemployment is likely to remain high and close to the 9 per cent of this year. There is unlikely to be a fiscal stimulus, given the policy inertia in the US but in the short-run a fiscal contraction is not expected. Monetary policy will thus remain loose with the FED continuing with operation *TWIST* designed to reduce long-term interest rates, thereby encouraging private sector investment. This approach is in sharp contrast to that adopted in previous recessions where the emphasis was on stimulating consumer expenditure through lower interest rates. It is clear that if the approach proves less effective than is hoped the FED will design new instruments to raise the growth rate. Although the US economy is not heavily dependent on eurozone economies, the overall success of US policy would be enhanced by a more favourable international climate. The uncertainty in relation to the future of the eurozone may lead to, or may have already led to a relocation of, and not just a delay to, US investment, with some relocating to the US itself.

UK

The UK economy is set to experience growth of less than 1 per cent this year and next. Originally it had been hoped that a recovery in trade would compensate for demand lost through fiscal austerity, with the private sector shifting output from domestic demand to exports. However, the weakness in the eurozone economy – on which the UK is dependent – is likely to keep external demand low. Domestic

demand has been weak this year, particularly consumer demand which has been hit severely by higher inflation. While inflation in 2012 may fall to about 2 per cent, the weakness in the eurozone economy and the continued effect of the fiscal consolidation will keep external and internal demand weak. Investment has not picked up and is unlikely to do so as long as the degree of uncertainty regarding the eurozone persists. As a consequence, unemployment in the UK is likely to rise and may hit 9 per cent. Monetary policy remains loose in the UK, as the need to support the fragile recovery outweighs concerns about the increase in the price level, which is largely seen as representing once-off factors such as VAT increases and energy costs. Despite accommodative rates of interest, this has not been reflected in increased lending. Uncertainty in relation to banks' exposure to eurozone debt has kept interbank and wholesale money markets frozen.

REST OF THE WORLD

In terms of the world economy the most rapid growth is still being experienced in the newly-developing economies in Asia. However, even there growth has slowed down as the developed economies have weakened. And exports have been hit. In addition the increase in inflation in China and India has resulted in higher interest rates and this will pull back growth rates, though they will still remain very high. In reality the world is now linked more heavily through trade and financial integration than ever before, so that the generalised weakness across the developed world feeds on itself, impacts on developing economies and makes the solution of many countries' problems more difficult.

The best that could be hoped for with this profile of the major markets Ireland trades with is that Irish GDP might grow by about 1 per cent next year.

Table 1: Economic Performance of Selected Economies 2011-2012

	GDP % change		Unemployment %		Inflation %	
	2011	2012	2011	2012	2011	2012
US	1.7	2-3	9	9	2.5	2.5
UK	0.7	0.7	8	9	4.5	2.5
Eurozone	1.6	0.0	10	10	2.7	1.5

Source: Various & own forecasts.

2. Exports of Goods and Services

EXPORTS OF GOODS AND SERVICES IN 2011 AND 2012

The weakness in the international situation is reflected in merchandise exports. Quarterly data indicate that exports peaked in the first quarter of the year, but by the third quarter had fallen by 10 per cent in value terms and about 9 per cent in volume. Exports were still running above the volume levels of 2010, but the momentum in exports from the early part of the year has gone. This has a counterpart in industrial production figures where modern sector output peaked in the third quarter of 2010 and remained flat to mid 2011. Then, in the third quarter output rose again so it is still possible that exports will be stronger in the final quarter of this year. A similar picture occurs in the traditional sector, with output peaking in the third quarter of 2010 and then falling to mid-year before recovering sharply in the third quarter. Again we may see an increase in exports from this sector in the final quarter. For this year, the volume of merchandise exports looks set to rise by 5 per cent, but next year this could be down to 3 per cent growth. A resolution of the eurozone financial crisis could see greater exports next year, while a concerted fiscal strategy, as discussed in the General Assessment, could add a further impetus to growth.

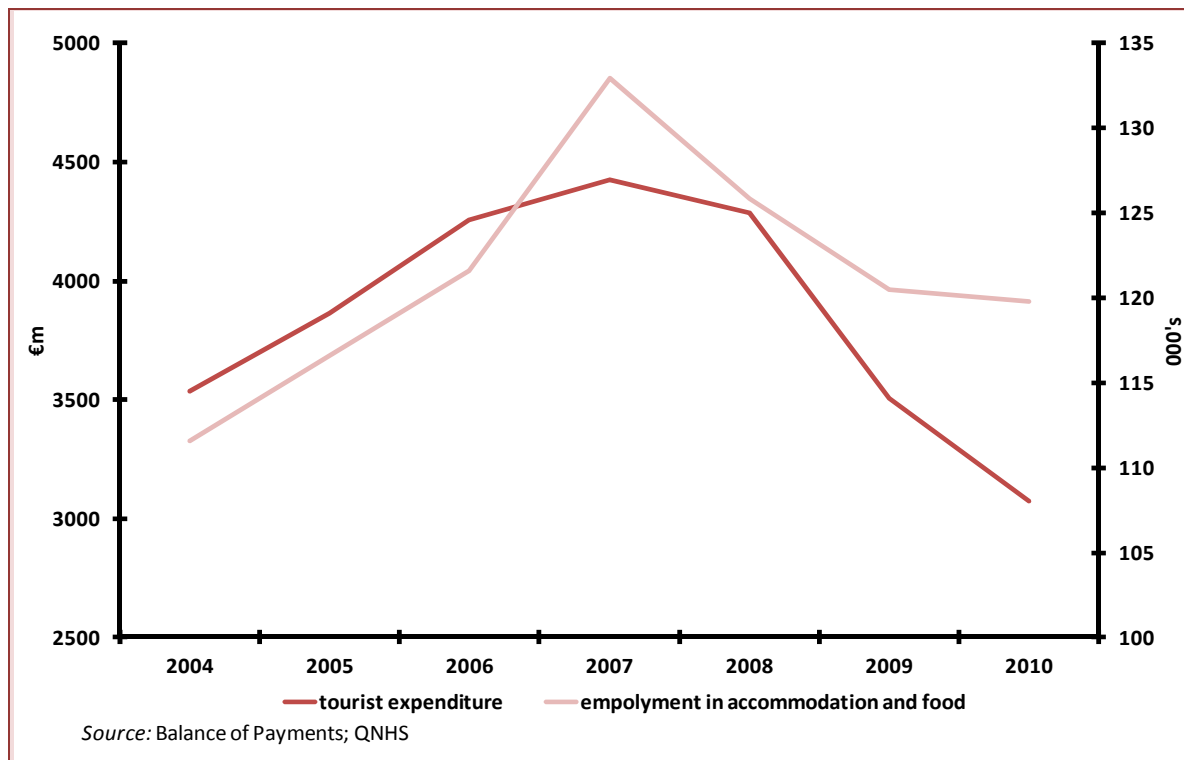
Tourism exports are holding up remarkably well and while growth in numbers may be slightly less this year than we had expected, at 10 per cent rather than 12.5 per cent, it does mark a recovery. Next year will be difficult because of the fall in incomes in the eurozone and the UK, but there could still be increases in visitor numbers as the sector has become relatively more competitive. (See Box below).

BOX 1: UK TOURISM TO IRELAND

The numbers of overseas visitors to Ireland were up 12.7% in the first half of this year compared with the first half of 2010. We are forecasting an increase of 10 per cent for 2011 as a whole and 7.5 per cent in 2012. This follows a four year slump in the sector that saw visitor numbers plummet from 8 million in 2007 to 6 million in 2010.

The economic benefits of tourism are obvious. Tourists bring money earned elsewhere and spend it here, which boosts employment, profits and government revenues, while also contributing favourably to the balance of payments. Tourism has the additional benefit of being job intensive, unlike most other types of exports, with the possibility of many of these jobs being created in rural areas where alternative employment can be scarce. Taking employment in the accommodation and food sector as a proxy for direct tourism related employment¹, we can see how tourism and the numbers employed in the sector are related. (Figure 1A)

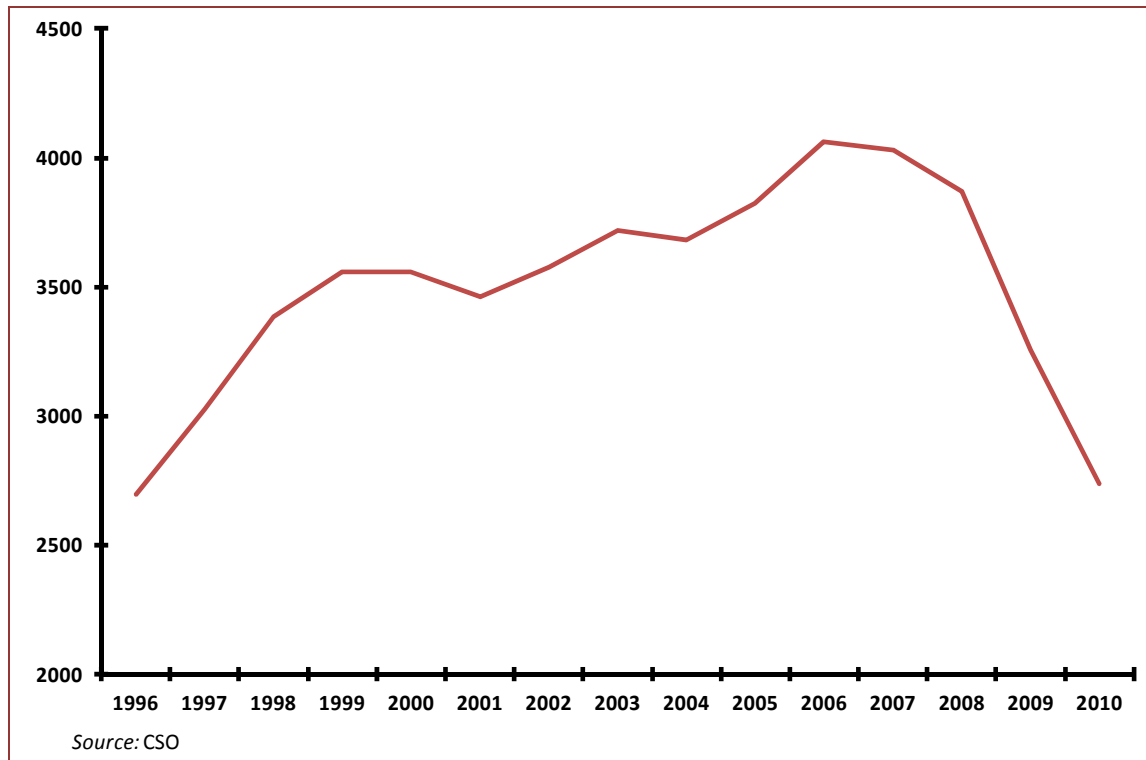
Figure 1A: Tourism-related Expenditure and Employment



¹ Jobs in this sector are also linked to domestic demands for these services. Tourism expenditure is also not restricted to this sector, and will have a positive impact across a range of other sectors (e.g. retail and travel).

Tourism from the UK, which has traditionally been our largest market for overseas visitors, has fallen faster and recovered more slowly than tourism from the rest of the world. The decline in visitors from the UK began in 2006, but became precipitous in 2008. From peak to trough, the number of visitors from the UK fell by 1.3 million, or 33 per cent.

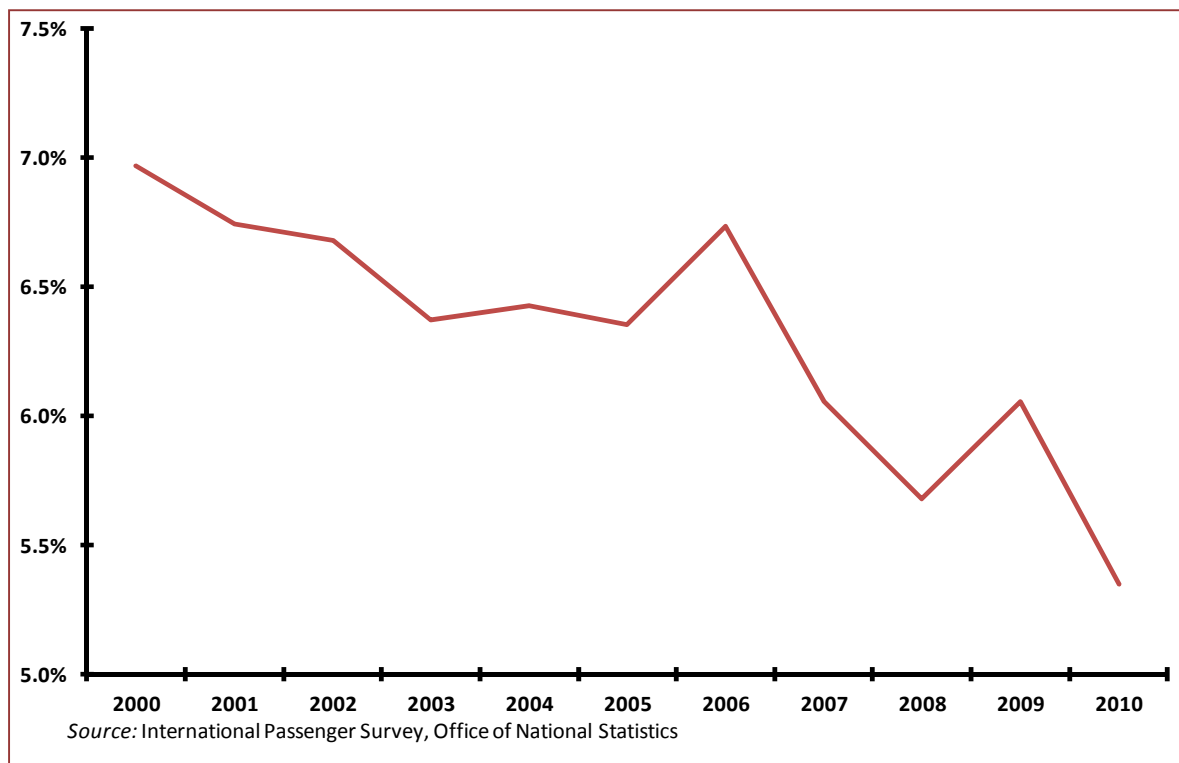
Figure 1B: Overseas Visitors to Ireland from the UK, 000's



Data for the first half of the year indicates that there has been a turnaround in this trend, with tourism from the UK up 7-8 per cent from last year.

This decline is perhaps unsurprising given the divergence between the UK and Irish price levels over this time, as seen in Figure 1D. This divergence was accentuated in 2008 and came as a result of the devaluation of the pound via the It is important to note that overseas tourism from the UK to all destinations has been falling since 2006, with the major declines taking place in the period 2008-2010. Given this negative trend, it is useful to look at Ireland's market share for overseas tourism from the UK. The trend in market share since 2000, as shown in Figure 1C, has been largely negative and has been in decline since before the onset of the current Great Recession.

Figure 1C: Ireland's Market Share of Overseas Trips by UK Residents

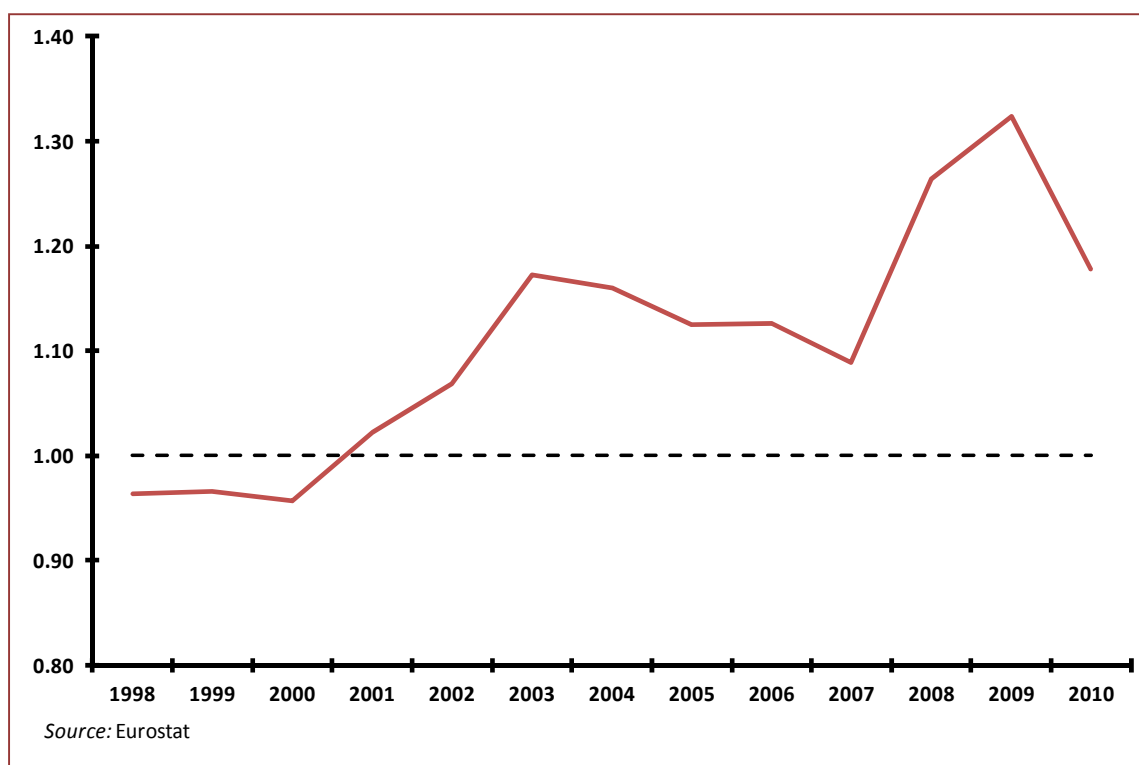


This decline is perhaps unsurprising given the divergence between the UK and Irish price levels over this time, as seen in Figure 1D. This divergence was accentuated in 2008 and came as a result of the devaluation of the pound via the loose monetary policy of the Bank of England. In a recent ESRI working paper, Callaghan and Tol² show that the price elasticity of trips to Ireland from the UK is fairly high, owing to a high percentage of trips to Ireland being shorter in nature, meaning that the price level differential is an extra potent as a disincentive for UK tourists. This is exacerbated by *ad rem* travel taxes, which bear unduly heavily on short-haul inexpensive flights.

Not only did Ireland become a more expensive destination relative to the UK over this period, but Ireland also became less competitive relative to other destinations. Ireland went from being the 5th most expensive country in the EU to the 2nd. More recently, Ireland has been in the process of an internal devaluation which has improved competitiveness and boosted exports, including tourism. Between 2008 and 2010, Irish prices as measured by the Harmonised Index of Consumer Prices (HICP) declined 3.2 per cent, and Ireland moved from being 2nd back to 5th place in the ranking of EU countries' price levels. Meanwhile, the UK's loose monetary policy has stoked up significant inflation which saw the UK price level increase by 5.6 per cent between 2008 and 2010.

² Callaghan, Niamh and Tol, Richard (2011). "UK Tourists, The Great Recession and Irish Tourism Policy" ESRI Working Paper 412.

Figure 1D: The Mark-up of the Irish Price Level Over the UK Price Level



Between 2008 and 2010, Irish prices as measured by the Harmonised Index of Consumer Prices (HICP) declined 3.2 per cent, and Ireland moved from being 2nd back to 5th place in the ranking of EU countries' price levels. Meanwhile, the UK's loose monetary policy has stoked up significant inflation which saw the UK price level increase by 5.6 per cent between 2008 and 2010.

Looking ahead, inflation is forecast to remain subdued in Ireland at about 2 per cent when allowance is made for the proposed increase in VAT rates (assuming full pass-through in to prices), while the latest National Institute Economic Review (NIER) forecast is for 4.2 per cent inflation this year and a significantly lower inflation rate of 1.9 per cent next year in the UK. For the EU as a whole, the European Commission is forecasting an inflation rate of 2.9 per cent for 2011 and 2 per cent for 2012. Should these rates materialise, trips to Ireland should become relatively more attractive. Should real disposable income in the UK return to growth next year as forecast in the NIER, then this, combined with the impact of our competitiveness gains, could lead to a further increase in numbers from the UK.

Table 2 : Exports of Goods and Services

	2009		% Change in 2010		2010		% Change in 2011		2011		% Change in 2012		2012
	€b	Volume	Value		€b	Volume	Value		€b	Volume	Value		€b
Merchandise	78	5.6	6.8		83	5	4		86	3	4		90
Tourism	4	-10.2	-12.3		3	10	11		3	7.5	8.5		4
Other Services	64	8.1	11.2		71	7	9		77	6.5	7		83
Exports of Goods and Services	145	6.3	8.3		157	6	6.3		167	4.8	5.5		176
FISIM Adjustment	1				1				1				1
Adjusted Exports	146	6.3	8.1		158	6	6.5		168	4.8	5.5		177

3. Investment

Quarterly National Accounts from the CSO show that total investment recorded quarterly growth in the first two quarters of the year. This is the first time that investment has shown two consecutive quarters of growth since the end of 2008. However, annual growth rates continue to contract and so in the first half of 2011 total investment was 12 per cent lower than the first half of 2010.³ The decline of total building and construction was in line with the decline in overall investment. Within building and construction, civil engineering works fell by approximately 40 per cent in the first half of 2011 compared with a year earlier, while housing fell by 23 per cent. Other building output is down by 7.3 per cent, compared with the first half of 2010.⁴ In line with the decline in civil engineering and other building output the recent *Infrastructure and Capital Investment 2012-16: Medium Term Exchequer Framework* announced cuts of €750 million in 2012.

The 2011 National Housing Development Survey⁵ shows that there remains a large stock of completed or unfinished new dwellings. The survey also shows there were 85,538 new dwellings in unfinished housing developments recorded as being completed and occupied, compared to 78,195 in 2010 – an increase in occupancy of 9.4 per cent. In addition, there were fewer dwellings recorded as complete and vacant, 18,638 in 2011 compared with 23,350 in 2010. However, despite these positive findings the survey shows a much reduced level of activity on the construction sites' surveyed in 2011 when compared to 2010. We expect that the volume of housing output will fall by just over 20 per cent this year and there will be a further decline of about 6 per cent in 2012. These declines occur in a sector that has been contracting for several years. We now expect that housing completions will be only about 11,000 this year. Overall building and construction output is expected to decline by 17½ per cent in 2011 and forecast to decline by 8¼ per cent in 2012 in volume terms.

Although the import of producer capital goods showed strong growth in value terms over the first five months of this year, this has now slowed and the two months to August both show a decline. Registrations of new goods vehicles increased by 4.3 per cent in the first 10 months of the years, although registration

³ CSO, *Quarterly National Accounts, Quarter 2, 2011*, September 2011

⁴ CSO, *Production in Building and Construction Index*, September 2011.

⁵ Department of Environment, *2011 National Housing Development Survey, Summary Report*, October 2011

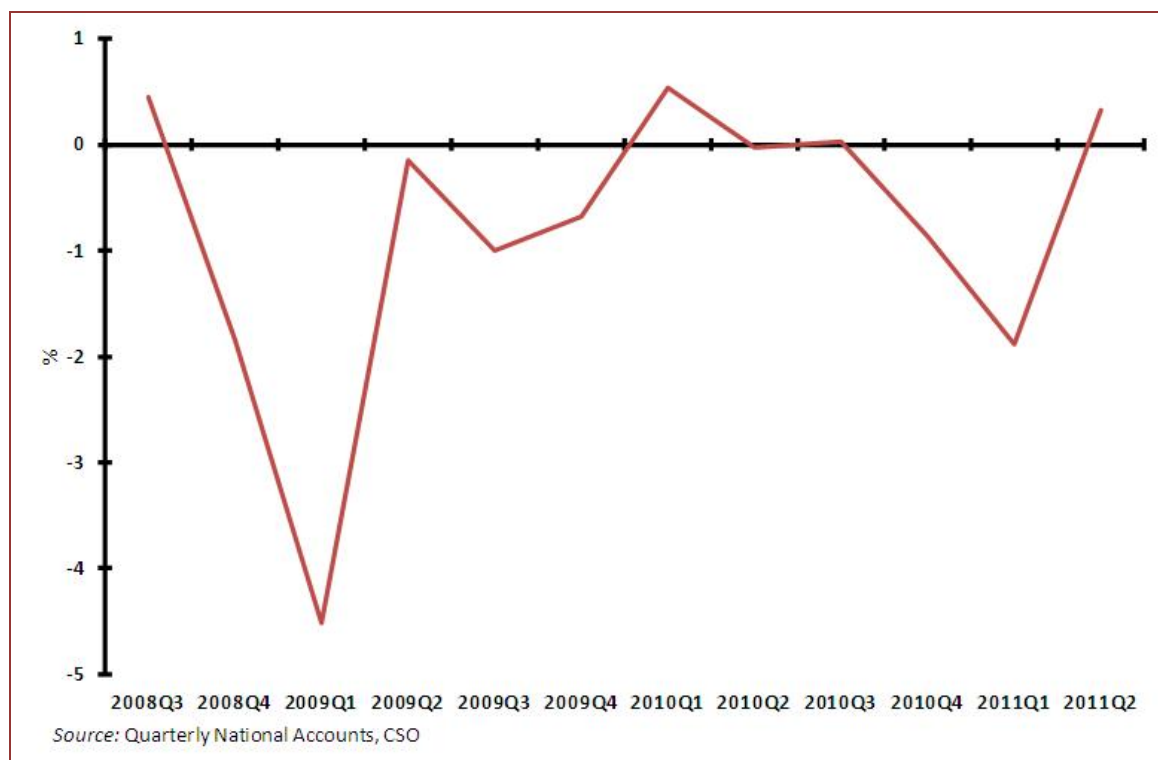
of second-hand goods vehicles fell by over 40 per cent. Overall new and second-hand goods vehicles registrations declined by 15 per cent. Investment in machinery and equipment is expected to increase by 7.4 per cent this year in volume terms, followed by a 5 per cent increase in 2012.

The international environment is likely to play an important role in determining investment over the short term. Heightened uncertainty about the financial crisis and the eurozone suggests that it is unlikely that major investment decisions will be taken until businesses and households are convinced that the crisis is being properly tackled and resolved. Overall, the volume of investment is expected to fall by 7.8 per cent this year, and by 2.3 per cent in 2012.

4. Household Consumption

Household consumption has continued to contract against a backdrop of ongoing government austerity, weak earnings, the need for indebted households to deleverage and the elevated level of precautionary savings. The recent quarterly trend has been mostly negative. Consumption increased somewhat in the second quarter of this year, but not by enough to offset the decline in the first quarter, resulting in a 2.6 per cent decline in consumption during the first half of the year compared to the same period in 2010.

Figure 2: Quarter-on Quarter Percentage Change in Consumption, Seasonally Adjusted



The programme for fiscal consolidation to which we must adhere has some time yet to run. This adjustment will apply downward pressure on consumption activity in two ways: incomes will be reduced and the uncertainty surrounding future losses of income will lead to further precautionary savings. In previous *Commentaries* it was noted that the effect of the latter could be somewhat mitigated by pre-announcing changes to taxation, expenditure and charges for services so that the uncertainty that households and businesses face could be reduced and expenditure could be planned accordingly.

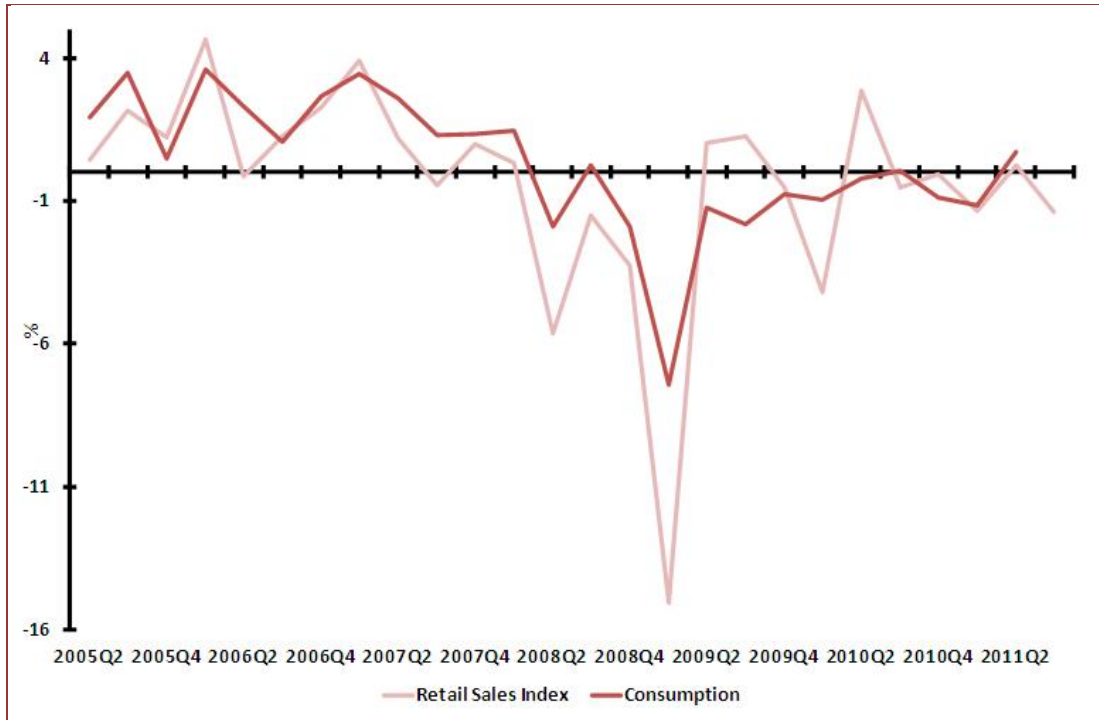
In this regard, the “*Medium-Term Fiscal Statement November 2011*” published by government in early November had somewhat less detail than might have been expected. As things now stand, the fiscal adjustment proposed by government over 2012-2015 is for a total consolidation amount of €12.4 billion of which €1.4 billion relates to Capital Expenditure. Further detail was not forthcoming, partly because of the very high degree of uncertainty in relation to the world economy, the likely growth in the Irish economy and the consequent public finances outcome. In principle, government faces less uncertainty than households, so the outcome of these tiers of uncertainty is likely to be a postponement of consumer durable and other expenditure, adding to the uncertainty about the fiscal outcome.

Some part of the adjustment has already been announced with cuts of €0.75 billion in capital spending in 2012, though strictly the changes are mainly decisions not to go ahead with new projects. Capital spending is very different to current spending – once some physical infrastructure is in place there is no need to maintain the same level of capital expenditure, though obviously continuous maintenance is required to maintain the capital stock. For instance, with the exception of some bottlenecks, the major road construction projects within the state are complete. If we were to assume that the remainder of the fiscal adjustment will be mainly undertaken by tax increases and charges for services, the implications are that households on average would face a reduction of €7,000 in household income by 2015. Very roughly the amounts year-by-year are €1,850 for each of 2012, 2013 and 2014 reducing to €1,450 in 2015. This would represent a reduction in disposable income of approximately 7-8 per cent by 2015. This compares with the 10 per cent decline in disposable income experienced between 2008 and 2010. Of course, the adjustment may be made by cutting employment directly as services are reduced, but this is still reflected primarily in cuts in disposable income. There is no easy way to cut expenditure without affecting incomes.

Household consumption as measured by the Retail Sales Index has deteriorated in the third quarter of the year, both in value and volume terms, reversing gains made during the summer. There may be a temporary improvement in sales pre the VAT increase.

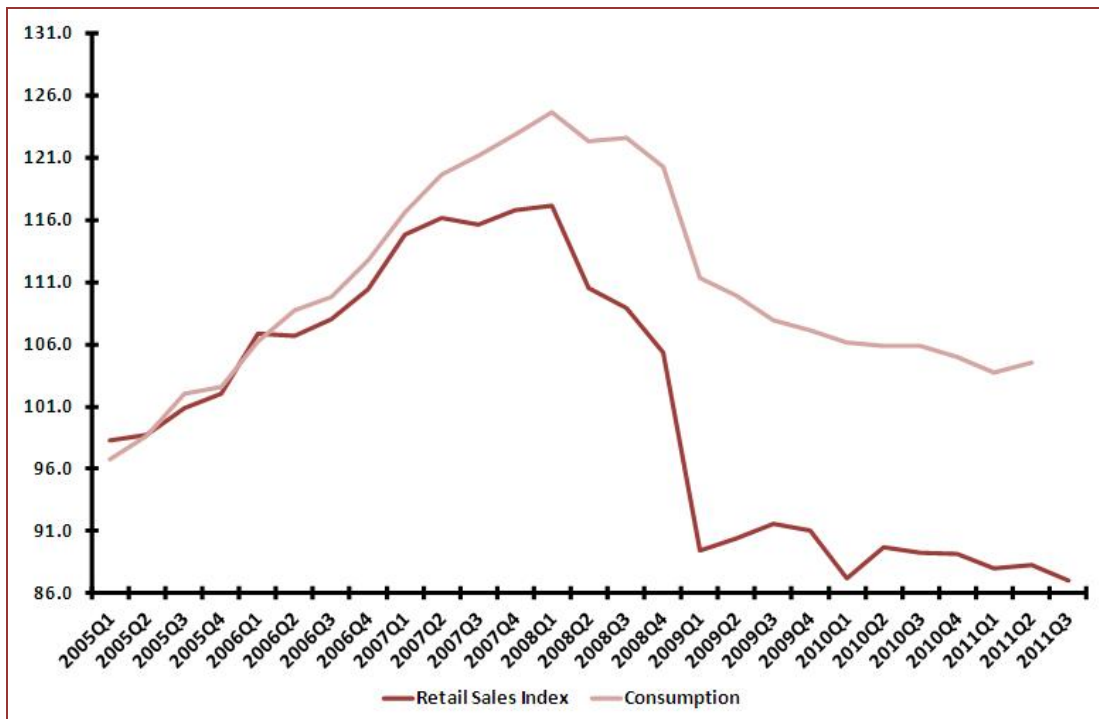
The index is an indicator of consumption activity and is useful due to the timeliness and high frequency of the data. Figure 3 shows the quarterly rate of change of an index of personal consumption and the 3-month average Retail Sales Index, and shows that there is clearly a strong positive correlation between the two variables over time.

Figure 3: Quarterly Percentage Change in the RSI and an Index of Consumption in Value Terms, 2005=100



Although the Retail Sales Index is useful as an indicator of the change in private consumption, since 2007 there has been an increasing divergence between their levels, as seen in Figure 4. Hence, there is a large proportion of consumption that is not explained by the index, and the collapse of retail sales significantly overstates the fall in consumption. This points to shifting patterns of consumer expenditure that are not being picked up in the index. Some part may be due to internet sales that are difficult to track.

Figure 4: Quarterly Retail Sales and an Index of Consumption, 2005 = 100



Looking ahead, we are forecasting a decline of consumption of 1.8 per cent this year. Given the ongoing fiscal austerity and the large degree of uncertainty facing households, we are not expecting a revival in domestic consumption growth in 2012. The suggested increase in VAT will lead to consumer prices rising by an additional 1 per cent and this will have a negative effect on consumption. Of course other measures associated with the fiscal consolidation will also reduce consumption. Our forecast for next year is that consumption will fall by a further 1.5 per cent. The unknown in this is the behaviour of the savings rate over the forecast horizon. The savings rate is dependent on both the amount of income different households save and on the proportion of income used to pay-off debt. Uncertainty is likely to keep the level of precautionary saving high, while for some households the squeeze in disposable incomes arising from the budget will lead to a reduction in savings intentions and possibly a run-down in accumulated savings. Other households are in the process of deleveraging and this will continue until they are, on aggregate, satisfied with their net debt position – the timing of which is difficult to predict.

Table 4 : Personal Disposable Income

	2009	% Change in 2010		2010	% Change in 2011		2011	% Change in 2012		2012
	€b	%	€b	€b	%	€b	€b	%	€b	€b
Agriculture, etc.	2.2	24.9	0.5	2.7	9.8	0.3	3.0	10	0.3	3.3
Non-Agricultural Wages	73.6	-6.6	-4.9	68.8	-1.7	-1.2	67.6	-1	-0.7	66.9
Other Non-Agricultural Income	14.4	13.9	2	16.5	9.5	1.6	18.0	3.5	0.6	18.7
Total Income Received	90.3	-2.5	-2.3	88	0.8	0.7	86.0	0.3	0.2	88.9
Current Transfers	26.5	-0.2	-0.1	26.5	-2.1	-0.6	25.9	1.5	0.4	26.3
Gross Personal Income	116.8	-2	-2.4	114.4	0.1	0.1	114.5	0.5	0.6	115.2
Direct Personal Taxes	21.6	-3.4	-0.7	20.8	4.3	0.9	21.7	3.8	0.8	22.5
Personal Disposable Income	95.2	-1.7	-1.6	93.6	-0.9	-0.8	92.8	-0.3	-0.2	92.6
Consumption	85.2	-3.1	-2.6	82.6	-0.5	-0.4	82.2	-0.5	-0.4	81.7
Personal Savings	10			11			10.7			10.9
Savings Ratio	10.5			11.8			11.5			11.8
Average Personal Tax Rate	18.5			18.2			19.0			19.5

Note: The average tax rate for 2011 takes account of the Universal Social Charge and the Health Levy.

5. Public Finances

Table 5 sets out our forecast for the public finances for 2011 and 2012. Although the 2011 fiscal year is almost over, the November Corporation Tax and Income Tax receipts are critical in determining the outcome for the year. Tax planning by multinationals makes it difficult to know the level of profits liable for Irish Corporation Tax. Nevertheless, the 2011 Budget figures remain the best estimate available at this stage for Corporation Tax receipts for the year. While some elements of tax revenue are below the levels specified in the budget, some are greater – notably the tax revenue associated with the levy on pension funds.

Table 5: Exchequer Finances €billion

	2010 Outcome	2011 Forecast	2012 Forecast
Net current expenditure	47.0	48.5	49.7
<i>Net voted expenditure</i>	40.5	41.7	40.5
<i>Non-voted expenditure</i>	6.5	6.8	9.2
Current revenue	34.4	37.0	38.7
<i>Tax revenue</i>	31.8	34.6	36.2
<i>Non-tax revenue</i>	2.7	2.4	2.5
Current budget deficit (1)	12.6	11.5	11.0
Capital expenditure	8.0	16.3	7.4
<i>Net voted expenditure</i>	5.9	4.3	3.5
<i>Non-voted*</i>	2.0	12.0	3.9
Capital receipts	1.8	2.5	1.6
Capital deficit (2)	6.2	13.8	5.8
Exchequer deficit (1+2)	18.7	25.4	16.8
General Government Balance (deficit)	49.9	16.0	13.1

Source: Own estimates.

The outcome for 2011 is likely to be very close to the figures in the Budget when allowance is made for changes during the year. The pension fund levy has increased revenue while VAT receipts are running below expectations, even when allowance is made for the tax reductions associated with the “Jobs Initiative”.

Turning to 2012 there are some positive full year carryover effects from some of the measures introduced in 2011 while the major negative carryover effect is in relation to the reduction in the amount of VAT associated with the “Jobs Initiative”.

The government has indicated its intention to aim for a budget deficit of 8.6 per cent of GDP, with a slightly bigger adjustment than the €3.6 billion originally mooted. The main reason for this is the forecast of weaker growth in the major economies and economic areas. As a consequence the Irish economy will perform less well than if the government maintained the original €3.6 billion adjustment. The Fiscal Advisory Council took the same view in its first report, aiming for a significantly bigger adjustment in 2012 because the international situation had worsened, among other reasons.

The forecasts in Table 6 have built in the €3.8 billion adjustment indicated by the government. The precise shape of the adjustment must await budget decisions, though we have also built in the 2 per cent VAT increase. The final decisions in relation to the budget are political, but government needs to be conscious that the mix of expenditure cuts and tax changes should not worsen the position of labour relative to capital. In spite of the weaker situation internationally we think the target for 2012 is likely to be achieved.

BOX 2: THE IMPORTANCE OF FISCAL TARGETS AND ANOTHER ASPECT OF THE AGREEMENT BETWEEN GOVERNMENT AND THE TROIKA

It remains of the upmost importance that Ireland meets the range of quantitative targets laid out in the Programme for Financial Support. The goal for Ireland is to ensure economic sovereignty upon completion of the bailout programme, which requires that the government can borrow from the international sovereign debt market at reasonable rates of interest. Meeting the targets will contribute towards providing external assurance that Ireland’s debt is sustainable, while also assuring the public that Ireland’s problems are not insurmountable.

Ireland faces two sets of fiscal targets that may be alternatively described as short-term and medium targets. In the short-term, our fiscal targets are laid out in the *Memoranda of Understanding on Specific Economic Policy Conditionality* published by the IMF in their quarterly Reviews. These targets focus specifically on the Exchequer Primary Balance (EPB), which is the amount of net government borrowing excluding debt interest payments, which is further corrected to discount funds used to bailout domestic banks agreed under the Programme.

There is also a target level of net government debt, as well as an explicit condition that repayment of government debt is not to fall into arrears.

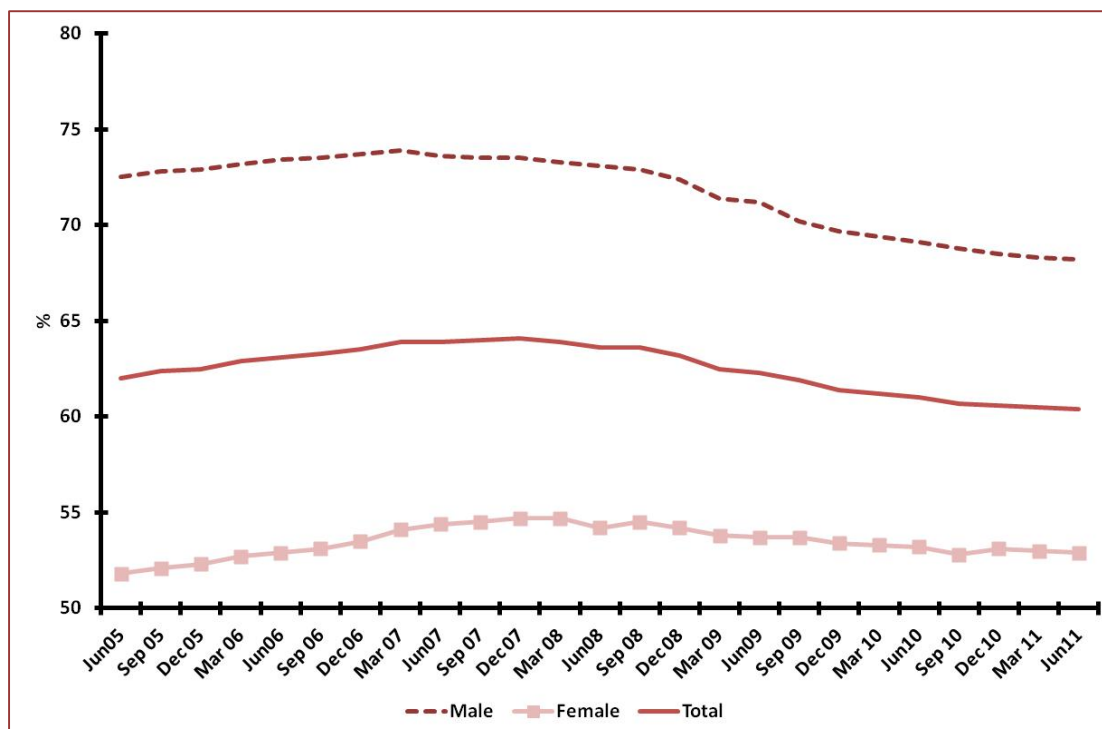
The EPB targets are revised based on any over or under performance of government revenues⁶. Following both the joint First and Second and the Third Reviews, Ireland has managed to significantly over-perform relative to the targets, which has led to a continual tightening of those targets. For instance, the original target for the EPB for Q3 2011 was -€14.2billion. However, when revenue came in ahead of the target profile, the EPB target was adjusted to -€12.9billion. Despite this tightening, the actual outturn for Q3 2011 was -€10.7billion. This system of revision, while clearly meant as a means of cementing the consolidation of over performance in one quarter into ongoing gains throughout the programme timetable, needs to be re-considered on two grounds. First, revenue data are very volatile, so that over-performance in one quarter will not guarantee continued good performance in subsequent quarters. Second, this creates an incentive for government to only just meet the revenue targets in order to avoid a further tightening of the EPB target.

⁶ The measure of government revenue used for the purposes of the Programme is exchequer tax revenue plus gross PRSI receipts (which include revenue from the national training fund).

6. Population, Employment, Unemployment and Earnings

The population in April 2011 was estimated at 4.581 million. The natural increase in population was running at 45,000 during the 2006-2011 period and peaked at 47,700 in the year to April 2011. The natural increase may remain at roughly the same level over the years to 2013. What happens to the population depends not just on the natural increase, but also on the level and direction of migration. In 2012 revised historical migration flows become available. The substantive story behind the previous estimates of migration before the new population estimates became available seems correct. It seems likely that net immigration occurred in the early part of the period 2006-2011, that this was followed by net emigration in the later part of the period, that the numbers were large and the gross flows were also large. It is our expectation that the net outflow has increased this year and that this will accelerate in 2012, due to an increase in the gross outflow and a reduction in the gross inflow. The importance of this is it impacts on our estimate of the numbers aged 15 years and over and on the potential labour force. The labour force is also affected by participation rates. Typically during the period of rapid growth participation rates increase while they decline in recession. This is

Figure 5: Participation Rates



likely to continue over our forecast period, with the participation rate falling from 60.9 per cent in 2010 to 60.4 per cent this year and 60 per cent in 2012. The participation rate is measured as the labour force relative to the population aged 15 years and over.

The bulk of the decline in participation is among both males and females aged 20-24 years where participation has fallen from 73.6 per cent to 68.9 per cent to 66.5 per cent from the second quarter of 2009 to the second quarter of 2010 to the second quarter of 2011. The corresponding figures for females are 70.9 per cent, 66.6 per cent and 65 per cent while for males they are 76.4 per cent, 71.3 per cent and 68 per cent. The fall in participation is due to a set of factors: increased participation in education, increased migration in that age group and a discouraged worker effect. In 2012 we expect participation rates to fall further, particularly as early retirement incentives in the public service take effect. This taken together with the increase in net emigration will lead to a fall in the labour force.

Table 6: Employment and Unemployment

	Annual Averages 000s			
	2009	2010	2011	2012
Agriculture	96	85	88	90
Industry	411	240	235	235
Construction		120	105	90
Services	1,422	1,403	1,380	1,370
Total at Work	1,929	1,848	1,807	1,785
<i>Of which: Employees</i>	<i>1,585</i>	<i>1,531</i>	<i>1,507</i>	<i>1,490</i>
<i>Others</i>	<i>344</i>	<i>317</i>	<i>300</i>	<i>295</i>
Unemployed	259	292	300	303
Labour Force	2,187	2,140	2,107	2,088
Unemployment Rate %	11.8	13.6	14.3	14.5

The most recent data on earnings, covering the first nine months of 2011, show that average earnings remained virtually unchanged compared with the same period of 2011. Hourly earnings rose but hours worked fell, but the amounts were marginal in both cases. Private sector average earnings have been very stable since 2009 and the best estimate is that this will remain so for the next few years. There may have been composition changes in 2009 and 2010 when unemployment rose so rapidly, with low paid workers losing their jobs and others on higher incomes taking pay cuts, leaving average earnings relatively unchanged.

Average public sector earnings are higher than private sector earnings. The public sector earnings figures record the declines experienced in the public service, both for new existing staff and new entrants, though the regime was different in each case

The rise in unemployment and the weakness in domestic demand have resulted in a moderation in inflation and inflationary pressure during the crisis. During the period of the bubble, inflation was driven not just by inflation worldwide and changes in the exchange rate. There was an added factor based on the non-tradable sectors, where domestic demand led to very significant price rises. With the collapse in the level of output driven by the fall in domestic demand these domestically generated inflationary pressures have eased, but the price level still remains too high.

There are three general measures of inflation, based on the Consumer Price Index (CPI), the Harmonised Index of Consumer Prices (HICP), and the implicit Household Expenditure deflator derived from National Accounts data. The latter is the most broadly based and has the virtue of taking account of changes in expenditure patterns – some induced by relative price shifts – while the other two are based on a fixed pattern of expenditure. The HICP most closely approximates the Household Expenditure deflator, though the CPI is more widely known. The CPI peaked in mid-2008 and then declined in early 2010, with the decline amounting to 7.3 per cent. Since early 2010 the CPI has been rising, partly under the impact of energy price increases and changes in mortgage interest rates. The HICP, which excludes mortgage interest payments, among others items, experienced a much smaller decline (2.8 per cent from peak to trough). This year the CPI may rise by about 2.6-2.7 per cent, while the HICP is set to increase by 1.2-1.3 per cent, and the Household Expenditure deflator to rise by about the same amount.

For 2012 we are assuming that government goes ahead with the indicated increase in the standard rate of VAT from 21 to 23 per cent. The rise will add about 1 per cent to the price level. Outside this the domestic pressure on prices will remain weak. There may also be some moderation in energy prices as the eurozone economy weakens, and there may be further declines in European Central Bank (ECB) interest rates. The HICP and the Household Expenditure deflator are likely to increase by about 2 per cent.

7. Imports and the Balance of Payments

The value of merchandise imports rose by 6.1 per cent in the period January-September 2011 compared with the same period in 2010. From detailed figures up to August it is clear that almost half of the increase in imports was due to an increase in the value of imports of mineral fuels, coal, gas and electricity. The value of these rose by almost 30 per cent. This was almost entirely price driven as import unit values for this category of imports indicate unit value increases of 1/3 for petroleum products, the main component. Excluding energy products, merchandise imports rose by 4.4 per cent, but prices increased by about 2½ to 3 per cent. Thus, there has been very little volume change in imports, but a serious deterioration in the terms of trade has resulted in an increase in the value of imports.

In the first half of the year there had been a very large increase in imports of machinery and transport equipment which was reflected in an increase in investment, but this has tailed off markedly.

The number of Irish tourists going abroad fell by 7 per cent in the third quarter and by 4.2 per cent in the year to September. We expect a decline for the year as a whole of 5-6 per cent. Next year the decline may be greater, partly because of the fall in disposable income, but also because people will substitute domestic for foreign holidays, as the domestic industry is now so much more competitive and access costs for other areas are non-trivial.

The volume of other services' imports may increase less rapidly than forecast previously. These imports are heavily influenced by exports by multinationals, including purchases of services from parent and other subsidiaries, and are often tax driven. Overall imports of goods and services seem set to grow by about 3 per cent both this year and next.

We are forecasting an increase in the balance of payments surplus to €3.2 billion in 2012. In effect, this reflects the fact that although the government is running a

budget deficit of 8.6 per cent of GDP the private sector is running a surplus of over 10½ per cent of GDP.

Table 7: Balance of Payments 2010-2012, €billion

	2010	2011	2012
Exports of goods and services	157.7	167.7	177.0
Imports of goods and services	127.9	135.9	140.8
Net Factor Payments	-27.4	-29.8	-31.5
Net Transfer	-1.2	-1.0	-1.0
Balance on current account	0.8	0.6	3.2

Table 8: Imports of Goods and Services

	2009		% Change in 2010		2010		% Change in 2011		2011		% Change in 2012		2012
	€b	Volume	Value		€b	Volume	Value		€b	Volume	Value		€b
Merchandise	45	-1.8	2.8		46	-3.3	4.0		48	1.0	1.0		49
Tourism	6	-6.9	-7.3		6	-6.0	-6.0		5	-10.0	-10.0		5
Other Services	69	6.5	9.0		75	7.5	8.8		82	5.0	6.0		87
Imports of Goods and Services	120	2.7	5.8		127	3.0	6.3		135	3.0	3.5		140
FISIM Adjustment	1				1				1				1
Adjusted Imports	121	2.7	5.7		128	3.0	6.3		136	3.0	3.5		141

8. General Assessment

GDP is forecast to increase by 2.2 per cent this year with GNP rising by 1.2 per cent. The National Accounts figures for the first half of the year are reasonably consistent with these. While we do not yet have third quarter figures for the whole economy, we know that industrial output rose by 2.3 per cent in the third quarter and agricultural output remained strong. While retail business was weak overall, output in the third quarter may have increased modestly. Thus, this year's performance will prove reasonably good, given the deflationary impact of Budget 2011. For 2012 we are now forecasting GDP growth of only 0.9 per cent and a decline in GNP of 0.3 per cent. The factors causing this poor performance are outside our control, and directly linked to the eurozone financial crisis. In this Assessment we discuss the issue of the required European response to the financial crisis as well as some issues raised by the current weakness in the world economy for fiscal policy.

Table 9: Measures of Output, % volume change

	2010	2011	2012
GDP	-0.4	2.2	0.9
GNP	0.3	1.2	-0.3

The Financial Crisis in the Eurozone

The eurozone economy seems to be heading into another recession induced by policy inertia in relation to the financial crisis and the lack of a framework at the collective level to provide the fiscal and monetary stimulus required at this time. Indeed, austerity is the model now adopted in several of the major economies (France, Italy and Spain), and in several of the smaller ones (Portugal, Greece and Ireland) and this will add to the recessionary forces. The effect will make it difficult for heavily-indebted countries to meet fiscal targets and may spark further downturns in domestic demand. The effect will also be felt in non-eurozone economies, dependent on the eurozone for trade. As we have indicated in previous *Commentaries*, collective coordinated fiscal action and a reduction in interest rates could reverse the downturn. Much of the weakness now stems from poor sentiment. However, it takes more than words to shift sentiment. A decisive policy mix could lead to a major shift in sentiment and reverse/prevent this recession.

There is a concern about the possible collapse of the eurozone as a monetary system and the possible fragmentation into the separate economies and with an associated weakening of the Single Market. These impact directly on private sector investment decisions in relation to the timing, amount and location of investment. No matter how impossible such a breakup might seem, given the consequences, the threat of the expulsion of Greece from the eurozone (in the absence of a clear acceptance of the end-October revised bail-out agreement by Greece) does raise the possibility of a significantly reconfigured eurozone.

More importantly, there remains a fundamental governance flaw at the heart of the eurozone, viz. the absence of a central government with powers to maintain a fiscal position and the backdrop *in extremis* of resort to Central Bank funding in times of crisis. Thus while the debt situation in the US and the UK is a cause of concern, the policy option is open to their governments in conjunction with the monetary authorities is to engage in monetary financing of the debt and budget deficits. At worst this could lead to a depreciation of the currency and higher inflation, but lenders would still maintain their assets. The link between monetisation and the inflation rate is not clearcut, particularly in the circumstances that now prevail. Within the eurozone monetisation of debt is not open to individual governments, and in the absence of monetary financing, the options include default. While monetising the debt will raise the monetary base (M1) it is not obvious what the impact on the money supply (M3) would be, as some part of the increase in M1 would be reflected in the recapitalisation of the banks. It was no surprise that financial markets shifted concerns from so-called peripheral countries to countries with high levels of debt, such as Italy and France.

The situation is exacerbated by the exposure of the eurozone banking system to Greek sovereign debt and the belief that the resources required to fully recapitalise the eurozone banking system are substantially in excess of €108 billion suggested at end -October. The end-October agreement envisaged private banks accepting write downs of up to 50 per cent on their holdings of Greek debt, recapitalising on private equity markets while increasing capital adequacy levels in the context of Basel III. To achieve this – and it is not obvious why equity markets would be willing to provide the necessary funds – would also involve a substantial shrinking of the balance sheet of banks. This would have the effect of draining resources from the provision of credit in the eurozone, thereby stifling consumer spending and business development. The European “solution” to the Greek debt crisis is thus to force private sector lenders to take a substantial write-down on the nominal value of assets and then to recapitalise themselves on private equity markets. The contrast with the situation in the US and the UK at the outbreak of the financial crisis could not be starker.

If the eurozone was considered as a single economy, the present situation (with negative growth in prospect, and the current high level of unemployment of 10 per cent) would suggest fiscal expansion and monetary easing as the appropriate strategy – the very opposite of what is happening. But the governance failure in the eurozone, with no central fiscal authority, makes it impossible to implement a fiscal expansion directly. However, it is not impossible to engineer an expansion with coordinated policies among the members of the eurozone while accepting that some countries must persist with austerity programmes. This is not in prospect at present.

The approach initially adopted at eurozone level to the financial crisis was to attempt to isolate the problems to the separate countries. It was only very belatedly recognised that this is a eurozone problem, requiring a eurozone solution. The end October agreement is clearly not that solution. A true solution requires that the ECB provides, either directly or indirectly, the funds that governments need to fully capitalise banks and reduce the debt of Greece to a manageable level. (Even with the proposed debt write offs, the debt to GDP ratio for Greece would be 120 per cent at a time when there is still a significant budget deficit. It now appears that the level of debt forgiveness may not have been sufficient).

The concern with the effective monetisation of debt by increasing the monetary base has to be put in the context of a growth in M1 and M3 of about 2 per cent so far this year. The danger of an increase in the inflation rate, following on from an increase in the money supply, may be overstated. An increase in the price level of 3-4 per cent spread over 2-3 years is unlikely to become embedded in expectations. Any potential loss in output from a temporary increase in inflation has to be weighed against the actual loss stemming from a very poor performance of the eurozone economies over the next five years. Without decisive intervention the eurozone economies will be seriously constrained, will grow very poorly and make the resolution of the debt crisis more difficult.

The moral hazard case against monetising the debt is weakened by the political consequences for governments to date in the crisis. It is difficult to believe that any government would willingly go through this again.

The difficulty of running with such an approach appears to be primarily political, but it needs to be recognised that the present situation is extraordinary and requires an extraordinary solution. The absence of such a solution has ramifications, not just for prosperity in the eurozone, but for the global economy as a whole. As long as Europe remains in crisis, there is little prospect of Ireland returning to a path of sustainable, export-led growth.

Fiscal Policy in a More Constrained World

Given that the fiscal framework is laid out in the report on the EU/IMF “Programme of Support for Ireland” issued by the Department of Finance (28th July, 2011), it would seem that there is very little domestic room for manoeuvre. However, the matter is not clear-cut. There remains some ambiguity about the precise fiscal targets that must be realised. On the one hand, the target is given in relation to the budget deficit – set at 8.6 per cent of GDP for 2011, while on the other hand the target is set in terms of absolute amounts – specifying the amount to be realised in total as a minimum of €3.6 billion, of which the amount to be raised by tax changes is €1.5 billion and expenditure cuts €2.1 billion. The absolute amounts are clear and unambiguous, whereas the rate depends, not only on the absolute amounts but also on the size of the denominator, GDP. The change in GDP is uncertain under normal circumstances. In the current climate the change in GDP is very uncertain. If there is not a change in policy towards the financial crisis in the eurozone then the likelihood is that the eurozone will slip back into recession. In this case, Irish GDP will be less than forecast and the target Budget Deficit/GDP will be more difficult to realise.

In its “*Medium-Term Fiscal Statement*”, the government has clearly adopted the 8.6 per cent of GDP target, and has taken this to mean an adjustment of €3.8 billion to the 2012 budget. The IMF suggested that the €3.6 billion target was the appropriate one to aim for.⁷

This raises the whole question of what changes, if any, should take place in a fiscal consolidation programme when the business cycle re-asserts itself. Theoretical considerations suggest that the correct focus is on the cyclically adjusted primary balance, i.e., the budget deficit excluding interest payments adjusted for the business cycle. This was explicitly stated in the Department of Finance document “*Reforming Ireland’s Budgetary Framework*”⁸ which gave the philosophy behind the new Fiscal Advisory Council. In these circumstances, the weakness of the eurozone economy resulting from the current phase of the financial crisis would be a classic business cycle originator and the target deficit/GDP should be modified, whatever about the absolute amounts. This approach allows policymakers to deal with the structural problem, while still accepting that there are business cycle effects. The practical difficulty is that to make this operational the logic must be written into the agreement between the government and the Troika. Otherwise a failure to meet a particular percentage might be seen as a failure to comply with the programme and make entry again to financial markets uncertain, when the real problem is the weakness in the

⁷ “IMF says deeper cuts not needed in budget” *Irish Times*, October 28th 2011.
<http://www.irishtimes.com/newspaper/finance/2011/1028/1224306622690.html>

⁸ Department of Finance, *Reforming Ireland’s Budgetary Framework: A Discussion Document*, March 2011.

world economy. As we noted in the previous *Commentary*, the end-July agreement explicitly allowed for the provision of funding from the European Financial Stability Facility (EFSF) for countries that have kept to the targets but still find difficulty in tapping into markets. This is an important backstop for Ireland if the EFSF has the resources.

While the comments above might seem a reversal of the position taken in recent *Commentaries* where it was argued that a faster adjustment was needed, the basis for doing rather more was the uncertainty in relation to fiscal outcomes. Monthly and quarterly government revenue and expenditure data are notoriously volatile – even now we are still uncertain about potential Corporation Tax receipts. Aiming for a slightly more ambitious target was to provide a safety net in case of unforeseen circumstances. There was also a preference for accelerating the adjustment, in what seemed to be a not too unfavourable international climate, so that the economy could resume reasonable growth earlier, after such a long period of decline and poor growth. In the face of a less favourable international climate, the danger is the potential downward spiral in the economy if the targets are not met because of a further worsening in the international situation.

General Conclusion

For Ireland, the critical issue is the external environment. In the short-run, i.e., 2012, we should comfortably meet the Troika targets, but it will become progressively more difficult to do so as the external environment worsens. The best hope both for meeting the targets and for employment purposes is for growth to resume. In an unfavourable external environment and seriously constrained on the fiscal side, this means pushing very hard on the competitiveness front and this involves the structural adjustment we outlined in previous *Commentaries*.

Special Articles

User Cost and Irish House Prices

David Duffy

*Irish Government Debt and Implied Debt Dynamics:
2011-2015*

John FitzGerald and Ide Kearney

User Cost and Irish House Prices

*David Duffy**

“But when it comes to forecasting house prices, recent events have shown there are only two types of economist; those who don’t know and those who don’t know they don’t know”

Quoted in Dorling and Cornford, 1995

1. INTRODUCTION

A measure commonly used to assess house prices is the house price-to-rent ratio. This ratio captures the costs of alternative forms of accommodation, namely buying or renting. In the long run these two costs should move together. If house prices rise compared to rents, more people may choose to rent rather than buy. This drives rents up and house prices down. In other words, if the alternative costs of accommodation are not moving together then people would switch between buying and renting. This would continue until the alternative costs again begin to move in line with each other.

Between 1995 and their peak, (between quarter 3 2006 and quarter 1, 2008), real house prices had nearly tripled in Ireland. They increased to be about 2.5 times higher in the UK and had approximately doubled in many European countries, as well as in Australia and New Zealand. Real price increases of over 50 per cent were recorded in Canada, Italy and the USA. In contrast prices in Germany ended the period lower than they were in 1995 (see Andre, 2010). Since then the Irish housing market has experienced a sharp contraction in both prices and output. Today, housing market indicators present a mixed picture – affordability measures have improved, reflecting the fact that the fall in house prices has exceeded the fall in incomes. Other housing market indicators suggest that there may be further falls in house prices.

Use of the house price-to-rent measure has been criticised on the grounds that it does not take account of either interest rates or the role played by price

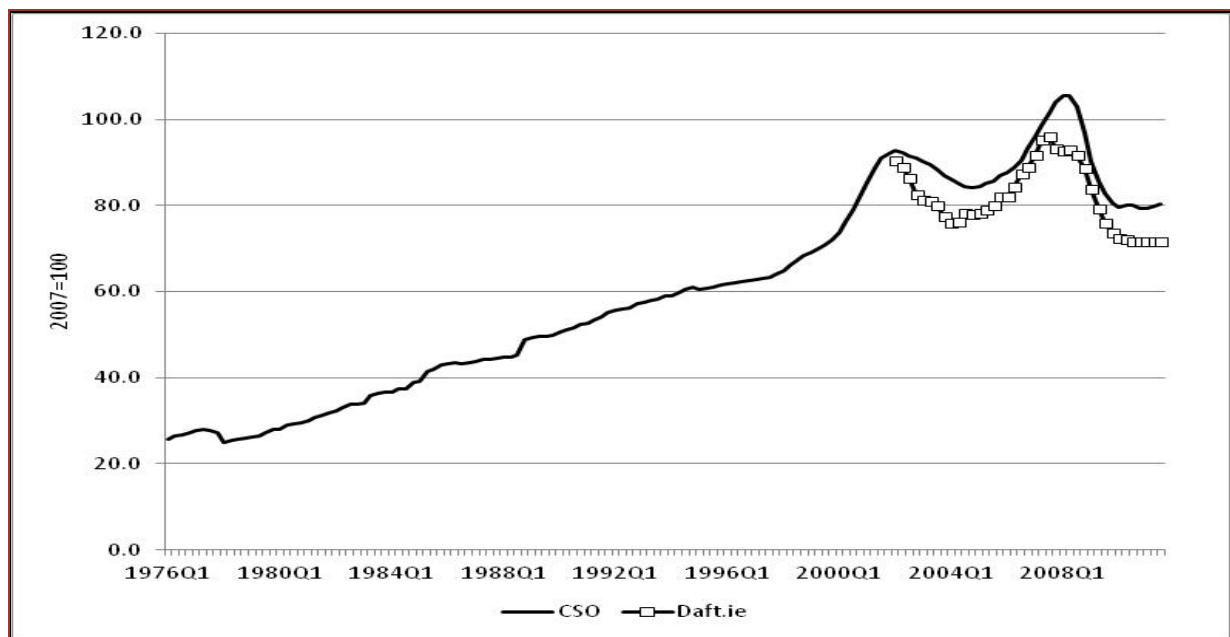
* I am grateful to John FitzGerald, Ide Kearney, Joe Durkan, Adele Bergin, Petra Gerlach and an anonymous referee for comments on earlier drafts.

expectations. The user cost of housing aims to take account of these factors and this is the measure calculated here. User cost is the notional price an owner-occupier pays for the housing services provided by their dwelling, the rate of return or the cost of owning a house. A number of alternative scenarios are examined to illustrate the importance of house price expectations.

2. THE SIMPLE HOUSE PRICE TO RENT RATIO

Most indicators suggest that nominal Irish house prices are down sharply from their peak, in excess of 40 per cent by most measures. Annual growth in house prices took place over a considerable period of time, commencing in quarter 3 1994, and lasting until quarter 2 2007, an upturn of 52 quarters. Figure 1 shows the private rents between quarter 1, 1977 and quarter 2, 2011. Over this period annual private rent inflation has averaged 3.4 per cent. However, there have been a number of exceptions to this. In the late 1990s, rent inflation was much higher, peaking at nearly 16 per cent in the first quarter of 2001.

Figure 1: Rent Index (nominal)



Source: Based on data from daft.ie asking rent index and CSO consumer price index sub-indices.

At the end of 2001 interest relief on investment property was restored and the 9 per cent flat rate of stamp duty and 2 per cent anti-speculative levy were abolished. Investors soon returned to the market and rents began to fall in 2002 and declined fairly steadily until 2005 in nominal terms. Rents then grew until the third quarter of 2008. Factors contributing to the growth in rents include demographic pressures through high inward migration and strong activity in the

buy-to-let market, see Kelly and Menton (2007). Since then rents declined for a number of years, although in recent times rents have started to grow on an annual basis. A similar trend is evident in separate data on “asking rents” from DAFT.ie, the property rental website.

In constructing a house price to rent ratio, an important consideration is the choice of house price measure. A number of alternative house price measures exist for Ireland. To construct our house price measure for this analysis we undertake the following steps. Firstly, a national average house price is estimated by weighting the average new and second hand house price by the proportion of loans paid for new and second-hand houses. Secondly, to avoid average price effects, price changes after quarter 1, 2005 are determined by the CSO Residential Property Price Index which is constructed using a hedonic regression methodology and so aims to avoid distortions caused by the changing mix of properties, see O’Hanlon, (2011).

One final adjustment is undertaken. It could be argued that the decision to buy or rent is primarily undertaken by potential first-time buyers who are choosing whether or not to enter the owner occupancy segment of the housing market. Analysis of the price-rent ratio should therefore be based on analysis of the first-time buyer price to rent ratio. The Department of Environment or the CSO does not distinguish between first-time or repeat buyers. However, examination of the micro-data used for the permanent tsb House Price Index from 1996-2010 shows that first time buyer house prices over the period were, on average, approximately 85% of the national price. A first-time buyer price is calculated as 85% of the weighted national house price, shown in Figure 2.¹

The first-time buyer price to rent ratio is shown in Figure 3. Given the magnitude of house prices changes, the ratio has followed the path of prices in recent years, with house prices increasing much faster than rents. Having reached a peak at the start of 1982, the price-rent ratio declined until 1987. In the succeeding years to 1990 the price-rent ratio grew by 17 per cent. However, this was followed by further declines and it was not until 1994 that the price-rent ratio started another period of sustained growth, with the late 1990s recording annual double digit growth. In that period the fastest growth in the price-rent ratio was at a time when rental growth was slow or falling and house prices were growing by double digits.

¹ A similar approach is taken in the construction of the EBS/EBS Affordability Index.

Figure 2: First-Time Buyer Average House Price (nominal), '000s euro

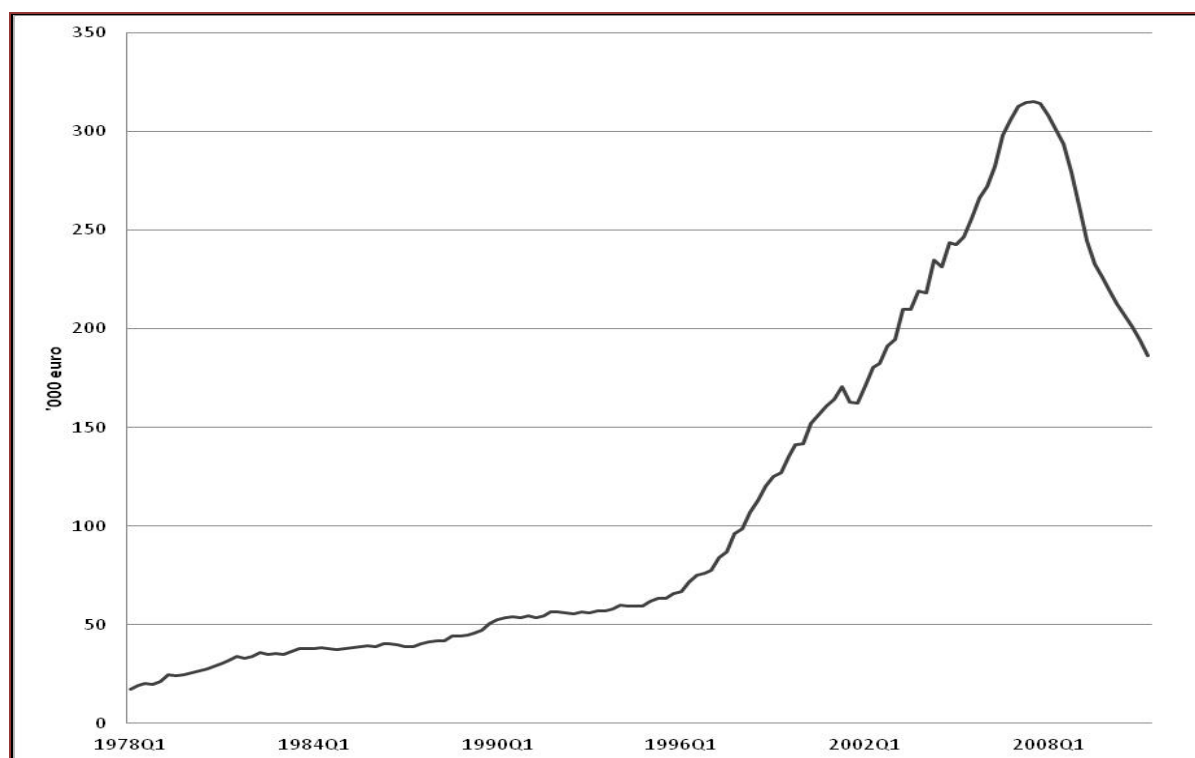


Figure 3 also shows that, since the beginning of 1998, the ratio of house prices to rents in Ireland has been above its long run average. For the period 1978 quarter 1 to 2011 quarter 2, the long run average for the ratio was 0.55. However, much of the period after 2000 is seen to represent the bubble period of the house price cycle and so its inclusion would increase the long run average to an artificially high level, the effect of which would be to underestimate overvaluation. For example, OECD, IMF, and Central Bank estimated that house prices became overvalued during that stage, in the order of 15 to 20 per cent.² Excluding the period after 2000 and using quarter 1, 1978 to quarter 4, 2000, the annual average is 0.39. The price-rent ratio peaked in quarter 3, 2006 and has moved back towards the long run average. In many economies the ratio can deviate from its long run average.³ For example, if people's expectation of their long-run income growth changes this could alter the long run relationship as the decision to buy becomes more attractive. Or in uncertain times people may prefer greater flexibility in their accommodation tenure and this could increase the attractiveness of renting. Indeed, the extent of the current housing market shock may have a long lasting

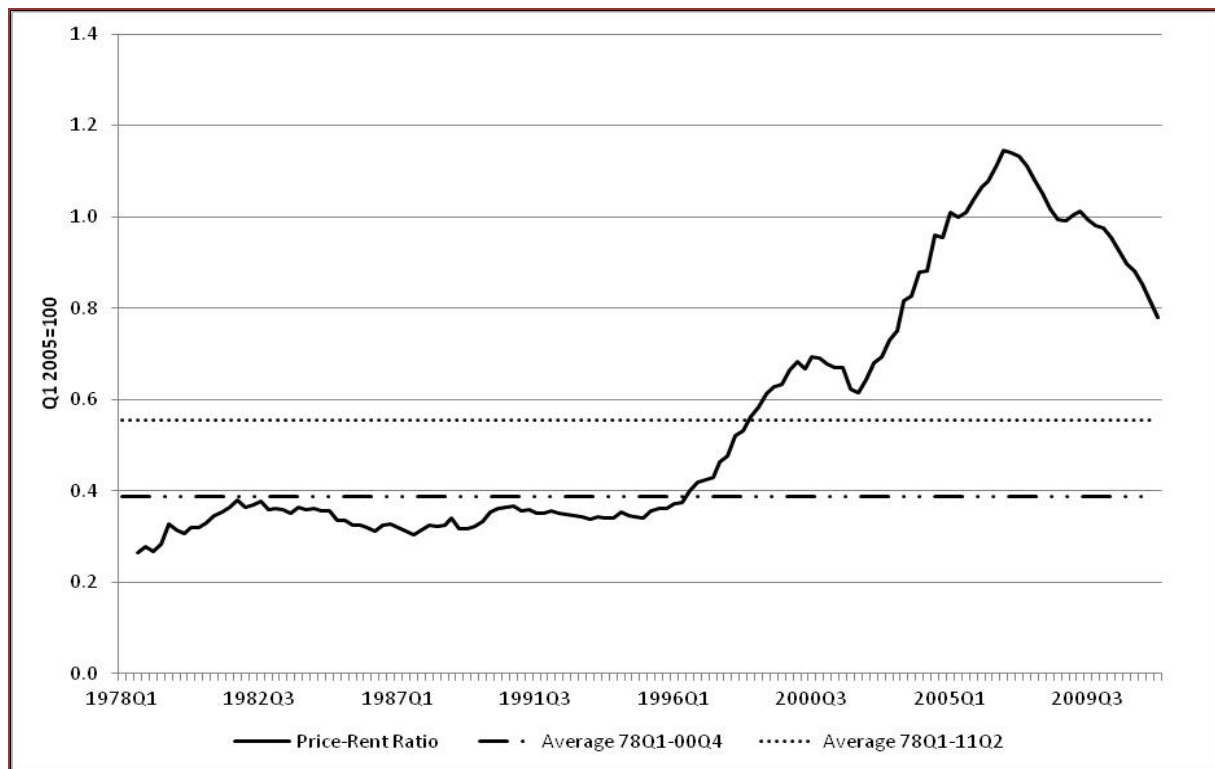
² OECD, Economic Outlook No.78 estimated that Irish house prices in 2004 were 15.4 per cent overvalued.

³ See for example the analysis in OECD World Economic Outlook, No.78, Chapter 3 "Recent House Price Developments: The Role of Fundamentals".

impact on preferences. If changes of this nature were to persist then the long-run average would shift.

The first-time buyer house price to rent ratio shown in Figure 3 suggests that there is still a significant adjustment to take place in house prices. However, this interpretation must be treated with some caution. The standard house price-to-rent ratio used above has been criticised on the grounds that it does not take account of the role played by interest rates. In addition, while the price is readily identifiable in the rental market as rent, it is not immediately obvious in the owner-occupier market. The everyday house price quoted is generally the asset purchase price and this is not the same as rent.

Figure 3: First-Time Buyer House Price Index-to-Rent Index Ratio, Ireland



Source: First-time buyer house price index constructed using DoE quarterly house price series and CSO national house prices. Rent index based on private rents from CSO detailed sub-indices from the consumer price index.

3. THE USER COST OF HOUSING

The need to develop a price for the consumption of housing brought about the concept of user cost. This allows the comparison of the annual cost of owning a house to the annual cost of renting. User cost is the notional price an owner-

occupier pays for the housing services provided by their dwelling, the rate of return or the cost of owning a house.⁴ In general, the user cost of housing is given by the following formula which aims to capture the costs and any offsetting benefits from homeownership.

$$\text{User cost of housing} = [(\alpha i_b + (1-\alpha) i_m) (1-\tau) + \delta - \pi^e_H] * P_H$$

where α is the downpayment as a fraction of the purchase price, i_b is the nominal rate of interest on large deposits, i_m is the nominal rate of interest on mortgages, τ is the marginal tax rate, δ is a depreciation rate, π^e_H is the expected rate of house price change, and P_H is the purchase price of the house.⁵ The downpayment is calculated as the dwelling price less the amount borrowed divided by the dwelling price. The depreciation rate is based on the annual rate used in the Economic and Social Research Institute (ESRI) macro-model. The nominal interest rates used are the interest rate on large deposits and the representative mortgage interest rate from the CSO. Although house price expectations are one of the most important components of the user cost measure they are one of the more difficult components to calculate. Mayer and Sinai (2007) point out that the standard user cost model does not characterise how price expectations are formed. In our base scenario, we assume that house price expectations continue to be based on a 4 quarter moving average of the annual growth rate in house prices, in other words consumers expectations of future house price changes are based on past experience. For example, the expected house price change in the first quarter of 2000 is the average of the annual change in each quarter of 1999. Murphy and Muellbauer (1997) provide evidence of this in the UK housing market, Case and Schiller (2003) and Piazzesi and Schneider (2009) show its presence in the US housing market, while Lunn (2011) shows evidence for the Irish housing market. Using this measure housing market equilibrium is reached when the expected annual cost of homeownership equals the annual cost of renting,⁶ when the value of user cost shown in the above formula is equal to the cost of renting.

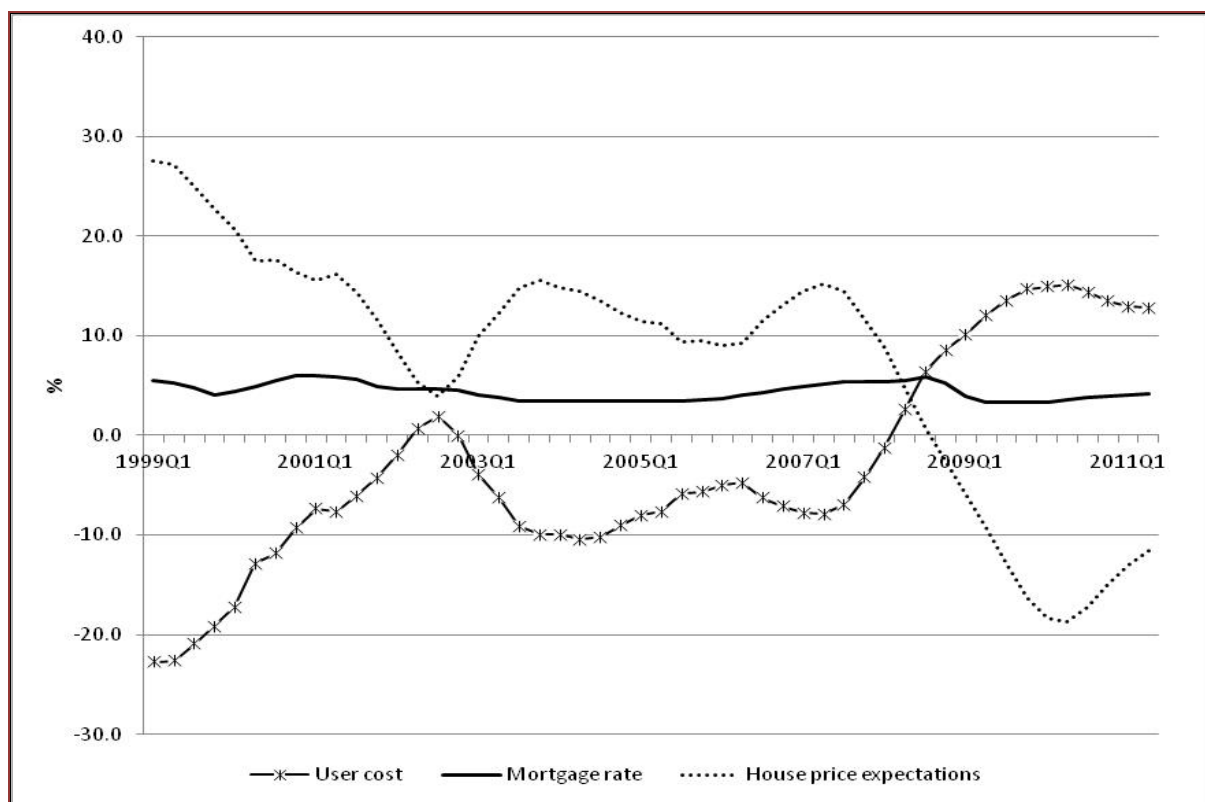
⁴ As this is not observable it must be imputed. There is extensive literature on this topic and its calculation. See, inter alia, Dougherty and Van Order (1982), Diewert (1983), Roche (1999), McCarthy and Peach, (2004), and Himmelberg et al, (2005).

⁵ In an Irish context, Barham (2004) gives a detailed account of the variables involved in the construction of the user costs of housing.

⁶ A number of alternative approaches exist to assessing whether or not a housing market is in equilibrium. For example, during the increase in house prices in Ireland after 2000 a number of studies compared house prices to a predicted house price, which is estimated based on factors such as demography, interest rates and income, see for example McQuinn and O'Reilly, (2006) and Barrett et al (2008), amongst others.

Figure 4 shows two factors that have a major impact on user cost and fluctuate most over time. Increasing interest rates raise the user cost, while high expected capital gains reduce user cost, making owner-occupancy attractive and so demand for housing can remain strong even in a period of rapid price growth. For much of the period shown the various house price measures available in Ireland all recorded strong house price growth, contributing to the expectation of future house price increases. Expectations of price increases reduce the user cost of homeownership increasing the demand for housing. As house prices grew strongly, leading to capital gains for homeowners, the user cost of housing was negative. The expectation that house prices would continue to grow contributed to the expectation of capital gain from homeownership, a factor that underpinned the demand for housing. Using the framework provided by the user cost equation also shows why the demand for housing is currently so low. As house price increases slowed this caused the user cost of housing to rise, causing the demand for housing to slow. As price expectations then became negative this further increased the user cost through the impact of an expected capital loss from homeownership.

Figure 4: User cost and its main components



3. USER COST OF HOUSING-TO-RENT RATIO

In order to assess what might happen in the housing market we examine what happens to the user cost-rent ratio under a number of scenarios for house price expectations: firstly, in our base scenario, house price expectations over the next two years are based on the moving average of house price change in the four quarters to quarter 2, 2011. In our second scenario, house price expectations improve and so rather than anticipating a fall in real terms of just over 12 per cent year-on-year from quarter 4, 2011 the expected decline is 6 per cent. These less pessimistic house price expectations lower the user cost to price ratio, suggesting a faster adjustment to a period when homeownership is again attractive. We also examine a scenario where house price expectations improve sharply. Thus, having fallen by 12 per cent in quarter 3, 2011, there is a sudden sharp shift in expectations and house prices are expected to remain flat in real terms. This leads to a sharp reduction in the user cost to price ratio, leading to the cost of homeownership being below the cost of renting. Recent data⁷ from the CSO Residential Property Price Index shows a pick up in the rate of house price decline. Therefore, we also include a scenario where prices are expected to fall by an annual average of 18 per cent in 2012 and 2013. Table 1 sets out the house price scenarios used in the analysis. For comparison, those used in *The Financial Measures Programme Report*⁸ are shown.

Table 1: House Price Scenarios, nominal growth, annual average

	2011	2012	2013
	%	%	%
House price expectations =4Q ma of annual rate [base]	-12.4	-12.8	-12.8
House price expectations improve	-10.3	-4.1	-4.1
House price expected to be unchanged from Q4 2011	-8.0	2.5	2.5
House price expectations worsen	-12.9	-18.0	-18.0
PCAR Base scenario	-13.4	-14.4	0.5
PCAR Adverse scenario	-17.4	-18.8	0.5

Part of the adjustment can occur through changes in rents and so a key assumption is what will happen to rents. Over the past number of years annual growth in rent inflation has been quite volatile, ranging from 14.6 per cent in 2001 to -4.2 per cent in 2004. Between quarter 2, 1976 and quarter 2, 2011 rent

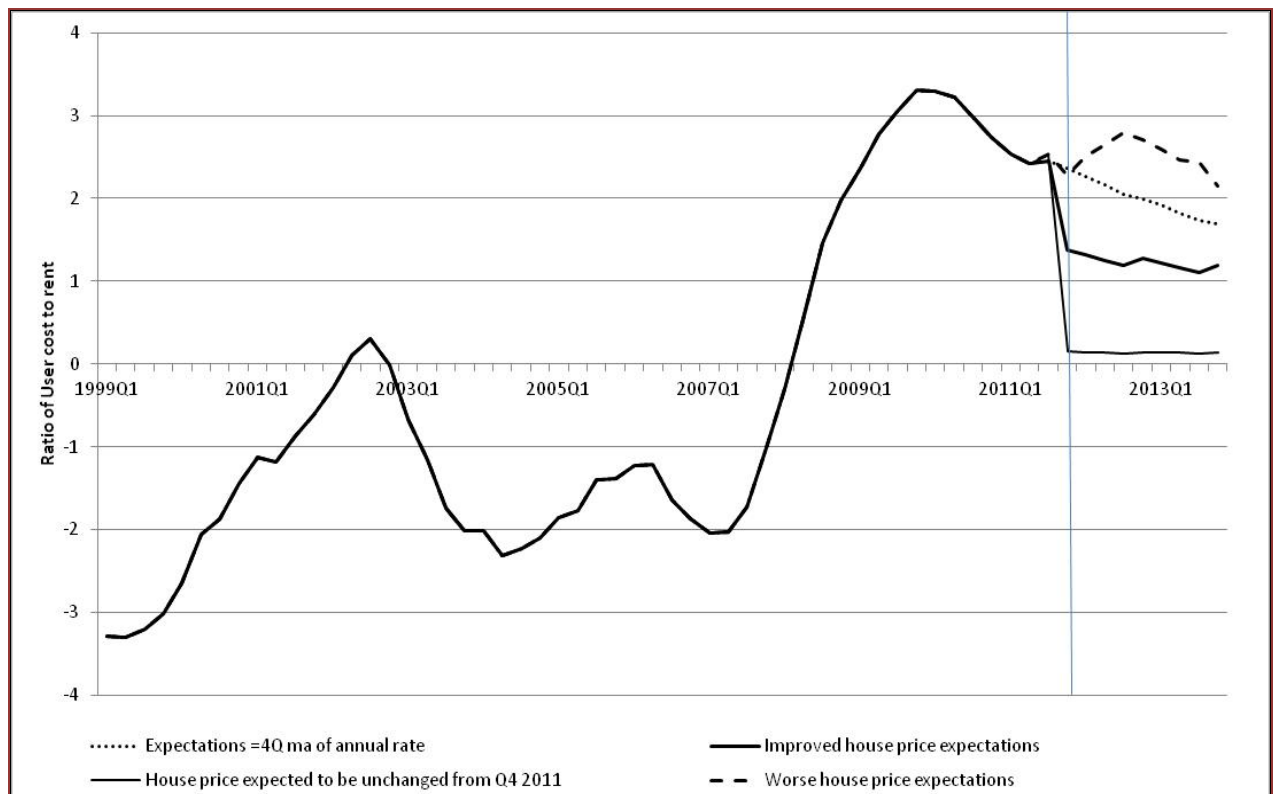
⁷ CSO Residential Property Price Index, September 2011, Release date 25 October 2011

⁸ Central Bank of Ireland March 2011

inflation has averaged 0.8 per cent, quarter on quarter. This represents our assumption for rental growth.

The results are summarised in Figure 5. The results show that for much of the period when house prices were increasing, high expected house price appreciation meant that the user cost of housing was negative, implying large capital gains, making home acquisition attractive. The fall in house prices leading to the expectation of further house price falls reversed this and the user cost to rent ratio rose dramatically, peaking in quarter 4, 2009. The extent to which the ratio rose during the housing market downturn reflects the capital loss experienced. Since then the ratio has fallen sharply. In our base scenario, house prices are expected to continue to fall and so the user cost-to-rent ratio gradually moves towards the point where the annual user cost of home ownership equals the cost of renting. Figure 5 also shows the extent to which changes in house price expectations can lead to sudden shifts in the user cost to rent ratio. For example, if house price expectations were to improve and become less pessimistic so an annual fall of 6 per cent was expected, rather than 12 per cent, this would lead to a sharp sudden change in user cost and a downward shift in the user cost to rent ratio. However, the ratio would remain above the equilibrium of user cost equalling rent, reflecting the expectation of continued house price declines and so renting would remain the attractive option. Alternatively, if house price expectations were to worsen this would raise the user cost, reflecting the higher capital loss. In another scenario the expectation becomes that house prices have stabilised and will remain flat in real terms. Again this reduces the user cost of housing and leads to a sharp downward shift in the ratio of user cost to rent. The size of the change in expectations is such that the ratio moves below equilibrium, making home ownership the attractive option.

Figure 5: User cost to rent ratio, alternative house price expectations



As some of the adjustment in the user cost to rent ratio could occur through rental growth an alternative scenario with stronger rental growth was also examined but this did not show results significantly different from the base case, again underlying the significant role played by house price expectations.

Finally, the introduction of a property tax is scheduled for 2012⁹. At the moment this is expected to be introduced as an annual charge of €100, although over time an annual rate is expected to be implemented. Callan et al (2010) suggest an annual rate of 0.4 per cent. The introduction of a property tax at that rate will result in a small increase in the user cost of housing, thereby putting some downward pressure on housing demand.

5. SUMMARY

At the moment the ratio of user cost to rent remains above the equilibrium value, reached when the annual user cost of owning a house equals the annual cost of renting. The analysis indicates that expectations regarding the direction of future

⁹ The issue of taxation policy and user cost is examined in Irvine (1984) and Barham (2004).

changes in house prices will play a key role in the housing market recovery.¹⁰ A change in price expectations could lead to a situation where the ratio of the user cost of homeownership to rent falls below equilibrium, ultimately leading to an increase in the demand for housing. In the current economic environment, housing market and house price expectations may also be influenced by credit availability. Borrowers observing credit constraints may lower expectations of future house price appreciation, as they assume demand will be curtailed, see Duca et al (2011).

Of course the extent to which the ratio is likely to correct is unknown, as indeed is the timeframe. The question remains about how much longer the remaining correction in the Irish housing market will take. Given both domestic and international uncertainty it is difficult to put a time frame on the adjustment. Rogoff and Reinhart (2008) in an analysis of financial crises internationally find that house price declines last on average for six years. Applying this to the Irish market, which peaked in quarter 2 2007, suggests that it could be the beginning of 2013 before the housing market emerges from the downturn. Bénétix et al (2010) suggests the slump could be longer, the previous housing market slump during the 1980s lasted 33 quarters. Kelly (2007) in an analysis of Irish data suggests that house prices could fall for approximately eight years, resulting in a 50 per cent peak to trough decline.

A word of caution is required. House price change is difficult to forecast and although the ratio may provide us with a guide as to how house prices might perform it is not a precise indicator of when and by how much house prices will change direction. A sudden change in expectations can lead to a sharp shift in the user cost-to-rent ratio and change the relative attractiveness of homeownership. Predicting house prices, as is the case with other asset prices, remains very difficult. The analysis above is based on existing data and economic outlook. Any deterioration in these would lead to a more severe housing market outlook.

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¹⁰ The role of uncertainty is also discussed in Kennedy and McQuinn (2011)

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Irish Government Debt and Implied Debt Dynamics: 2011-2015¹

*John FitzGerald and Ide Kearney**

ABSTRACT

This article examines the debt dynamics facing the Irish State over the period 2011 to 2015. The analysis takes account of the reduction in interest rates on EU borrowing agreed at the EU Council meeting in July 2011 and it makes very conservative assumptions on the interest rate available after 2013. The base case estimates suggest that the net debt to GDP ratio will peak at between 100 and 105 per cent of GDP in 2013 and that it could fall back to 98 per cent by 2015. The related gross debt to GDP ratio would peak in 2012 at between 110 and 115 per cent of GDP before falling back to between 105 and 110 per cent of GDP by 2015. This is much lower than had been assumed in official figures earlier this year, partly because the cost of bank recapitalisation was lower than anticipated and also because of the reduction in EU interest rates.

*This paper was published on-line on 6th September 2011. Since then the gross debt figure for 2010 has been revised downwards to €144.4 billion.

¹ The authors of this paper have received helpful comments from colleagues in the ESRI, Seamus Coffey (UCC), and from an external referee. They have also received extensive assistance from staff in the CSO, the NTMA, the Department of Finance and the Central Bank of Ireland. The authors remain solely responsible for the content of the article and the views expressed therein.

INTRODUCTION

The Irish economy has seen a dramatic growth in government indebtedness over the last four years. Having been one of the EU economies with the lowest government debt burden in 2007, Ireland has moved to being one of the more heavily indebted economies. This turnaround has occurred as a result of the collapse in the property market bubble, the resulting implosion of the domestic banking system and the associated huge fall in domestic output. These related events have together added 70 percentage points to the debt/GDP ratio between the beginning of 2008 and the end of 2010.

Taking the end of 2010 as its starting point, this article considers the composition of the debt at the end of 2010 and how it is likely to develop over the period to 2015. For the period to 2015 we use the Department of Finance's announced targets for the primary balance (the borrowing requirement excluding payments of debt interest) from the *April 2011 Stability Programme Update* in developing our scenarios for the Government debt.

Section 2 looks in some detail at the starting position for public gross and net debt at the end of 2010. Section 3 discusses the discrete components driving the dynamics of the debt over the period 2011 to 2015. These include the targeted government primary balance, the costs of recapitalising the domestic banking system and the debt repayments that fall due during this period. Based on these components, Section 4 considers how the debt is likely to evolve over the period to 2015. This path will be affected by the pattern of future growth in the economy, the interest rate charged on new borrowings and the government's strategy in relation to liquid assets. Section 5 of this article considers the strategies on funding the debt. By 2014 at the latest Ireland will need to return to the markets to fund its sovereign debt. In that year the EU/IMF funding will have ended and there is a very large bond repayment of almost €12 billion due, so planning for funding in 2014 is very important.

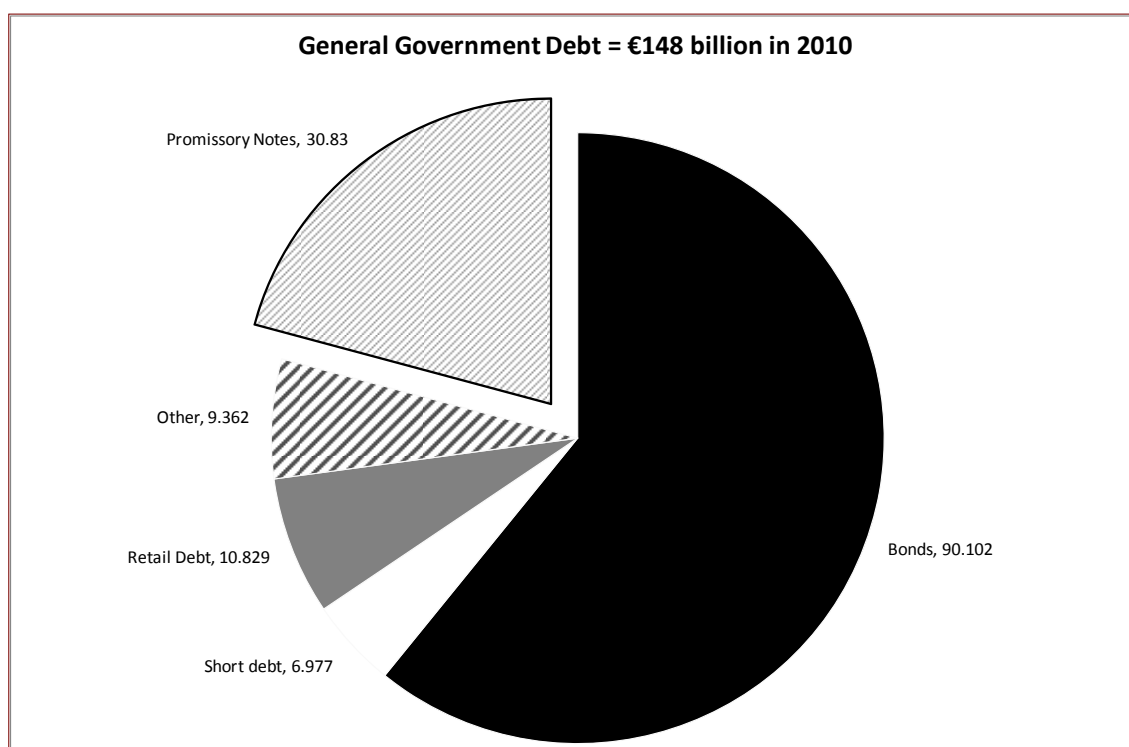
This analysis is based on the assumption that the government implements in full its target €9.8 billion (6 per cent of 2010 GDP) austerity package over the three year period 2012-2014. On the basis of this analysis we conclude that, absent any further negative shocks, the level of Irish government debt as a share of GDP will stabilise in 2013 and begin to fall thereafter. While this package is sufficient to stabilise and eventually reduce the debt burden, it is very far from costless. Building on an austerity package of €20 billion (13 per cent of 2010 GDP) over the

preceding four years 2008-2011, these essential further cuts will be very difficult to implement. Furthermore, they will serve to delay recovery in domestic demand within the economy and they will further reduce employment.

1. GOVERNMENT DEBT IN 2010: THE STARTING POSITION

At the end of 2010 the total Gross General Government Debt was €148 billion. This was equivalent to 95 per cent of GDP or 116 per cent of GNP. As shown in Figure 1 this was composed of €90 billion of government bonds, €31 billion of promissory notes to Anglo Irish Bank and Irish Nationwide Building Society (INBS) and €27 billion of other debt². The indebtedness of the State has increased over a short space of time from 25 per cent of GDP in 2007 to 95 per cent at the end of 2010. However, as discussed further below, the Irish authorities were unusual in holding significant liquid financial assets which were valued at €31 billion at the end of 2010.³ Including these liquid financial assets, the net indebtedness of general government at end-2010 was 76 per cent of GDP or 94 per cent of GNP.

Figure 1: General Government Debt in billions of euro at year end 2010

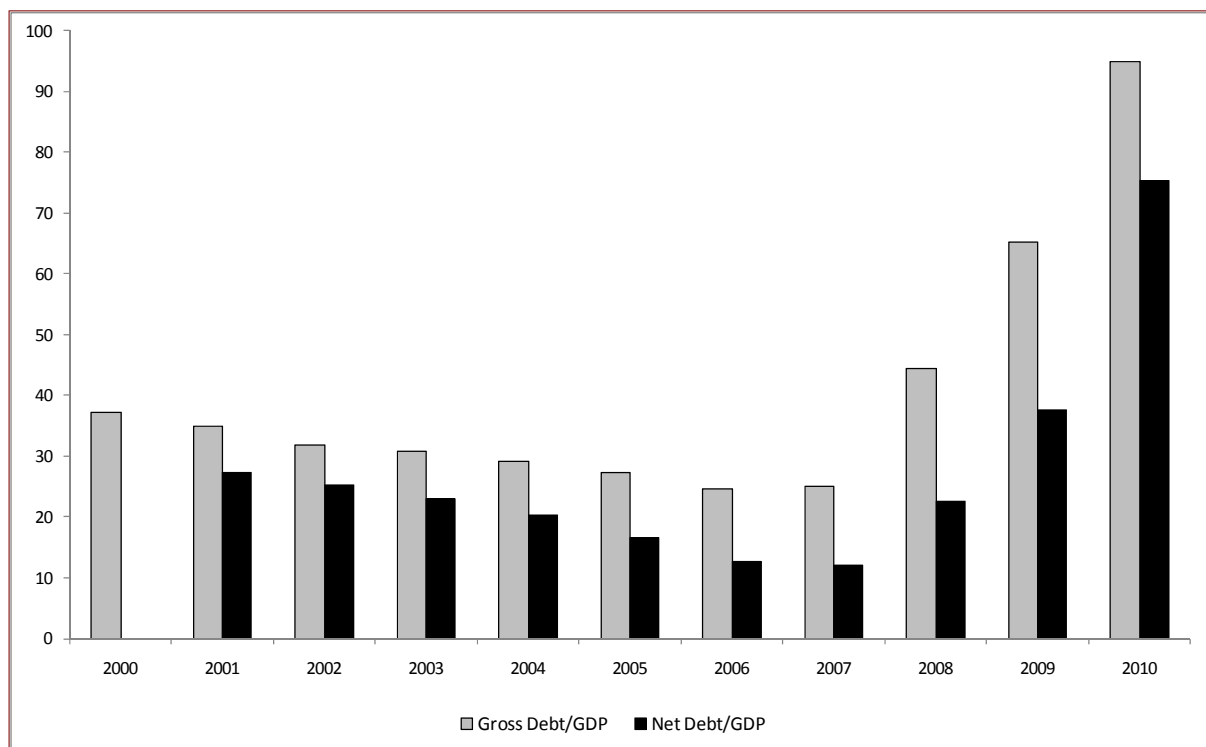


² Other debt includes short-term debt (t-bills and commercial paper), retail debt (savings certificates, prize bonds etc.), local government debt (Housing Finance Agency) and other debt instruments. Note that this figure does not include the total €30.2 billion NAMA bonds issued in 2010. Contingent debt liabilities of the State are discussed in Section 2.2 below.

³ The liquid assets consisted of €16.2 billion in cash deposits and €14.9 billion in discretionary funds held at the National Pension Reserve Fund.

Over the period 2000 to 2007 Irish government debt was low and falling (see Figure 2). In 2001 the government set up the National Pension Reserve Fund (NPRF) and 1 per cent of GNP was invested each year in that fund to provide for future pension requirements. The value of the fund grew rapidly to €21 billion in 2007. Along with cash balances and surpluses on a number of other managed funds, these investments meant that the gap between gross and net government debt grew steadily between 2001 and 2007, from 8 percentage points of GDP in 2001 to 13 percentage points of GDP in 2007. By the end of 2007, while gross government debt was just 25 per cent of GDP, net government debt was a mere 12 per cent of GDP. In 2008 the Irish authorities pre-funded future deficits by borrowing significant additional sums so that liquid assets – in the form of both cash holdings and the NPRF – amounted to almost half of total gross government debt (Figure 2).

Figure 2: Gross Debt and Net Debt, as proportions of GDP



2.1 Government Financial Assets

The Irish authorities responsible for undertaking borrowing to fund the government's needs had considerable experience in the 1980s of dealing with a difficult funding situation. Now constituted as the National Treasury Management Agency (NTMA), this agency took early action in 2008 to prepare for the oncoming storm. It undertook major borrowing on behalf of the government

which went well beyond the funding needs for 2008. As a result, having begun 2008 with cash on hands of €4.5 billion, it ended the year with cash holdings of €22 billion, 12 per cent of GDP (in addition to the assets available in the NPRF).

In 2009 the government decided that some of the assets of the National Pension Reserve Fund (NPRF) could be used to recapitalise troubled banks and more recently to fund capital expenditure.⁴ These are referred to as “directed investments”. Effectively these NPRF assets were made available to the exchequer to help fund the government deficit and bank recapitalisations. The total value of the NPRF at the end of 2010 was €24.4 billion, of which €14.9 billion was available as liquid financial assets⁵. By end June 2011, with a further €10 billion set aside for directed investments in the banks, the discretionary portfolio of the NPRF was valued at just €5.3 billion.⁶

Table 1 shows the cash and NPRF discretionary assets for year-end 2007 through to 2010 and also expresses it as a percentage of the following year’s GDP, i.e., the year to be prefunded. At the end of 2009 total liquid assets available to the government amounted to 28 per cent of the following year’s GDP.

Table 1: Government Liquid Financial Assets € Billion

	2007	2008	2009	2010
Cash	4.5	22.1	21.8	16.2
NPRF	21.2	16.4	22.3	14.9
Total	25.6	38.5	44.1	31.1
% of next year’s GDP	14%	24%	28%	20%

This approach to funding the government’s needs in advance has a cost⁷. However, it did give the government significant flexibility in dealing with the financial crisis. The buffer provided by the holdings of liquid assets meant that

⁴ <http://www.nprf.ie/home.html> “The Credit Institutions (Stabilisation) Act 2010 also provides for Ministerial directions for the Fund to invest in Irish Government securities or for payments to the Exchequer to fund capital expenditure in the financial years 2011, 2012 and 2013.”

⁵ At the end of 2010 €9.5 billion was in the “Directed Portfolio” of investments in Allied Irish Bank and Bank of Ireland and it is, therefore, excluded from liquid financial assets. By June 2011 these investments were valued at €5.5 billion.

⁶ http://www.nprf.ie/Publications/2011/Q2_2011_Performance_and_Portfolio_update.pdf

⁷ For example the interest payments on the excess borrowing undertaken in 2010 to prefund the government amounted to approximately 0.6 per cent of GDP.

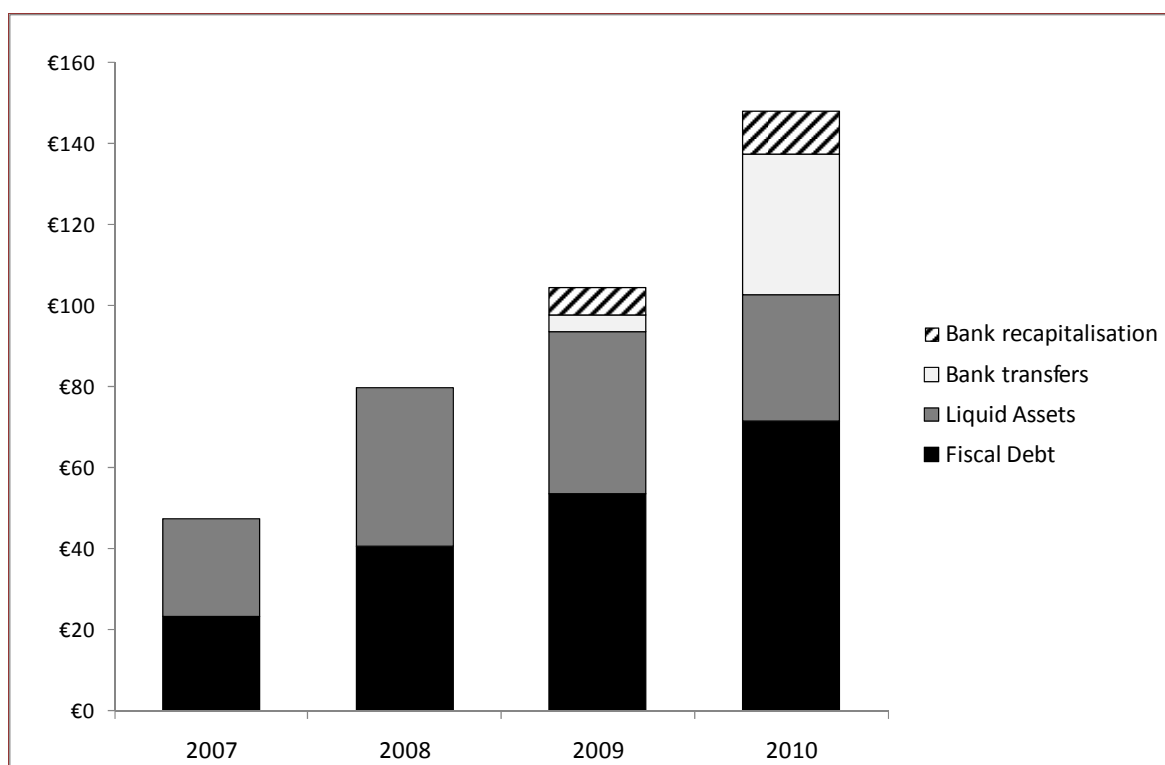
until the autumn of 2010 the government was funded at least a year in advance. However, in the late summer of 2010 the losses emerging in the covered (guaranteed) banks were so large that they led to an erosion of confidence in the banking system and the wider economy. This in turn dramatically raised the estimates of the government's future funding needs. So, while the funding available in cash and liquid assets was more than enough to meet the large borrowing to fund day to day spending and normal debt repayments over the course of 2011, it became clear that it would not be sufficient to fully recapitalise the government-guaranteed banks. As this became clear the government effectively lost access to international capital markets in the autumn of 2010. In November 2010, under pressure from the ECB, the government agreed a package of €85 billion of loans with the EU/IMF designed to finance both government borrowing and bank recapitalisation needs. This included €50 billion provisionally earmarked to fund the fiscal position and a maximum of €35 billion to further recapitalise the banking system, half of which was to come from government's own resources. The net contribution from the EU/IMF over the period of the agreement is, therefore, €67.5 billion.⁸

2.2 Government Liabilities in the Banking System

One of the key problems in considering the sustainability of the Irish government's financial position is the incomplete nature of the accounting framework applied to the government sector, both domestically and by international institutions. While it is normal (actually mandatory) for companies to present comprehensive balance sheet data showing assets and liabilities, including contingencies, this is not the way government accounts are usually published. Though there is a fairly complete accounting for the State's headline liabilities, somewhat less attention is given to its contingent liabilities in the banking system and the information available on its financial and real assets tends to be incomplete. In the current crisis external oversight has increasingly focused on the State's liabilities, including the very significant expansion of contingent liabilities, while relatively little attention has been paid to the State's financial assets and how they are managed.

⁸ Since the agreement was reached at end 2010 it has become clear that any surplus of EU/IMF funds not needed to recapitalise the banks can be used directly to fund the government.

Figure 3: Composition of General Government Debt in billions of euro 2007-2010



There are three main sets of government liabilities in relation to the banking system: liabilities that are included in the Government debt relating to direct intervention by the government in the banking system; contingent liabilities arising from NAMA bonds backed by property assets; residual contingent liabilities arising from the government guarantee of the bulk of covered banks' liabilities. It is complicated to unravel these different sets of liabilities and avoid double counting.

Table 2: Government Intervention in Banking System that Increases the General Government Debt.
Figures relate to end 2010.

	Total	Transfers			Investment
		Total Transfers	Exchequer Funding	Promissory Notes	
Anglo Irish Bank	29.3	29.3	4.0	25.3	0.0
INBS	5.4	5.4	0.0	5.3	0.1
EBS	0.9	0.9	0.0	0.3	0.6
Allied Irish Bank	7.2	0.0	0.0	0.0	7.2
Bank of Ireland	3.5	0.0	0.0	0.0	3.5
Total	46.3	35.6	4.0	30.9	0.7

The first set of liabilities relates to the crystallisation of bank losses guaranteed by the state through government transfers and investment in the relevant banks. These are shown in Table 2. These affect the level of the national debt directly. Figure 3 shows the dramatic impact that such direct government intervention in the banking system has had on the government debt figures since the beginning of 2009. By the end of 2010 total government direct intervention in the banking system amounted to over €46 billion. Of this, a €35.6 billion transfer to Anglo Irish Bank, Irish Nationwide Building Society and the Educational Building Society led to an increase in the gross debt, while a €10.7 billion directed investment by the NPRF into Allied Irish Bank (€7.2 billion) and Bank of Ireland (€3.5 billion) led to a concomitant depletion of liquid assets and an increase in the net debt.⁹

The PCAR/PLAR stress tests on the loan books in Allied Irish Bank, Bank of Ireland, EBS and Irish Life and Permanent, carried out in Q1 2011, estimated that the total recapitalisation needed to cover potential future losses and to meet liquidity rules (loan-to-deposit ratio of 122.5 per cent by end 2013) under an adverse scenario in the banks was €24 billion. Taking account of burden-sharing with junior bondholders, private capital injections and assets sales, an additional €17 billion in capital was injected into the banks by the State by July 2011 to meet in full the recapitalisation needs that had been identified in the stress tests. This brings the total bank liabilities crystallised on the State balance sheet to around €63 billion.

The objective of this recapitalisation is to ensure that, even under very unfavourable circumstances, the banks will still have adequate capital, over and above their liabilities, to allow them to continue to operate. As a result, the contingent liabilities of the State in relation to the covered banks should be more than covered by the value of assets on the banks books and this large capital buffer.

Separately, the recent stress test of the books of Anglo Irish Bank and INBS suggested the current level of State intervention is sufficient to cover all likely future losses.¹⁰ In August 2011 the CEO of Anglo-Irish bank suggested that when

⁹ In measuring the net debt we exclude from liquid assets the directed assets of the NPRF – the investment in Irish banks. As discussed later, these investments have significant value. However, they are not liquid and, until they are sold, it is difficult to put any valuation on them.

¹⁰ See Addendum to the FMP Final Report: Irish Nationwide Building Society and Anglo Irish Bank.

Anglo-Irish bank is finally wound down the cost to the taxpayer could actually prove significantly less than expected.¹¹

The second set of contingent liabilities arises from the €30.2 billion bonds issued to the covered banking institutions in return for heavily discounted troubled loans taken over by NAMA. These form contingent debt liabilities of the State and are housed in a special purpose vehicle (SPV) so that the liability is not recorded on the State's general government debt position. Of these, €28.7 billion are under direct government guarantee¹².

Table 3: Government Contingent Liabilities in NAMA at end 2010, in billions of euro

	NAMA Value	Nominal Value	Haircut
Total	30.2	71.2	58%
Anglo Irish Bank	13.0	34.0	62%
INBS	3.0	8.5	65%
EBS	0.3	0.8	63%
Allied Irish Bank	8.5	18.5	54%
Bank of Ireland	5.5	9.5	42%

The third set of contingent liabilities arises from the government's guarantees related to the banking system. The most important of these contingent liabilities falls under the Eligible Guarantee scheme (ELG). This amounted to €113 billion at end December 2010.¹³ Another source of contingent liability to the State is the Emergency Liquidity Assistance funding provided by the Irish Central Bank to domestic banks. At the end of December 2010 this was €51 billion, up from the €5 billion pre-crisis level (July 2008). A large portion of this lending is against assets which are already directly counted in the Government debt, namely the €31 billion promissory notes already included in the 2010 debt figure. This portion of ELA does not represent an additional contingent liability for the State. The remaining €20 billion (approximate) ELA funding goes largely to Anglo Irish Bank and INBS and does form an additional contingent liability to the State, though it is backed by collateral. The estimated total contingent liabilities of the

¹¹ A saving compared to the previously estimated losses of between €3 billion and €5 billion was recently suggested by the management of Anglo Irish Bank.

¹² 95 per cent of NAMA securities are guaranteed by the state.

¹³ This does not include liabilities covered under the Deposit Guarantee Scheme which pre-dated the financial crisis.

State, not included in the Government debt, comes to around €162 billion as shown in Table 4.

Table 4: Estimate of contingent liabilities of the State in the banking system at end 2010, € billion

NAMA Bonds¹⁴	29
Emergency Liquidity Assistance (net of promissory notes)	20
Eligible Guarantee Scheme	113
Total	162

While there is a degree of clarity about these contingent liabilities of the State there is considerable uncertainty about the future value of the financial assets held by the covered institutions. In relation to NAMA assets, the haircut applied to the original loan book averaged 58 per cent (Table 3) and the related NAMA bonds are accepted as collateral by the ECB. It will be some considerable time before these assets can all be sold and their full value determined. However, the size of the initial haircut suggests that there is a reasonable prospect that the State may eventually avoid significant losses on this portfolio.

Following the recapitalisation of the banks at the end of July 2011 the value of their regulatory capital over and above their liabilities could, on the basis of the Central Bank “base” case, be around 20 per cent of GDP. Even under the Central Bank “adverse” scenario it would still be substantial. In a sense this is the “book value” of the banks. However, the need to rapidly reduce their balance sheets, the continuing pressures on their profitability in State ownership and the need to sell the State’s stake in the banks within a reasonable time scale may mean that the State will only realise a fraction of this value. However, if the economy grows along the lines assumed in official forecasts (or outperforms them), then the eventual sale of the state stake in the banks could produce a significant recovery of value, reducing the debt / GDP ratio in the long term. Because of the uncertainty about the timing and outcome of any future sale of the State’s stake in the banks we do not include it in our calculations in this article. However, the significant longer-term value of this asset, albeit uncertain in magnitude, should be kept in mind when assessing the medium-term prospects for the burden of the Government debt in Ireland.

¹⁴ By end July 2011 this had fallen €28.4 billion.
<http://www.nama.ie/Publications/2011/NAMADebtSecuritiesIssued28July2011.pdf>

The scale of the State's contingent liabilities in the banking system relative to the actual size of the Irish economy is very large. While the best available estimates suggest that the assets will turn out to be worth more than the contingent liabilities, the size of the gross assets and liabilities covered by guarantees leaves the state open to significant contingent losses or profits in the future. In this sense the State is highly geared.

3. COMPONENTS OF THE DEBT 2011-2015

The future funding needs of the government are made up of borrowing to fund the ongoing deficit in the public finances and repayment of past borrowing. By the end of July 2011 the recapitalisation of the banking system had been completed so that, while the recapitalisation affects the funding needs for 2011, it should not require additional resources in the future. Here we focus on the different elements in turn.

3.1 *The Agreed Austerity Package and Target Primary Balance 2011-2015*

Since the summer of 2008 the Irish fiscal position deteriorated very rapidly. Beginning in autumn 2008, the authorities responded to this deterioration with a series of austerity budgets designed to stabilise the deficit. The speed with which the deficit deteriorated, even in the face of these measures, warranted a supplementary budget in the spring of 2009 and it was not until 2010 that the measures undertaken were sufficient to see the deficit begin to stabilise. Table 5 summarises the *ex ante* measures undertaken over the period 2008-2010; in total they were equivalent to almost €15 billion or 10 per cent of 2010 GDP. By the end of 2010 the general government deficit had stabilised, albeit at a very high level of 11 ½ per cent of GDP (excluding costs of recapitalisation). In November 2010 the Irish government agreed a package of loans from the EU/IMF designed to help fund Ireland over the period 2011-2013. Prior to that agreement the government had already mapped out a further package of austerity measures designed to bring the deficit below 3 per cent of GDP by the middle of the decade. This package of measures was subsequently incorporated into the agreement with the EU/IMF.

Table 5 summarises the agreed measures for 2011-2014. Roughly two-thirds of the actual and planned austerity package relates to cuts in expenditure, both current and capital. In 2009 and 2010 significant cuts in public sector pay levels were introduced, equivalent to up to 15 per cent of gross salary. There have also been very large cuts in expenditure on capital projects. On the revenue side,

taxes on income have risen substantially in these years. Over the period 2011-2014 the planned consolidation measures total €15 billion, or 10 per cent of 2010 GDP. This means that cumulatively by 2014 the Irish authorities will have introduced *ex ante* austerity measures equivalent to 20 per cent of GDP over a continuous seven year period.

Table 5: Summary of actual and planned austerity measures over period 2008-2014, €billion

	2008-2010	2011	2012	2013	2014	2011-2014
Revenue	5.6	1.4	1.5	1.1	1.1	5.1
Expenditure	9.2	3.9	2.1	2.0	2.0	10.0
<i>of which Capital</i>	1.6	1.9	0.4	0.4	0.4	3.1
Total	14.7	5.3	3.6	3.1	3.1	15.1
Per cent of 2010 GDP	10%	3%	2%	2%	2%	10%

In order to look at the dynamics of the debt we use the official target for the primary balance.¹⁵ We use the medium-term estimates of gross government borrowing and interest payments given in the April 2011 Stability Programme update document to derive a figure for the primary balance, shown in Table 6. Under this programme, the primary balance should return to a surplus in 2014.

Table 6: Official Target Deficit and Implied Primary balance 2011-2015, €billion

	2011	2012	2013	2014	2015
General Government Deficit	€15.7	€13.9	€12.1	€8.1	€5.0
% of GDP ¹⁶	10.0%	8.6%	7.2%	4.7%	2.8%
Debt interest payments ¹⁷	€5.9	€7.6	€10.2	€11.0	€11.3
% of GDP	3.8%	4.7%	6.1%	6.3%	6.2%
Primary Balance	-€9.7	-€6.3	-€1.9	€2.9	€6.3
% of GDP	-6.2%	-3.9%	-1.1%	1.6%	3.4%

¹⁵ This is defined as borrowing net of debt interest payments.

¹⁶ Note the GDP figures used here are based on the April estimates of 2010 GDP. This has since been revised upwards by the CSO by over one per cent in *National Income and Expenditure 2010*.

¹⁷ Table 5b *April 2011 Stability Programme Update*. This includes interest payments on promissory notes.

3.2 Bank Recapitalisation Needs 2011-2015

As discussed earlier, on 31 March 2011 the Minister for Finance announced the results of stress tests of the Irish domestic banks. At the time of writing it seems likely that €7 billion of the €24 billion needed to recapitalise the banks was raised by the banks themselves, with an injection of €17 billion coming from the government. As part of this recapitalisation, €5.3 billion of “excess capital” is being provided to the banks using an instrument which provides for early repayment to the government should the capital prove unnecessary. We assume that €3 billion of this contingent capital will be repaid by 2014.

3.3 Refinancing and the timing of repayments 2011-2015

Since the 1980s the bulk of government borrowing has been undertaken at medium to long maturities, which helps to make funding needs more predictable. In addition, the practise was often to refinance debt in advance of its maturity date through buying debt back in the period immediately preceding the due date for payment. Thus the repayment dates for the existing government bonds outstanding are spread out over the rest of the decade with the last tranche due in 2025. All short-term debt was repaid earlier this year.

The elimination, of necessity, of short-term debt makes the management of the roll-over of debt easier than where there is a bunching of short maturities. However, the need to repay substantial tranches of debt will still put pressure on the government in the next few years until Ireland again has ready access to capital markets. Here we consider the details of the funding needed to cover future debt repayments. These funding needs are summarised in Figure 4.

As of January 2011 the funding requirements of the government are made up of three main components, as shown in Figure 4. The first is the repayments on the €90 billion of outstanding government bonds, €28 billion of which have to be repaid between 2011 and 2014 with a particularly large repayment of €12 billion falling due in January 2014. The bulk of the rest of the repayments fall due in 2016 and 2018, 2019 and 2020 (see Section 5 below).

The second main component of the funding requirement to cover debt repayments relates to the promissory notes of €31 billion plus interest which is to be paid in equal cash instalments of €3.1 billion each year over the period 2011-

2025. Details of how these payments are handled in the accounts are set out below in Box 1.

Figure 4: Refinancing Needs 2011-2025 – Repayment of Debt, € billion

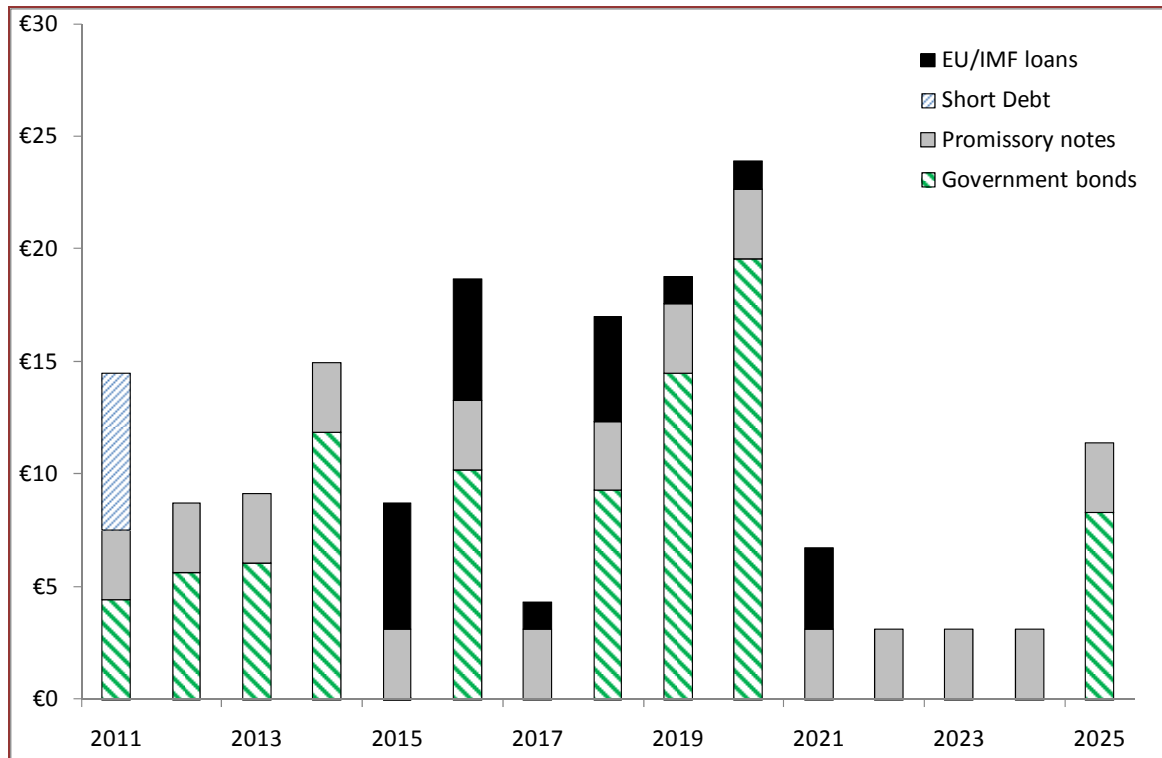


Figure 4 also sets out the profile on repayment of the money borrowed to date from the EU/IMF prior to the 21st July 2011 EU Council. However, the EU Council decided to lengthen the maturity profile on all of the EU lending, which will significantly alter the picture, possibly reducing repayments in 2015 and 2016. To date, the precise profile for repayment remains unclear. Furthermore, Figure 4 does not take account of when the EU/IMF borrowing, which is yet to be drawn down, will need to be repaid. If the result of the Council’s decision is to push major repayment of this debt beyond 2015 or 2016 it will greatly facilitate Ireland’s return to financial markets by easing the funding needs in the 2014-16 period, making 2015 a particularly “calm” year for the NTMA.

BOX: TREATMENT OF PROMISSORY NOTES 2011-2015

In 2010 total general government debt increased by €31 billion relating to promissory notes issued to Anglo Irish Bank and INBS. These promissory notes will be redeemed by the State through a series of annual payments of €3.1 billion from the Exchequer. This annual payment adds to the annual funding needs of the State and it can be partitioned into payment of interest and repayment of principal.

These payments are treated in slightly different ways for the purpose of calculating the Government debt (GGD) and government borrowing (GGB). For borrowing purposes the interest payment is calculated on an accruals basis whereas for the purpose of calculating the debt the interest is counted when it is actually paid. This difference in accounting treatments leads to a slight mismatch between the GGB and GGD numbers, as described below.

The interest payment for the promissory notes is calculated on the basis of the year beginning on the 1st of April running to the 31st of March. The interest is payable on the 31st of March. When translated to a calendar year basis the difference in accounting treatments gives rise to a difference in timing of payments. On 31 March each year, the promissory note component of the general government debt is reduced by the €3.1 billion Exchequer cash payment to Anglo-Irish Bank but increased by whatever interest has accrued on the promissory notes over the previous twelve months.

Given the interest holiday incorporated in the promissory notes in 2011 and 2012, the payments in those years are primarily repayments of principal, other than for a small amount of interest that had accrued over the last nine months of 2010. The different treatment of the debt interest under the two accounting approaches is shown below in Table A.1.

Table A.1: Interest Payments on Different Bases

	2011	2012	2013	2014	2015
Affecting borrowing	0.0	0.0	1.9	1.8	1.7
Affecting debt	0.6	0.0	0.5	1.8	1.7

As far as the flows are concerned that means that the amount put to repayments is different from the amount assumed to be repaid for debt purposes. In each case the “repayment” is derived by subtracting the interest payment from the

€3.1 billion payment in respect of the promissory note. That gives rise to the following pattern on repayments.

Table A.2 Debt Repayments on Different Bases

	2011	2012	2013	2014	2015
Affecting borrowing	3.1	3.1	1.2	1.3	1.4
Affecting debt	2.5	3.1	2.6	1.3	1.4

The stream of repayments on a debt basis is then used to reduce the amount of the promissory notes outstanding each year, resulting in the following figures for the total amount of the promissory notes to be included in calculating the Government debt on the EU basis.

Table A.3: Value of Promissory Notes Outstanding

	2010	2011	2012	2013	2014	2015
Affecting debt	30.9	28.3	25.2	22.6	21.4	20.0

Figure 4 highlights the fact that, even with a major reduction in the general government deficit by 2014, the State will still need to borrow a large amount to refinance existing debt, especially in 2014 and 2016. By raising the gross funding requirement, the bond repayments will make a return to the financial markets more difficult in 2014.

4. DYNAMICS OF THE DEBT 2011-2015

In this Section we consider the likely dynamics of the debt using a range of forecasts and scenarios. There are three key elements which will determine the future path of the debt/GDP ratio: the growth in nominal GDP, the interest rate charged on the debt, and the government policy of holding liquid assets. Our assumptions on these are discussed in Section 4.1. In Section 4.2 we look at the implied dynamics of the gross and net debt under these assumptions. In Section 4.3 we look at alternative growth paths to sustainability which would arise with lower or higher growth rates (or higher or lower interest rates).

4.1 Key Assumptions: The Growth Rate, Interest Rates and Liquid Assets

1. To simplify comparisons with estimates of the debt by official bodies made earlier this year, we have used the Department of Finance assumptions on the future primary deficit or surplus, set out in the *April 2011 Stability Programme* update document (Table 7). We generate the debt interest payments for each year using the assumptions set out in this note. We use the forecast for nominal and real GDP for 2011 and 2012 from the latest *Quarterly Economic Commentary* and we take the Department's numbers for growth for 2013-15. The Department of Finance uses broadly similar assumptions on growth to those in the "Low Growth" scenario in Bergin *et al.*, 2010.¹⁸

There remains the possibility that, in the medium term, the economy could outperform this assumed growth path pushing it towards the "High Growth" scenario in Bergin *et al.*, 2010. There also remains the possibility that a new shock, such as a world recession, could push the economy into a further downward spiral with a substantially worse growth performance.

Table 7: Assumptions on Nominal and Real Growth Rate and Interest Rates 2011-2015

	2010	2011	2012	2013	2014	2015
Growth Rates:¹⁹						
Real GDP	-0.4%	1.8%	2.3%	3.0%	3.0%	3.0%
Nominal GDP	-2.9%	0.7%	2.5%	4.0%	4.3%	4.6%
Interest Rates:						
Short debt	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Retail Debt	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
EU/IMF borrowing		3.9%	3.9%	3.9%	3.9%	3.9%
New bonds	5.0%			6.0%	6.0%	6.0%
Liquid Assets	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%

¹⁸ In Bergin *et al.*, 2010 a number of scenarios for future growth were considered. That paper was published before the full magnitude of the banking losses was known.

¹⁹ The growth rates for 2010 are from the June *National Income and Expenditure 2010* estimates from the CSO. These are higher than was estimated in the *April 2011 Stability Programme Update* with consequent base effects on the level of GDP in 2010.

2. We assume that the interest rate on all EU borrowing under the programme will be 3.5 per cent. The interest rate on IMF borrowing is assumed to be 5.7 per cent.²⁰ The weighted average interest rate is then 4.2 per cent. The interest rate on new borrowing from 2014 onwards is assumed to be 6 per cent. This is a very conservative assumption representing a significantly higher rate than is currently being paid by Spain and Italy. Interest rates on retail debt are assumed to be 3.5 per cent. The interest rate on liquid asset holdings is assumed to be just 0.5 per cent. Hence there is a significant cost to holding these assets over a prolonged period of time.

3. As discussed earlier, we assume that the €3 billion of excess capital put into the banks in 2011 is returned to the government in 2014.

4. In relation to liquid assets, the bank recapitalisation which was completed by the end of July 2011 was financed through a directed investment from the NPRF of €10 billion.²¹ In relation to cash balances we assume that the exchequer cash balance is run down to €9 billion by 2013, as outlined in the NTMA indicative funding schedule.²² This means that by 2015 the total value of liquid assets will be €14 billion (€9 billion held in cash balances plus €5 billion held in the NPRF). This seems a very high level of liquid assets and, as discussed in Bergin et al., 2011, significant interest savings could be achieved by reducing the holdings of cash.

5. We assume that retail debt (small savings etc.) will increase by €1.2 billion in 2011 and 2012, and by €1 billion in subsequent years. The most recent data from the NTMA indicate that over €1.0 billion in retail debt was raised by the end of July 2011 so this assumption is likely to be conservative.²³

²⁰ This is based on the initial average rate of 5.7 per cent estimated at the initiation of the support programme in November 2010. So far the most recent tranches of IMF monies have been borrowed at a lower rate of 4.8 per cent, see <http://www.ntma.ie/GovernmentDebt/EUIMFProgramme.php>.

²¹ http://www.nprf.ie/Publications/2011/Q2_2011_Performance_and_Portfolio_update.pdf

²² <http://www.ntma.ie/Publications/2011/InformationNoteOnIrelandsFundingNeeds.pdf>. Based on the stock of financial assets shown in the memo item of this note, the NTMA figures suggest that cash balances will be increased by €1.2 billion in 2011, reduced by €2.3 billion in 2012 and reduced by €6.2 billion in 2013. The memo item in the note suggests that the liquid cash balances at the end of 2010 amount to €12.3 billion, this is €3.9 billion lower than the figure shown in Table 1 above and the figure shown in the NTMA information note on Ireland's debt issued in May 2011. http://www.ntma.ie/Publications/2011/GG_debt_NTMA_info_note.pdf This difference relates to €3.9 billion of HFA loans which we include in cash balances for consistency purposes.

²³ <http://www.finance.gov.ie/documents/exchequerstatements/2011/excheqjuly2011.pdf>

4.2 *Simulating the Debt Dynamics*

Based on these assumptions, Table 8 shows our estimate of the debt dynamics out to 2015. The top panel shows each of the flows: new government borrowing for day to day purposes, the sums required for bank recapitalisation and the holdings of liquid assets. Using these assumptions, we generate a projection of net new borrowing for the period to 2015. This is shown at the bottom of the top panel of Table 8.

In the top panel the primary balance is as set out in the Department of Finance's April estimates (see Table 6). When this is combined with the final cost of recapitalising the banks and the revised interest rates for the period we estimate substantially lower Government debt interest payments for the period to 2015 than did the Department using the earlier assumptions on interest rates. Naturally, the lower interest payments reduce the debt which, in turn, reduces the interest bill. When these figures for debt interest payments and primary balance are combined to give the borrowing requirement it turns out to be significantly lower by 2015 than in the previous official estimates. As shown in Table 8, on this basis in 2015 the government deficit would be 1.7 per cent of GDP whereas the previous official estimate (Table 6) was 2.8 per cent.

One other point of note in Table 8 is that there is very little change in Government debt interest payments between 2011 and 2012 and then there is a big jump in 2013. This pattern arises from the nature of the agreement concerning the promissory notes (see the Box). This agreement allows an "interest holiday" between the beginning of April 2011 and the end of March 2013, which means that the actual interest payments in 2011 and 2012 are deceptively low.

The top panel of Table 8 shows our assumptions about the funding of bank recapitalisation. As discussed earlier, it is assumed that €17 billion is injected in 2011. It is also assumed that €3 billion of this injection represents "excess" capital and that by 2014 it will become clear that this is no longer needed and can be repaid to the government.

Table 8: General Government Debt and Deficit 2011-2014, Own Estimates

	2010	2011	2012	2013	2014	2015
Borrowing - FLOWS:						
A. General Government deficit, €bn	49.9	15.1	12.6	10.5	6.3	3.2
% of GDP	32.0	9.6	7.8	6.2	3.6	1.7
Primary Balance, €bn*	44.9	9.7	6.3	1.9	-2.9	-6.3
% of GDP	28.8	6.2	3.9	1.1	-1.6	-3.4
Debt interest, €bn	5.0	5.4	6.2	8.5	9.1	9.5
% of GDP	3.2	3.4	3.9	5.1	5.2	5.2
B. Bank recapitalisation, €bn		17.0	0.0	0.0	-3.0	0.0
C. Change in liquid assets €bn		-8.8	-2.3	-4.3	0.0	0.0
cash balances		1.2	-2.3	-4.3	0.0	0.0
NPRF		-10.0	0.0	0.0	0.0	0.0
Total New Borrowing €bn (A+B+C)		23.3	10.3	6.2	3.3	3.2
* net of debt interest						
STOCKS:						
Bonds outstanding**	90.1	85.7	80.1	74.1	62.2	62.2
Other***	27.1	21.4	22.6	23.6	24.6	25.6
Promissory Notes	30.9	28.3	25.2	22.6	21.4	20.0
EU/IMF borrowing €bn	0.0	36.0	53.8	67.5	67.5	61.9
Residual Funding needed: €bn	0.0	0.0	0.0	0.0	15.4	24.6
Total Gross Government Debt (A+B+C)	148.1	171.4	181.7	187.8	191.1	194.3
% of GDP	94.9	109.1	112.8	112.1	109.3	106.2
Liquid Assets	31.1	22.3	20.0	15.7	15.7	15.7
% of GDP	19.9	14.2	12.4	9.4	9.0	8.6
Total Debt Net of Liquid Assets (A+B)	117.0	149.1	161.7	172.1	175.4	178.6
% of GDP	75.0	94.9	100.4	102.7	100.3	97.6

** Stock as of end December 2010.

*** Short term debt, retail debt, HFA etc.

Finally, we assume a reduction of liquid assets of €8.8billion in 2011, €2.3 billion in 2012 and €4.3 billion in 2013 as suggested by the most recent NTMA note on funding.²⁴ Given this profile, it suggests that it will be the end of 2013 before the full amount of the EU/IMF facility is drawn down. The stock of liquid assets available at the beginning of 2014 will be slightly greater than the funding needs for that year. This should facilitate Ireland's return to the financial markets.

²⁴ We assume that the full €67.5 billion in EU/IMF support funding is drawn and that any "excess" is held as liquid assets at the end of 2013 in preparation for a return to market funding in 2014.

The bottom panel in Table 8 shows an estimate of the implied stock of debt, given the forecast borrowing requirement. There are significant bond repayments each year to 2014 (as shown in Figure 4, no bonds are to be repaid in 2015). Promissory notes are due to be redeemed each year, as shown in the Table. An assumed profile for the draw-down in EU/IMF funding and repayments due in 2015 is also included based on funding already drawn down. However, this could well change as a result of the decisions by the EU Council in July 2011. When these sources of finance are taken into account these figures imply that the State would have adequate funding until the end of 2013 and that the stock of liquid assets available at the beginning of 2014 would be the equivalent of one year's funding.

On this basis the bottom panel of Table 8 shows the evolution of the gross debt, a calculation of the implied net debt and the implied level of liquid assets. On the basis of the assumptions set out above, the figures show that gross debt as a percentage of GDP would peak in 2012 at 113 per cent of GDP and would fall back to 106 per cent of GDP by end 2015. This contrasts with the estimates earlier in the year by the Department of Finance, the EU and the IMF that the gross debt to GDP ratio would peak in 2013 at between 118 per cent and 121 per cent of GDP. On the basis of our analysis the net debt to GDP ratio would peak at 103 per cent of GDP in 2013 and could fall to 98 per cent of GDP by 2015. This difference compared to the official forecasts earlier in the year arises primarily because of the lower than expected cost of the bank recapitalisation and the downward revision in the rate of interest on EU borrowing.

While this estimated net debt ratio is high by the standards of our EU neighbours, it is significantly lower than the headline gross debt figures. If the assumptions on growth and borrowing are met in the coming years, this debt level will be attainable with the prospect of a continued improvement in the years after 2015 when the economy is likely to return to a "more normal" growth trajectory.²⁵ Putting this in perspective, this net debt to GDP ratio, peaking at around 102 per cent in 2013, would be somewhat lower than the peak net debt to GDP ratio of 111 per cent experienced in 1987, during the last major fiscal crisis.

²⁵ Bergin *et al.*, 2010 suggested that, after a period of recovery when the economy could grow above potential output, the realised growth rate could settle back to the rate of growth in potential output: in the range 2 per cent to 3 per cent per annum.

4.3 Debt Sustainability Scenarios

The issue of debt sustainability can be analysed using a simple accounting framework as illustrated here. While such a simple exposition misses a number of very important issues for policy makers arising from the complexity of the government balance sheet, it is useful in looking at the sensitivity of scenarios to certain key assumptions.

The burden of debt is sustainable when the debt/GDP ratio is constant or falling over time. The sustainability of a government's debt position at any given point in time is determined by the interaction of the initial level of debt relative to income (D/Y), new debt issuance unrelated to financing the fiscal deficit (NDI), the fiscal primary balance (P) and the gap between the growth rate of the economy and the interest rate payable on the debt ($g-r$). Formally debt in year t will accumulate as follows:

$$D_t = D_{t-1} + r_t * D_{t-1} - P_t + NDI_t \quad (1)$$

Assuming no new debt issuance ($NDI = 0$), and rearranging we get

$$\Delta d_t = (r_t - g_t)d_t - p_t \quad (2)$$

where $d = D/Y$ and $p = P/Y$. On this basis, an assessment of the sustainability of debt in a situation whereby the debt to income ratio is rising hangs on three issues: firstly, the legacy of previous deficits represented by the initial level of debt; secondly the gap between the future growth rate and future interest rate; and thirdly the impact of fiscal policy, as measured by the primary balance. Sustainability implies that the change in the ratio of debt to GDP must be no greater than zero so that equation (2) becomes:

$$0 = (r_t - g_t)d_t - p_t \quad (3)$$

$$p_t = (r_t - g_t)d_t \quad (4)$$

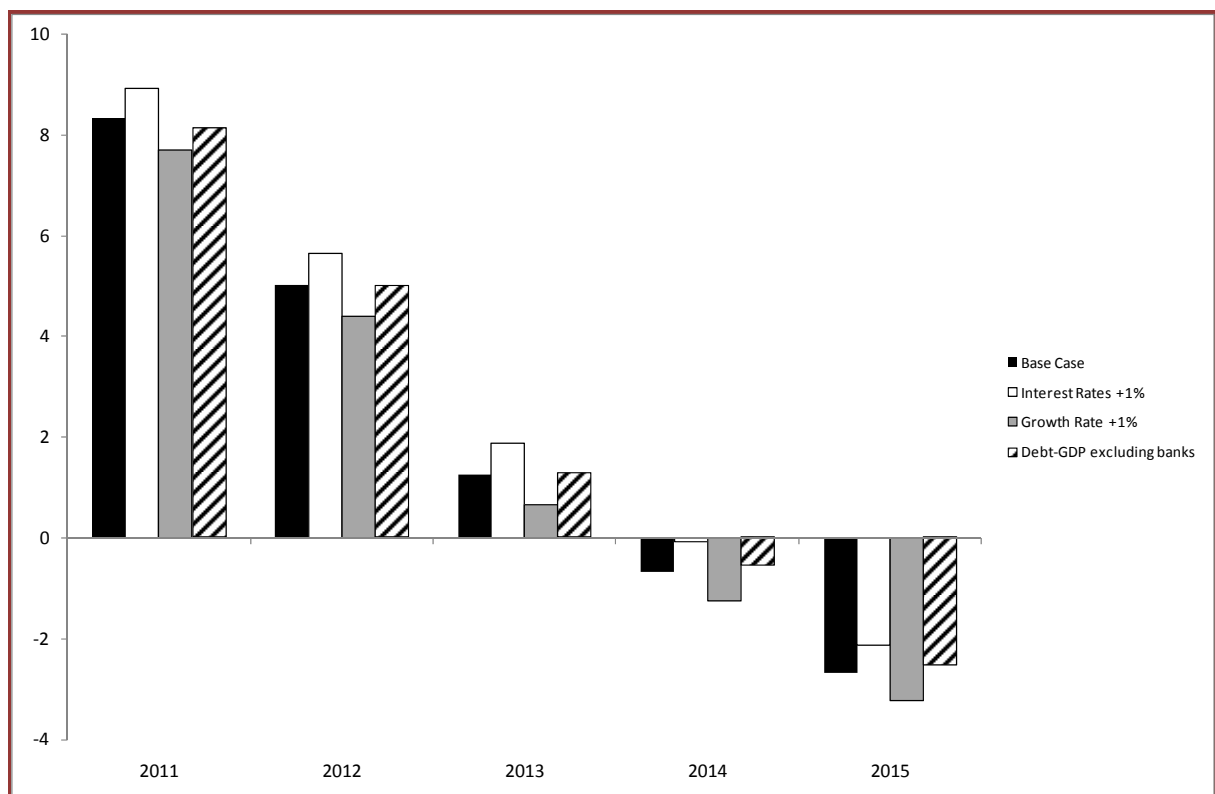
When the primary balance is sufficient to offset the growth-adjusted interest cost of the initial level of debt, then the debt to income ratio will stabilise. To track a path towards sustainability, this equation can be used to estimate the "primary gap" in any given year, which is the difference between the fiscal stance required to stabilise the debt to GDP ratio and the actual fiscal stance in a given year. The primary gap is calculated as:

$$(rt - gt)d_t - pt \quad (5)$$

Figure 5 shows the primary gap for each year out to 2015 – that is the improvement needed in the primary surplus to put the debt on a stable path where the debt/GDP ratio would be constant. In each case we use the actual marginal interest rates for the relevant year rather than the average or expected long run marginal rate. Similarly we use the assumed growth rate for nominal GDP for each year rather than the expected medium-term growth in this aggregate.

In the base case discussed in this paper the primary deficit in 2011 forecast by the Department of Finance would need to be improved by around 8 percentage points of GDP if the debt/GDP ratio was to stabilise in that year. This huge gap arises because of the very big primary deficit expected for the year and the forecast very low growth in nominal GDP. However, by 2014 in the base case the forecast primary surplus is more than enough to render the debt “stable”. This happens in spite of the assumption of an increase in the marginal interest rate from the EU/IMF average rate of 4.2 per cent in 2013 to an assumed market rate of 6 per cent in 2014.

Figure 5: Alternative Estimates of the Primary Gap



The graph also shows the effect of a higher interest rate or a higher growth rate on the primary gap. If the growth rate in nominal GDP were to be higher in 2013 by one percentage point that would necessitate a smaller primary surplus to make the debt sustainable in 2014. (The same results would be achieved if the market interest rate were one percentage point lower). However, if the interest rate was to be one percentage point higher than assumed in the base case (or the growth rate was one percentage point lower than in the base case) the primary surplus would be just sufficient to bring the debt on a sustainable path by 2014. Finally the graph also shows the effect of excluding total transfers and investments in banks of €63 billion from the debt-GDP figure. If the government had not transferred or invested monies in the banks, then the debt-GDP ratio would stabilise in 2013 based on current official targets and the target primary surplus for 2014 would exceed that necessary to stabilise the debt.

This sensitivity test points to the importance of reducing the primary deficit as planned over the coming years. Provided the target reduction is achieved by 2015, producing a significant primary surplus in that year, the debt will be on a sustainable path even if the assumptions about interest rates or growth in the base case proved to be a bit too optimistic.

5. STRATEGY ON FUNDING

As shown in Table 9, new borrowing needs for 2011 are projected to be €15.1 billion. In addition to new borrowing, there will also be significant debt roll-over. In 2011 there is €4.4 billion in government bonds and €3.1 billion in promissory notes to be paid, €2.5 billion of which is a write-down of principal. In addition, we assume that there will be no roll-over of the short-term debt of €7.0 billion which was repaid earlier this year. So the total amount borrowed from the EU/IMF of €36 billion is required to cover gross funding needs of €46 billion (deficit, bank recapitalisations and debt refinancing), offset by the use of liquid assets of €8.8 billion to fund the bank recapitalisation and €1.2 billion raised in retail debt (See Table 9).

Table 9: Funding Needs 2011-2015

	2011	2012	2013	2014	2015	Total
General Government Deficit ²⁶	15.1	12.6	10.5	6.3	3.2	47.6
Bank recapitalisations	17.0	0.0	0.0	-3.0	0.0	14.0
Refinancing needs						0.0
Bonds	4.4	5.6	6.0	11.9	0.0	27.9
Promissory notes	2.5	3.1	2.6	1.3	1.4	10.9
Short Term Debt	7.0	0.0	0.0	0.0	0.0	7.0
EU/IMF Loans	0.0	0.0	0.0	0.0	5.6	5.6
Gross Funding needs	46.0	21.2	19.1	16.4	10.2	112.9
Contribution from change in liquid assets	- 8.8	- 2.3	- 4.3	0.0	0.0	-15.4
Retail debt	1.2	1.2	1.0	1.0	1.0	5.4
Net Funding needs	36.0	17.7	13.8	15.4	9.2	92.1

The official projections published earlier this year implied that the government finances would move into surplus net of debt interest – the primary balance – by 2014. On this basis the gross funding needs over the period 2011 to 2015 are estimated to be approximately €112.9 billion. Of this, €67.5 billion is available from EU/IMF funds out to 2013.²⁷ We also assume that €15.4 billion of liquid assets will be used to fund the debt out to 2015. With €5.4 billion raised on retail debt markets, this means that a total of €24.6 billion would have to be borrowed from sovereign debt markets²⁸ to cover funding needs for 2014 and 2015.

While this article suggests that, on present plans, the Irish debt burden will stabilise at a manageable level in 2013 and 2014, there will still remain considerable uncertainty about the future. While the EU/IMF “umbrella” provides guaranteed funding to 2013, as discussed above there will be a need to source significant funding for 2014. Once that hurdle is successfully overcome 2015 is then likely to see a smaller funding requirement. Thus an important objective for public policy is to plan how best to access capital markets to ensure this funding

²⁶ Includes interest on promissory notes.

²⁷ These numbers do not follow the planned release of funds from the EU/IMF; rather, they compute the funds that would be needed in each year from the EU/IMF funds based on the sum of the projected deficit, bond refinancing, bank recapitalisation and change in liquid assets. They further assume that the EU/IMF funds not needed to recapitalise the banks will still be made available to Ireland by the end of 2013.

²⁸ This figure is illustrative and ignores retail debt and short-term debt sources.

for 2014 well in advance of when it is needed. If that is accomplished then the funding needs for future years will prove much easier.

To ensure adequate funding for 2014 it would be desirable that the Irish government, through the NTMA, should succeed in returning to capital markets in the second half of 2012 or early 2013 at the latest. For a return to the markets to succeed it will require an end to the continuing sense of crisis in the Euro zone economy and clear evidence of progress in Ireland. This makes it essential that the government meets the minimum adjustment targets agreed with the EU/IMF for 2012 and 2013.

The deal agreed at the July 21st EU Council on interest rates for Ireland has made a significant difference to the position of the Irish economy. The deal makes it much more likely that Ireland will outperform its target of reducing government borrowing below 3 per cent of GDP by 2015. It also reduces the long-term debt burden. As its full implications become clear it should increase confidence in Ireland's ability to ride out the current crisis.²⁹

In preparing the ground for raising money through a sale of new bonds it may be desirable for the NTMA initially to seek to return to short-term capital markets in 2012. While this would not solve the funding needs of 2014, it would provide some reassurance that Ireland can access the capital markets. It would also ease the way for the State-guaranteed banks to return to the capital markets, reducing their dependence on ECB funding.

While not directly under government control, a return to reasonable growth in the Irish economy would also reassure capital markets. However, because of the ongoing fiscal adjustment, the forecast in the current *Quarterly Economic Commentary* sees relatively slow growth this year and next year. While the analysis in Bergin *et al.*, 2010, suggests that from 2013 onwards the recovery could be more vigorous, there is no certainty about this, especially given current uncertainty about global economic prospects. In addition, even if growth in 2013 were to prove robust it could be the end of that year before this would become apparent in the published statistics.

²⁹ The fall in Irish bond yields in August suggested an increase in confidence.

Probably the most effective way to ensure an orderly return to the markets would be if the rules for the new EU funding mechanism clearly allowed it to provide additional funding to countries that are progressing satisfactorily towards sustainability without imposing losses on existing bond holders. With such a provision in the rules, by making clear the sustainability of Ireland's recovery, it would almost guarantee market access. In turn this would avoid any need to provide the additional funding to Ireland.

CONCLUSIONS

This paper examines the debt dynamics facing the Irish State over the period 2011 to 2015. Using medium-term official forecasts on the growth rate and assuming that the official target primary surplus will be achieved, we examine the likely path of the debt out to 2015. We take account of the reduction in interest rates on EU borrowing agreed at the EU Council meeting on 21st July. However, we have made very conservative assumptions on the interest rate available after 2013. It could well be significantly lower than we have assumed, with consequential beneficial effects on debt sustainability. In addition, we have used the official projections for holdings of liquid assets which seem very high. If more of the liquid assets were used to fund the deficit over the period to 2014 this would reduce the interest bill. Finally we have included a major repayment to the EU in 2015. If the result of the Council's decision is to push major repayment of the EU debt beyond 2015 or 2016 it will greatly facilitate Ireland's return to financial markets by easing the funding needs in the 2014-16 period, making 2015 a particularly "calm" year for the NTMA.

On this basis our base case estimates suggest that the net debt to GDP ratio will peak at between 100 and 105 per cent of GDP in 2013 and that it could fall back to 98 per cent by 2015. The related gross debt to GDP ratio would peak in 2012 at between 110 and 115 per cent of GDP before falling back to between 105 and 110 per cent of GDP by 2015.

There are few easy options in tackling the current levels of debt facing the Irish government. The current programme of austerity, with an agreed package of cuts totalling €30 billion over the period 2008-2014, will, on these assumptions, be sufficient to all but eliminate the primary deficit by 2013. However, the very high current levels of debt mean that if growth were to prove less than assumed in the Department of Finance estimates, it would not be sufficient to stabilise the debt to GDP ratio before 2015. On the other hand, a more robust recovery would both

improve the primary balance more rapidly than in the base case and it would also ensure that the debt to GDP ratio would begin to fall at an earlier date.

In planning for recovery a critical additional strategic hurdle faces Irish policy makers - the need to return to the financial markets in 2013 to fund substantial debt repayments in 2014. If this can be satisfactorily accomplished then the position of the government will be facilitated by the prospective lower funding needs in 2015. To prepare for the return it will be important to implement fully the prospective adjustment in the public finances. If this is successfully accomplished and growth picks up in 2013 it will be clear that most of the new borrowing will be to fund debt repayments, not to pay for an unsustainable gap between public expenditure and revenue.

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Research Bulletin 11/3

Selling State Assets: Three Options

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Selling State Assets: Three Options

**Paul K. Gorecki and Richard S.J. Tol*

Under the EU/IMF Programme for Financial Support for Ireland, the government undertook to consider the potential for disposing of State assets. In the 2011 Programme for Government a target of up to €2 billion was set for the sale of non-strategic State assets, but only after adequate regulatory structures to protect consumers were in place. The State owns important parts of the economy – including the ports, airports, electricity generators, and transmission systems (gas and electricity). It also owns a household waste collector, a tour operator, a horticulture business, and a stud farm. The sale of State assets is nothing new – €8.3 billion has already been raised through the sale of State assets in steel, sugar refining, banks, telecommunication and airlines. Largely as a result, the share of the commercial state sector in total employment fell from 8 per cent of total employment in 1980 to 2 per cent in 2008.

THREE OPTIONS FOR DECIDING WHICH STATE ASSETS TO SELL

Perhaps the most obvious rule for selling State assets is **to sell the most valuable assets**. One could sell the largest companies until the cumulative total of €2 billion had been reached. However, this would leave the largest number of State assets in state hands and fails to distinguish between strategic and non-strategic assets. Monopolies would be sold intact, thus leading to higher prices for consumers and businesses. Although State assets are frequently located in the non-traded sector, their goods and services are used as inputs by other sectors, so these higher prices are likely to damage the export sector. Regulation can, of course, be introduced to combat the exercise of market power, but the regulator would face considerable difficulties dealing with a monopoly, particularly if it is vertically integrated with activities in non-related fields.

A second rule would be to sell **a minority share**. This option has been selected by the State in the case of ESB. Again assets would be valued and when the cumulative total of €2 billion was reached the exercise would be concluded. This approach has the advantages that the distinction between strategic assets and

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non-strategic does not have to be made since the government retains control, and it is a lower risk strategy for price discovery at a time when the market may undervalue Irish assets. However, it has certain important drawbacks. Arguably the result is a dysfunctional governance structure. Three groups with sometimes sharply differing objectives would constitute the board: the Employee Share Ownership Plan, the State and the private investor. Selling a minority share makes it much more difficult to change the structure of the new firm. A minority shareholder would not be able to restructure and reorganise the State-owned firm so as to realise efficiencies and improve profitability. As a result a bidder for a minority stake is unlikely to bid a high price.

The third rule is the ***economic approach using a market failure framework***. This approach assumes that in general private ownership and market forces are the best way of organising economic activity. However, in some instances markets fail and government may have a role in correcting the failure. Using this approach four sets of questions are raised:

- What is the rationale for State ownership – to curb market power, to capture externalities or to provide public goods?
- Is the rationale still relevant – conditions such as technology, market size, and/or financial instruments may have changed?
- Are there better, more cost effective policy instruments – a tax, public private partnerships, tendering – that could be used to attain the objectives?
- What objectives are best met through public ownership – natural monopolies such as energy transmission systems, especially if adequate regulatory safeguards and sanctions cannot be put in place?

This approach is consistent with that used in the report of the Review Group on State Assets and Liabilities. The use of this approach can be illustrated with respect to Bord na Mona, which was founded in 1946. Given the reliance of Ireland on imported oil, coal and gas for electricity generation, the availability of a domestic fuel, peat, provided some security of supply. However, it is not clear that this rationale is still relevant to-day. CO₂ emissions from peat are high, while consumer electricity bills in 2011 were increased by €78 million to support peat burning generators. Ireland already has high electricity prices compared to other EU Member States. Security of supply is now being improved through electricity interconnection with Great Britain, while gas will soon be available from the Corrib field. All this suggests that there are no strong grounds for Bord na Mona peat mining activities to remain in public ownership.

If the aim is to raise €2 billion from privatizations, then, under the economic approach, one would first sell those companies that do poorly under the current, public ownership but which a private owner believes can be made profitable. This would balance the sale value of the State assets against the stream of dividends from the companies that remain in State ownership.

WHICH OPTION?

Ireland has few policy levers with which to generate growth and employment, with monetary policy controlled by the ECB and fiscal austerity limiting the role of fiscal policy. Micro-economic reform is one of the few policy levers left. State assets are present in some of the most important sectors of the economy. By creating the right incentives for efficiency, prices in these largely non-traded sectors can be lowered, thus assisting in raising Ireland's competitiveness. The economic approach outlined has the best chance of meeting this test. Strategic assets are identified, and retained in public ownership. Dysfunctional governance structures are identified and remediated.

WHAT ASSETS?

The Programme for Government foresees the sale of companies that are owned by the State. There are other assets too. Some (quasi-)government agencies engage in commercial activities, such as R&D and sales promotion. The government owns three television channels and four radio stations. Improvements to government finances from privatising such assets would arise primarily from reduced subsidies rather than amounts raised by the sales. The government also owns the radio spectrum and issues permits to exploit oil and wind and emit carbon dioxide. The government should also seek to maximise the value of these assets, perhaps through dividends in public ownership, perhaps through incorporation and sale.

Economic circumstances have put privatisation on the political agenda. This opportunity should be used to strengthen market regulation as the government focuses on its core tasks.

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Parents, Children and Sense of Control

*Dorothy Watson**

To the extent that people believe that their own actions can bring about a valued outcome, they are said to have a “sense of control”. This is a key factor in understanding why people act as they do. When individuals feel that their actions can make a difference to important aspects of their lives, they are motivated to take action. If, on the other hand, they feel that their actions do not make a difference, there is little incentive to act. To what extent has the sense of control of adult children been affected by that of their parents? This question is addressed in a recent article.**

The strength of a person’s sense of control is known to be linked to favourable outcomes in areas such as education, health, and mental health. We know also that a sense of control is linked to social class, and is higher among men than women. People’s sense of control can be strengthened by direct experience – when one’s own actions make for a better outcome – but can also be learned from observing the experience of others – for example, when a parent takes an action which has a positive result. This raises the question as to whether the sense of control of children is positively influenced by the sense of control of parents. To address this question, we used data from the 1994 *Living in Ireland Survey*, which gathered data on the sense of control of more than 1,600 adult children, aged 16 to 25 and living in the parental home. Data on both children and at least one parent was gathered by face-to-face interview. The analysis controlled for the social class and education levels of both parents and children, and allowed for the possibility that there are differences in the strengths of the influences going from mothers and fathers to daughters and sons, as there is some evidence of differential impacts in the literature.

Psychologists measure a sense of control using a scale constructed from seven questions (ranging from “Sometimes I feel that I am being pushed around in life”

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to “I can do just about anything I set my mind to”). The scale ranges from 0 (very low sense of control) to 10 (very high sense of control)

The sense of control of both fathers and mothers was positively associated with the sense of control of the adult child. This effect remains significant when controlling for the education, economic status and social class of both parents and the young adults. The findings suggested that the sense of control of mothers had a significantly greater effect on daughters than on sons, but we did not find that father’s sense of control has a stronger impact than mother’s sense of control on sons.

We then checked whether there was a difference in transmission to sons and daughters of a high sense of control. The results here were very interesting: a mother’s sense of control only had a significant impact on the sense of control of sons *when the mother’s sense of control is high*. On the other hand, both sons and daughters were influenced by the sense of control of fathers, and it made no difference whether the father’s sense of control was high or low. Daughters were influenced by the sense of control of mothers, with no difference when the mother’s sense of control was high. This is consistent with the proposition that boys will generally be influenced by male role models but – if we can interpret high sense of control as indicating ‘power’ – will be influenced by a powerful female role model. The effect is a very strong one: the sense of control of fathers would have to be increased by about 4 points on the 10-point scale to have a similar impact as having a mother with a sense of control in the top quintile.

Unlike sons, daughters are not influenced differently by a mother with a low or high sense of control. This, again, is consistent with research findings that girls are less influenced than boys by the power of the role model. The reason for the impact of high maternal sense of control – but not of maternal sense of control across the whole range – on sons can be understood in terms of the centrality of mastery and control to the self-image of men and boys. To the extent that power and control are more salient for males, we would expect them to be more influenced than females by a role model with a high sense of control.

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The Effects of the Euro on Intra-Euro Area Exports

* *Gavin Murphy and Iulia Siedschlag*

An important argument for the adoption of the euro was the expectation that it would boost trade. Existing theory suggests several channels through which the euro would enhance trade. First, eliminating exchange rate uncertainty reduces the risks associated with trading when different currencies are in use. Second, eliminating transaction costs related to operations in different currencies is likely to lead to an increased volume of trade. Third, increased price transparency fosters competition among firms and leads to a fall in the mark-up which in turn is expected to increase the volume of bilateral trade. Fourth, the single currency could improve the ability of euro area countries to hedge against exchange rate risk in their trade with non-euro area countries. This suggests that the euro might also boost trade with countries outside the euro area. However, existing empirical evidence on euro-enhanced trade is inconclusive.

In a recent paper** we analyse the effects of the euro on Irish exports to euro area countries. Our results indicate that the euro effect on Irish exports to euro area countries relative to the rest of the trading partners of Ireland has been positive, significant and increasing since 2000. Furthermore, we find that the impact of the euro on trade varies across industries. We find consistent significant positive euro effects for industries characterised by increasing returns to scale.

We use a panel of annual data on export flows between Ireland and its main trading partners across 21 industries over the period 1993-2004. We focus in particular on Irish exports to 28 OECD countries. Ireland exported on average approximately 90 percent of its total exports to this set of advanced economies over the period. We first estimate the aggregate effect of the euro on Irish exports to the euro area countries relative to other trading partners. Second, we estimate time-specific euro effects on export patterns. Third, we identify average industry-specific euro effects.

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Our results suggest that on average, the adoption of the single currency has had no significant aggregate effect on the Irish exports to euro area countries relative to the rest of the Irish trading partners. However, when we relax the assumption of homogeneous euro effects over the analysed period, we find that the impact of the euro on exports to euro area countries relative to non-euro area countries was significant and positive from 2000 onwards – shortly after the final “locking” of exchange rates, and before the advent of the physical euro currency. This effect has increased over time.

Our estimates indicate that the euro effects have varied across industries. We find a positive and significant euro effect on exports in chemicals (excluding pharmaceuticals); other non-metallic mineral products; office, accounting and computing machinery; and radio, television and communication equipment. These industries are characterised by substantial economies to scale. Furthermore, the reduction of trade costs benefited goods that became more competitive in markets outside the euro area as well. We find that the advent of the euro has led to higher exports to the non-euro area countries relative to euro area countries in iron and steel; non-ferrous metals; motor vehicles, trailers and semi-trailers; textiles, textile products, leather and footwear; rubber and plastics products.

Our empirical evidence on industry-specific and time-specific trade gains from the single currency suggests the importance of going beyond the analysis of aggregate average effects of the euro on trade.

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What Has Happened to Marginal Tax Rates?

**Tim Callan, Niamh Crilly, Claire Keane and John R. Walsh*

As the economy boomed in the early 2000s, income tax rates were reduced, tax credits were increased and the standard rate band was widened. With the onset of the crisis in 2007-2008, and the collapse of revenues from capital gains tax and stamp duty, major increases in taxes on income were introduced to sustain and increase tax revenue. What has been the net impact of these policy changes on marginal effective rates of tax on income? This is one of the topics examined in a recent conference paper.[†]

When deciding about whether to accept or look for additional hours of work, or to seek promotion or a job at higher levels of skill and pay, it is the net financial gain which is of primary interest. High marginal effective rates of tax reduce the incentive to progress in the labour market. The marginal effective rate of tax refers not just to income tax, but takes account of PRSI, income levies and the Universal Social Charge – along with any reduction in social welfare payments to the individual concerned or to his or her partner. We focus in this paper on the marginal tax rate applying to an increase in earnings of €100 – equivalent to about a day and half's pay at the minimum wage.

In order to identify the impact of the sharp changes in policy, we examine the distribution of marginal effective tax rates for those in employment under three scenarios. For each of the scenarios we keep the relevant population and income levels constant – at their projected values for 2011 – and allow policy to vary. We contrast the actual 2011 policy with both the pre-crisis policy (as of 2008) and the policy in force in 2000, when the fiscal balance could be regarded as more sustainable than in the immediate pre-crisis years. The policy parameters for 2000 and 2008 are adjusted in line with wage growth or decay between the relevant year and 2011 – this ensures that the overall proportion of income taken in tax is kept close to that in the base year for the policy.

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The results in the table below show that for 7 out of 10 workers, the marginal effective tax rate increased by more than 5 percentage points between 2008 and 2011. Such an increase would have been expected because of the introduction of the income levy, later replaced by the Universal Social Charge, and reductions in the standard rate band. However, it is perhaps more striking that comparison with the 2000 policy scenario indicates that for 4 out of 10 workers, there is an increase of more than 5 percentage points in the marginal effective tax rate. These results indicate that recent tax increases have done much more than simply reversing recent tax cuts, and that most workers now face significantly higher marginal effective tax rates than 10 years ago. While there are difficulties in finding precisely comparable analyses for other EU countries, analysis of the situation in Ireland compared to other countries is now a priority.

Marginal Effective Tax Rates: Impact of Policy Changes, 2000-2011 and 2008-2011

Marginal Effective Tax Rate	2000 Indexed to 2011 Policy	2008 Indexed to 2011 Policy
Percentage point change in METR	(%)	(%)
Fall of 10 percentage points or more	13.0	1.6
Fall of 5 to 10 percentage points	4.8	8.7
Fall of 2 to 5 percentage points	1.0	0.9
Fall or rise of under 2 percentage points	14.9	3.6
Rise of 2 to 5 percentage points	26.1	9.8
Rise of 5 to 10 percentage points	23.4	61.8
Rise of over 10 percentage points	16.8	13.5
Total	100.0	100.0

[†]T. Callan, N. Crilly, C. Keane, J.R. Walsh, A. Ní Shúilleabháin 2011. "Public policy towards the sale of state assets in troubled times: Lessons from the Irish experience", *Utilities Policy*, Vol. 19, pp. 193-201.



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