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QUARTERLY ECONOMIC COMMENTARY

Spring 2009

**ALAN BARRETT
IDE KEARNEY
JEAN GOGGIN**

*The forecasts in this Commentary are based
on data available by mid-April 2009*

RESEARCH BULLETIN

09/1

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Alan Barrett, Ide Kearney and Jean Goggin

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SUMMARY TABLE

	2007	2008	2009	2010
OUTPUT				
(Real Annual Growth %)				
Private Consumer Expenditure	6.3	-0.8	-7.0	-3.0
Public Net Current Expenditure	6.0	2.1	-0.4	0.0
Investment	1.2	-19.9	-31.2	-11.6
Exports	6.8	-0.4	-5.0	-2.0
Imports	4.1	-4.4	-9.3	-5.2
Gross Domestic Product (GDP)	6.0	-2.2	-8.3	-1.1
Gross National Product (GNP)	4.1	-3.1	-9.2	-1.2
GNP per capita (constant prices)	1.8	-4.9	-9.3	-1.4
PRICES				
(Annual Growth %)				
Harmonised Index of Consumer Prices (HICP)	2.8	3.3	-1.1	0.6
Consumer Price Index (CPI)	4.9	4.1	-4.6	0.0
Wage Growth	4.8	1.9	-3.0	-1.6
LABOUR MARKET				
Employment Levels (ILO basis (000s))	2,117	2,104	1,917	1,814
Unemployment Levels (ILO basis (000s))	100	137	292	366
Unemployment Rate (as % of Labour Force)	4.5	6.1	13.2	16.8
PUBLIC FINANCE				
Exchequer Balance (€m)	-1,619	-12,714	-21,691	-19,987
General Government Balance (€m)	443	-13,277	-19,976	-18,806
General Government Balance (% of GDP)	0.2	-7.1	-12.0	-11.5
General Government Debt (% of GDP)	24.8	41.1	57.7	70.3
EXTERNAL TRADE				
Balance of Payments Current Account (€m)	-10,303.0	-8,345.4	-1,575.5	2,546.1
Current Account (% of GNP)	-6.4	-5.3	-1.1	1.9
EXCHANGE AND INTEREST RATES				
US\$/€ Exchange Rate (annual average)	1.39	1.47	1.33	1.32
STG£/€ Exchange Rate (annual average)	0.70	0.80	0.91	0.90
Main ECB Interest Rate (end of year)	4.00	2.50	1.00	1.00

SUMMARY

Most of the incoming data in recent months has been more negative than even the most pessimistic expectations. For example, on the international front the rate of job losses in the US has been extraordinary, with 3.3 million jobs being shed in the five months to the end of March 2009. The forecast from the OECD that Germany will contract by 5.3 per cent is in sharp contrast to earlier expectations that Germany would escape the worst of the global recession. For Ireland, the rate of job losses in the first three months of this year exceeded all expectations, with 80,000 joining the Live Register between January and March.

The wave of poor outcomes and indicators have led us to cut our forecast for 2009, from -4.6 per cent in our *Winter Commentary* to -9.2 per cent (on a GNP basis). For 2010, we expect to see a moderation in the pace of decline and for GNP to fall by 1.2 per cent. Our forecast for 2010 is based on the assumption of activity bottoming out in the latter part of that year.

The implications of the downturn for employment are highly negative. We now expect employment in 2009 to be 187,300 lower than in 2008, on an annual average basis. Corresponding to this fall in employment, we expect to see the number unemployed averaging 292,200 in 2009, an increase of 155,500 on the 2008 figure (or 114 per cent). This implies that the unemployment rate would average 13.2 per cent. For 2010, we expect further employment falls, amounting to 102,800. We expect unemployment to rise by a further 73,300 and the rate to average 16.8 per cent in 2010.

We expect the General Government Deficit to be 12 per cent of GDP in 2009 but for this to fall to 11.5 per cent in 2010. These forecasts take account of the measures announced in the April 7th Budget and assume full implementation in 2010. We have not, however, included any quantification of the possible impact on the public finances of the National Asset Management Agency.

On-going weakness in the domestic and international economies, plus the weakness of sterling, should lead to a continued trend towards moderation in price levels in 2009. On a HICP basis, we expect inflation to average -1.1 this year. When interest rate cuts are factored in, we expect CPI inflation in 2009 to average -4.6 per cent. For 2010, our HICP and CPI forecasts are 0.6 per cent and 0 per cent respectively.

In the *General Assessment*, the overall negative picture is noted but we also draw attention to some positive developments since our *Winter Commentary*. Our assessment of the fiscal measures introduced in February and April is broadly positive and we see these as important moves in the direction of restoring fiscal sustainability. A comprehensive assessment of NAMA is not possible at this point because further details will be needed in order to provide a more comprehensive and considered assessment of the proposal. However, the movement towards decisive action on the banking situation is a positive development. Finally, we draw attention to some “glimmers of hope” in the US and argue that policy must remain focused on the issue of competitiveness so that Ireland can participate in the global upturn.

NATIONAL ACCOUNTS 2008 (Estimate)

A: Expenditure on Gross National Product

	2007 €m	2008 Estimate €m	Change in 2008				
			€m		%		
			Value	Volume	Value	Price	Volume
Private Consumer Expenditure	91,582	93,603	2,021	-726	2.2	3.0	-0.8
Public Net Current Expenditure	26,766	28,410	1,644	570	6.1	3.9	2.1
Gross Fixed Capital Formation	50,140	39,289	-10,851	-9,989	-21.6	-2.1	-19.9
Exports of Goods and Services (X)	151,390	150,337	-1,053	-558	-0.7	-0.3	-0.4
Physical Changes in Stocks	-95	411	506	464			
Final Demand	319,782	312,049	-7,733	-9,955	-2.4	0.7	-3.1
less:							
Imports of Goods and Services (M)	131,017	128,118	-2,899	-5,756	-2.2	2.3	-4.4
less:							
Statistical Discrepancy	-1,838	-1,791	47	31			
GDP at Market Prices	190,603	185,722	-4,880	-4,230	-2.6	-0.3	-2.2
less:							
Net Factor Payments (F)	-29,393	-29,236	157	-615	-0.5	-2.6	2.1
GNP at Market Prices	161,210	156,486	-4,723	-4,942	-2.9	0.1	-3.1

B: Gross National Product by Origin

	2007 €m	2008 Estimate €m	Change in 2008	
			€m	%
Agriculture, Forestry, Fishing	3,456	3,456	0	0.0
Non-Agricultural: Wages, etc.	78,211	79,050	840	1.1
Other:	70,087	66,847	-3,240	-4.6
Adjustments: Stock Appreciation	-362	-200		
Statistical Discrepancy	-1,838	-1,791		
Net Domestic Product	149,555	147,363	-2,192	-1.5
less:				
Net Factor Payments	-29,393	-29,236	157	-0.5
National Income	120,162	118,127	-2,035	-1.7
Depreciation	18,534	18,538	4	0.0
GNP at Factor Cost	138,696	136,665	-2,031	-1.5
Taxes less Subsidies	22,514	19,821	-2,692	-12.0
GNP at Market Prices	161,210	156,486	-4,723	-2.9

C: Balance of Payments on Current Account

	2007 €m	2008 Estimate €m	Change in 2008	
			€m	%
Exports (X) less Imports (M)	20,373	22,219	1,846	
Net Factor Payments (F)	-29,393	-29,236	157	
Net Transfers	-1,283	-1,328	-45	
Balance on Current Account	-10,303	-8,345	1,958	
as % of GNP	-6.4	-5.3	1.1	

D: GNDI and Terms of Trade

	2006 €m	2007 Estimate €m	2007 Volume Change	
			€m	%
Terms of Trade Loss or Gain		-3,847.7		
GNP Adjusted for Terms of Trade	161,210	152,420	-8,790	-5.5
GNDI*	159,927	151,121	-8,806	-5.5
National Resources**	159,989	151,132	-8,857	-5.5

* GNDI is GDP adjusted for terms of trade and net international transfers.

** GNDI including capital transfers.

FORECAST NATIONAL ACCOUNTS 2009

A: Expenditure on Gross National Product

	2008 Estimate €m	2009 Forecast €m	Change in 2009				
			€m		%		
			Value	Volume	Value	Price	Volume
Private Consumer Expenditure	93,603	86,180	-7,423	-6,552	-7.9	-1.0	-7.0
Public Net Current Expenditure	28,410	26,194	-2,216	-114	-7.8	-7.4	-0.4
Gross Fixed Capital Formation	39,289	25,196	-14,092	-12,261	-35.9	-6.8	-31.2
Exports of Goods and Services (X)	150,337	143,633	-6,704	-7,474	-4.5	0.5	-5.0
Physical Changes in Stocks	411	-400	-811	-856		0.0	-208.2
Final Demand	312,049	280,804	-31,246	-27,394	-10.0	-1.4	-8.8
less:							
Imports of Goods and Services (M)	128,118	115,694	-12,424	-11,956	-9.7	-0.4	-9.3
less:							
Statistical Discrepancy	-1,791	-1,791	0	53		0.0	0.0
GDP at Market Prices	185,722	166,900	-18,822	-15,491	-10.1	-2.0	-8.3
less:							
Net Factor Payments (F)	-29,236	-28,186	1,050	1,050	-3.6	0.0	-3.6
GNP at Market Prices	156,486	138,714	-17,772	-14,416	-11.4	-2.4	-9.2

B: Gross National Product by Origin

	2008 Estimate €m	2009 Forecast €m	Change in 2009	
			€m	%
Agriculture, Forestry, Fishing	3,456	3,887	431	12.5
Non-Agricultural: Wages, etc.	79,050	69,567	-9,484	-12.0
Other:	66,847	63,552	-3,296	-4.9
Adjustments: Stock Appreciation	-200	-200		
Statistical Discrepancy	-1,791	-1,791		
Net Domestic Product	147,363	135,015	-12,348	-8.4
less:				
Net Factor Payments	-29,236	-28,186	1,050	-3.6
National Income	118,127	106,828	-11,299	-9.6
Depreciation	18,538	17,229	-1,309	-7.1
GNP at Factor Cost	136,665	124,057	-12,608	-9.2
Taxes less Subsidies	19,821	14,657	-5,164	-26.1
GNP at Market Prices	156,486	138,714	-17,772	-11.4

C: Balance of Payments on Current Account

	2008 Estimate €m	2009 Forecast €m	Change in 2009	
			€m	%
Exports (X) less Imports (M)	22,219	27,939	5,720	
Net Factor Payments (F)	-29,236	-28,186	1,050	
Net Transfers	-1,328	-1,328	0	
Balance on Current Account	-8,345	-1,576	6,770	
as % of GNP	-5.3	-1.1	4.2	

D: GNDI and Terms of Trade

	2008 €m	2009 Estimate €m	2009 Volume Change	
			€m	%
Terms of Trade Loss or Gain		1,352		
GNP Adjusted for Terms of Trade	156,486	143,423	-13,064	-8.3
GNDI*	155,158	142,089	-13,069	-8.3
National Resources**	155,169	142,389	-12,780	-8.2

* GNDI is GDP adjusted for terms of trade and net international transfers.

** GNDI including capital transfers.

FORECAST NATIONAL ACCOUNTS 2010

A: Expenditure on Gross National Product

	2009 Forecast €m	2010 Forecast €m	Change in 2010				
			Value	€m Volume	Value	% Price	Volume
Private Consumer Expenditure	86,180	84,013	-2,167	-2,585	-2.5	0.5	-3.0
Public Net Current Expenditure	26,194	24,701	-1,493	0	-5.7	-5.7	0.0
Gross Fixed Capital Formation	25,196	20,961	-4,235	-2,929	-16.8	-5.9	-11.6
Exports of Goods and Services (X)	143,633	141,541	-2,092	-2,856	-1.5	0.5	-2.0
Physical Changes in Stocks	-400	400	800	702		0.0	-175.4
Final Demand	280,804	271,616	-9,188	-7,671	-3.3	-0.6	-2.7
less:							
Imports of Goods and Services (M)	115,694	109,606	-6,089	-6,009	-5.3	-0.1	-5.2
less:							
Statistical Discrepancy	-1,791	-1,791	0	159		0.0	0.0
GDP at Market Prices	166,900	163,801	-3099	-1,822	-1.9	-0.8	-1.1
less:							
Net Factor Payments (F)	-28,186	-28,061	125	125	-0.4	0.0	-0.4
GNP at Market Prices	138,714	135,740	-2,974	-1,699	-2.1	-0.9	-1.2

B: Gross National Product by Origin

	2009 Forecast €m	2010 Forecast €m	Change in 2010	
			€m	%
Agriculture, Forestry, Fishing	3,887	4,387	500	12.9
Non-Agricultural: Wages, etc.	69,567	64,621	-4,946	-7.1
Other:	63,552	64,480	928	1.5
Adjustments: Stock Appreciation	-200	-200		
Statistical Discrepancy	-1,791	-1,791		
Net Domestic Product	135,015	131,497	-3,518	-2.6
less:				
Net Factor Payments	-28,186	-28,061	125	-0.4
National Income	106,828	103,436	-3,393	-3.2
Depreciation	17,229	16,822	-406	-2.4
GNP at Factor Cost	124,057	120,258	-3,799	-3.1
Taxes less Subsidies	14,657	15,482	825	5.6
GNP at Market Prices	138,714	135,740	-2,974	-2.1

C: Balance of Payments on Current Account

	2009	2010	Change in 2010	
	Estimate €m	Forecast €m	€m	%
Exports (X) less Imports (M)	27,939	31,935	3,997	
Net Factor Payments (F)	-28,186	-28,061	125	
Net Transfers	-1,328	-1,328	0	
Balance on Current Account	-1,576	2,546	4,122	
as % of GNP	-1.1	1.9	3.0	

D: GNDI and Terms of Trade

	2009	2010	2009 Volume Change	
	€m	Estimate €m	€m	%
Terms of Trade Loss or Gain		868		
GNP Adjusted for Terms of Trade	138,714	137,883	-831	-0.6
GNDI*	137,386	136,554	-832	-0.6
National Resources**	137,397	136,853	-543	-0.4

* GNDI is GDP adjusted for terms of trade and net international transfers.

** GNDI including capital transfers.

THE INTERNATIONAL ECONOMY

The major developments in the world economy of relevance to Ireland can be summarised as followed:

- Most of the world's major (and indeed minor) economies are now in a deep recession. As discussed below, the Euro Area is expected to contract by 4.1 per cent in 2009. The corresponding figures for the UK and the US are 4 per cent and 3.7 per cent.
- World trade has been registering astonishing declines. According to the Dutch Central Planning Bureau, the annualised decline amounted to 23 per cent in the last quarter of 2008. For 2009, the OECD expects world trade to contract by 13.2 per cent.
- While the OECD expects some degree of recovery in 2010, the pace of recovery is expected to be slow.

Given the highly globalised nature of the recession, most of the world's major economies are engaging in aggressive financial, fiscal and monetary policy actions which are aimed at stabilising banking systems and injecting demand into economies. The precise forms of action vary. For example, quantitative easing is currently being employed in the US and in the UK but not in the euro zone. However, a degree of commonality on the diagnosis of current problems on a range of solutions was evident in the G20 declaration of 2 April. Whatever the forms of action taken, the general policy direction is positive from an Irish perspective both directly in terms of ECB interest rate cuts and indirectly in terms of demand spillovers. However, some policy initiatives appeared to signal some return to protectionism. Any momentum in that direction would be troubling.

Euro Area

The Euro Area is now in the midst of a deep recession. Although there had been hopes at the outset of the financial turmoil in late 2007 and early 2008 that the Euro Area would not be as severely affected as the US, this has not been the case. In the last quarter of 2008, GDP declined at an annualised rate of 6 per cent and the indications are that a similar decline has occurred in the first quarter of 2009. Falls in exports have been the main source of this contraction, although falling consumption has also contributed.

The ECB has reacted to the downturn partly through cutting its policy rate by 300 basis points since September 2008. It has also continued its policy of liquidity management, whereby banks are facilitated in borrowing funds. However, unlike the Bank of England and the US Federal Reserve, it has not yet engaged in quantitative easing, whereby assets are purchased from banks through the “printing” of money.¹ At 1.25 per cent, its policy rate remains above that of its UK and US counterparts, who have reduced rates essentially to zero.² This means that scope remains for further interest rate cuts on the part of the ECB and for the introduction of less orthodox methods. With inflation falling in the Euro Area from a peak of 4 per cent in July 2008 to below 1 per cent now, the OECD has argued that such measures should be taken soon. Euro Area governments have introduced discretionary stimulus packages, amounting to almost 1 per cent of GDP in 2009 according to the OECD, with automatic stabilisers³ providing a further boost.

For 2009, the OECD expects Euro Area GDP to fall by 4.1 per cent. For 2010, a more modest fall of 0.3 per cent is expected. Underlying these annual figures is a profile whereby the rate of contraction eases throughout 2009, with growth returning at a slow pace through 2010. The consequences for unemployment are severe, with the rate expected to rise from 7.5 per cent in 2008 to 10.1 per cent in 2009 and upwards to 11.7 per cent in 2010. The resulting output gap is expected to put further downward pressure on wages and prices, with HICP inflation expected to be below 1 per cent in both 2009 and 2010.

Turning to specific countries within the Euro Area, Germany is suffering more than most from the downturn. Like Japan, the importance of export-oriented industrial production means that it is experiencing a disproportionate impact from the dramatic downturn in world trade. For 2009, exports are expected to fall by a massive 16.5 per cent, contributing to an overall GDP fall of 5.3 per cent for this year. Unemployment is expected to rise from 7.3 per cent in 2008 to 8.9 per cent in 2009. While 2010 should show a stabilising in the economic situation, growth of just 0.2 per cent for the year is forecast by the OECD, with unemployment continuing to rise and averaging 11.6 per cent. The general government deficit is expected to be almost 7 per cent in 2010, significantly up from a situation of balance in 2008.

Although the situation in France is severe, its lesser reliance on industrial exports relative to Germany implies a lower rate of contraction in 2009. French GDP is expected to fall by 3.3 per cent in 2009, with the rate of unemployment rising to 9.9 per cent. Like Germany, the pace of contraction should ease through 2009, with some recovery evident in 2010. However, this recovery will be weak and will not prevent France from

¹ The ECB has announced, however, a willingness to engage in quantitative easing.

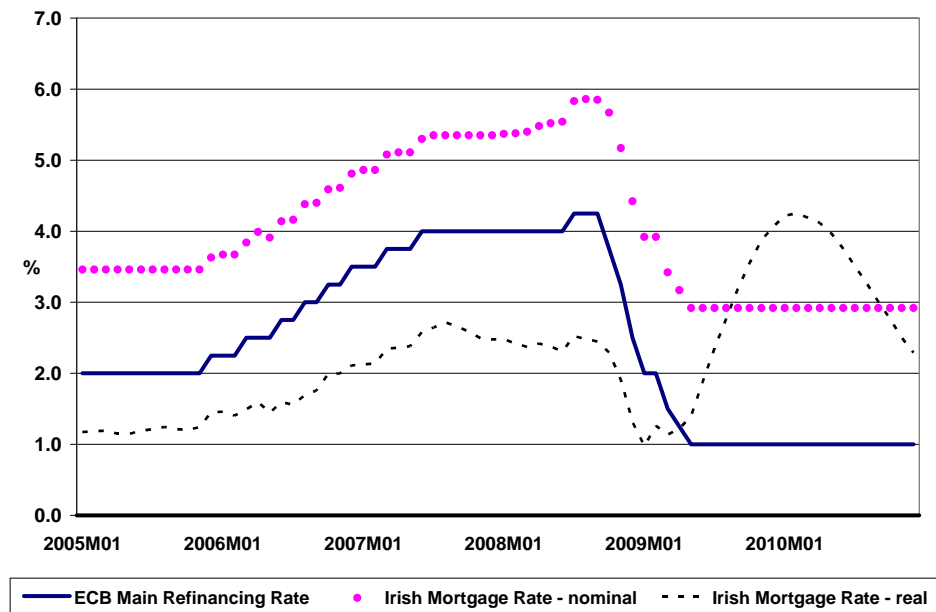
² We expect ECB rates to fall to 1 per cent, as shown in Figure 1.

³ The term “automatic stabilisers” refers to the spending increases (primarily welfare) and taxation falls which occur in a recession without direct policy action being taken by the government.

registering another decline in GDP for the year 2010, of 0.1 per cent. As regards public finances, the deficit is expected to reach 8.3 per cent in 2010.

Italy is also suffering from the downturn in world trade, given its concentration on luxury goods, consumer durables and investment goods. Its exports are expected to decline by almost 16 per cent in 2009, mirroring the situation in Germany. This will contribute to GDP falling by 4.3 per cent. For 2010, the fall in GDP is expected to be 0.4 per cent. The general government deficit is expected to reach almost 6 per cent of GDP in 2010, below the levels expected in Germany and France in that year. This reflects the higher level of public debt in Italy and hence the lesser scope for fiscal stimulus.

Figure 1: Interest Rates*



*Mortgage rate used is the Home Purchase Loans Average Interest Rate.
Source: Central Statistics Office.

United Kingdom

Like elsewhere, the UK is experiencing a severe downturn but comparisons with Germany are interesting. As the UK experienced a house-price boom and has a heavy concentration in the financial sector, it would have been expected at the outset of the current global downturn that the UK would have been more severely affected. For 2009, the OECD expects UK GDP to fall by 3.7 per cent but this is lower than the expected contraction in Germany, where GDP is expected to fall by 5.3 per cent.

Although the fall in private consumption is expected to be larger in the UK relative to Germany (2.2 versus zero), the forecast fall in German exports for this year at 16.5 per cent is higher than that for the UK. In the UK, exports are expected to fall by 9.8 per cent. Part of the difference in the exports figures is likely to be related to the respective content of German and UK exports. However, the 20 per cent depreciation in the value of sterling since the end of 2007 may also be playing a role.

Table 1: Short term International Outlook

Country	GDP Output Growth			Consumer Price Inflation*			Unemployment Rate			Current Account Balance		
	2008	2009	2010	2008	2009	2010	%			% of GDP		
							2008	2009	2010	2008	2009	2010
UK	0.7	-3.7	-0.2	3.6	2.0	1.7	5.7	7.7	9.5	-4.4	-9.3	-10.5
Germany	1.0	-5.3	0.2	2.8	0.6	0.5	7.3	8.9	11.6	-0.1	-4.5	-6.8
France	0.7	-3.3	-0.1	3.2	0.4	0.6	7.4	9.9	10.9	-3.4	-6.6	-8.3
Italy	-1.0	-4.3	-0.4	3.5	0.7	0.7	6.8	9.2	10.7	-2.5	-4.7	-5.9
Euro Area	0.7	-4.1	-0.3	3.3	0.6	0.7	7.5	10.1	11.7	-1.8	-5.4	-7.0
USA	1.1	-4.0	0.0	3.8	-0.4	0.5	5.8	9.1	10.3	-5.8	-10.2	-11.9
Japan	-0.6	-6.6	-0.5	1.4	-1.2	-1.3	4.0	4.9	5.6	-2.6	-6.8	-8.4
China	9.0	6.3	8.5	7.2	2.0	0.5				0.0	0.0	0.0
OECD	0.9	-4.3	-0.1	2.3	3.3	1.7	6.0	8.4	9.9	-3.0	-7.2	-8.7
Ireland	-2.2	-8.3	-1.1	3.3	-1.3	0.6	6.1	13.2	16.8	-6.4	-12.0	-11.5

Source: OECD

* HICP for Euro Area countries and the UK

Another difference between the UK and continental Europe arises in the context of monetary policy. As discussed above, the actions of the Bank of England have been more aggressive than those of the ECB in terms of cutting official interest rates and employing quantitative easing. The Bank of England has cut rates from 5 per cent in October 2008 to close to zero in March 2009. It is also in the process of spending UK£75 billion on asset purchases. In addition to these monetary measures, the UK authorities are also using fiscal measures in an effort to lessen the impact of the downturn. Discretionary fiscal easing is estimated to amount to 1.4 per cent of GDP in 2009 although the total deficit is expected to be 9.3 per cent of GDP this year, higher than the German figure, due to automatic stabilisers and the contraction of revenue-rich sectors.

For 2010, the OECD expects a further contraction in the UK economy of 0.2 per cent, although a very modest recovery during the year is envisaged. The general government deficit is expected to be 10.5 per cent in that year, with unemployment rising to 9.5 per cent. HICP inflation is expected to be 2 per cent in 2009 and 1.7 per cent in 2010, somewhat ahead of the expected German values of 0.6 per cent and 0.5 per cent. The reason for the difference is the weakness of sterling.

United States

The US is now in a deep recession and one of the starkest illustrations of this is seen in the labour market. Since the recession began in late 2007, over 5 five million jobs have been lost with 3.3 million of these losses occurring in the five months to the end of March 2009.⁴ The rate of unemployment now stands at 8.5 per cent, the highest rate since late 1983. In terms of output, on an annualised basis GDP fell by 6.3 per cent in the last quarter of 2008 relative to the third quarter.

The OECD expects output to fall by 4 per cent in the US this year. The financial system remains fragile and both business and consumer confidence are low. As a result, private consumption is expected to fall by 2.4 per cent this year, with private residential and non-residential investment expected to fall by 20 per cent and 17.8 per cent respectively.

Through much of the latter part of last year and the early part of this year, the Federal Reserve was actively engaged in policies aimed at stabilising the banking system and in using interest rates to help stimulate the economy. The new administration has also been highly active. Its fiscal stimulus package has been passed by Congress and includes discretionary measures estimated by the OECD to amount to 2.1 per cent and 2.4 per cent of GDP in 2009 and 2010 respectively. It has also set up a plan⁵ to remove bad loans from bank balance sheets.

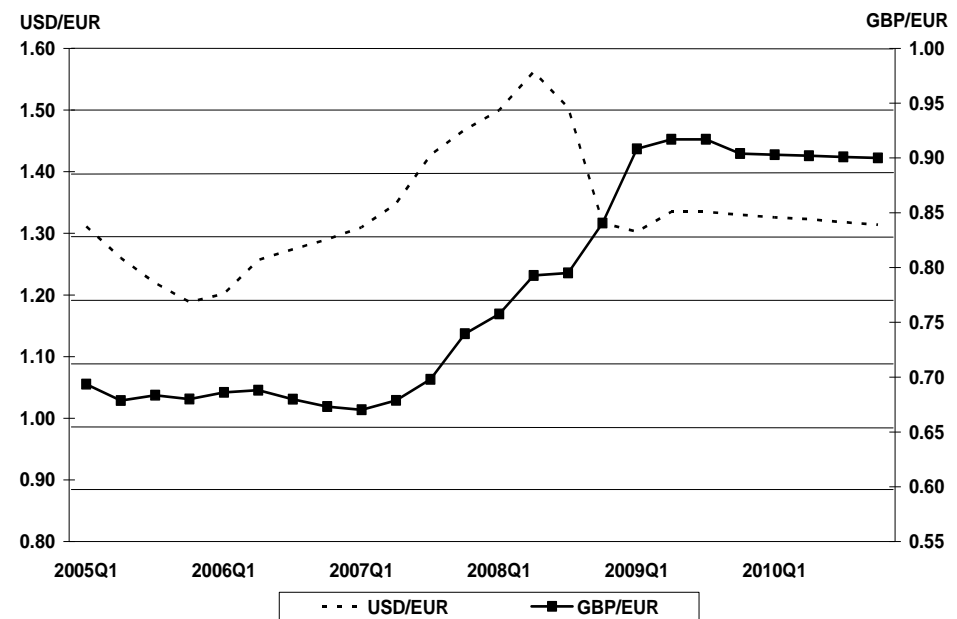
Based partly on an expectation that the various policy initiatives just mentioned will be somewhat successful, the OECD expects a gradual recovery to occur next year although zero growth for the calendar year

⁴ Total employment in the US is currently 140 million.

⁵ The Public-Private Investment Program, also referred to as the Geithner Plan.

2010 is expected. The unemployment rate is expected to continue rising and to average 10.3 per cent in 2010. This would represent a peak in post-war unemployment, only being matched by a period around late 1982 and early 1983 when unemployment also exceeded 10 per cent. The general government deficit is expected to reach almost 12 per cent of GDP in 2010. This implies that the US would have one of the highest deficits of all OECD countries in 2010, marginally above that of the UK (at 10.5 per cent) but well ahead of the expected German deficit next year (6.8 per cent). Ireland's deficit is projected to be in line with those of the UK and the US (see section on the *Public Finances* below).

Figure 2: Exchange Rates



Source: Central Bank & Financial Services Authority of Ireland (historic) and NIESR *Economic Review*, No. 207 (forecast).

Asia

The highly globalised nature of the current downturn is possibly best illustrated by the experience of Japan. Its financial system was not exposed to the sort of property-related bad loans which have crippled the banking systems of the US and the UK. However, according to the OECD, the contraction in the Japanese economy will be larger than those of the other G7 countries. GDP is expected to contract by 6.6 per cent, due largely to a huge fall in exports (26.4 per cent). Like Germany, Japan is suffering due to the nature of its industrial base. It is also suffering from an appreciation of the yen.

The Japanese government has announced a series of stimulus packages since August last. Together, they amount to about 2 per cent of GDP and so will cushion the impact of the global downturn. However, with Japan's public debt forecast to approach 200 per cent of GDP by 2010, there is clearly a constraint on continued reliance of fiscal stimuli. The Bank of Japan has also been active, cutting rates and implementing measures to increase liquidity.

With the beginning of a recovery expected in the world economy in 2010, the plummet in Japan's exports should halt and so 2010 should be less traumatic for the Japanese economy. Even so, GDP is expected to fall by 0.5 per cent. Deflation is also expected to re-emerge, with HICP inflation expected to be -1.2 per cent and -1.3 per cent in 2009 and 2010 respectively.

China has also been hit by the contraction in world trade. It is expected to grow by 6.3 per cent in 2009, well down on the recent trend of double digit growth. Unlike most other countries, however, there appear to be some signs of rebound in China with both consumption and investment rising somewhat in January and February. Part of the reason for this, in contrast to elsewhere, is that negative wealth effects from falling equity and housing markets have been much lower in China. In addition, financial tightening has not been as severe in China relative to OECD countries. These factors, when combined with a large fiscal stimulus announced in November, allow the OECD to forecast that China will, grow by 8.5 per cent in 2010. Its fiscal balance is expected to remain positive in 2009 and 2010 (at 1.2 per cent and 0.7 per cent of GDP respectively). Its large current account surplus is also expected to continue, at 11.7 per cent of GDP in 2009 and 10 per cent in 2010.

India is expected to grow by 4.3 per cent in 2009 and by 5.8 per cent in 2010, down from a recent high of 9.7 per cent in 2006. Like elsewhere, its fiscal balance has deteriorated and is expected to worsen, with the public deficit forecast to be 12.2 per cent this year and 12.7 per cent in 2010.

Context for Ireland

Clearly, the international economic environment that Ireland is facing is enormously challenging. It is also highly uncertain. The central OECD forecasts envisage a pick-up of sorts in 2010 but this is not without downside risk. For example, it could be that the deterioration in the real economy will lead to further falls in asset prices, thereby putting greater strain on the international financial system. Another negative feature of the international context facing Ireland is the weakness of sterling. As shown in Figure 2, our forecasts are based on the GBP/EUR rate remaining above 0.90 over the forecast period.

Our usual focus when looking at the international context in which Ireland will find itself is on the level of demand for Irish exports. However, given the critical role which we foresee that competitiveness will play in restoring Ireland to a path of growth, comparisons of wage and price developments here relative to elsewhere are also important. For 2009, we expect price inflation here to be lower than in the UK and in the Euro Area and this will be positive for competitiveness. For 2010, our HICP rate will again be lower than that expected for the UK.

THE DOMESTIC ECONOMY

General

Preliminary figures from the *Quarterly National Accounts* for 2008 point to a very dramatic slowdown in economic activity in the last quarter of 2008, with GDP estimated to have fallen by over 7 per cent (see Figure 3). The single biggest driver of this contraction was a fall of over 15 per cent in investment, however, both consumption and exports also recorded falls. On the basis of these numbers, were there to be no further deterioration in economic activity in 2009, GDP would fall by 5 per cent in 2009.⁶

Figure 3: GDP Quarter-on-Quarter Growth Rates, Seasonally Adjusted

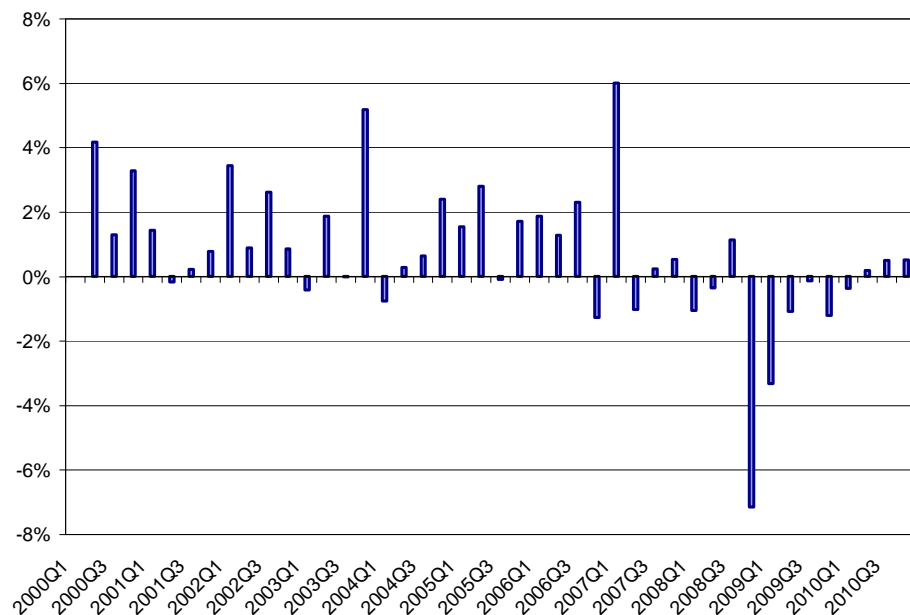


Table 2 gives the implied carryover figures across all expenditure headings. Were investment to remain at the level recorded in 2008 Q4 the annual fall would be of the order of 15 per cent in 2009. However, our forecasts expect a considerable further deterioration in the performance of

⁶ This is a measure of what is called “carryover” or “statistical overhang”. It is the annual change in a variable if it was to remain at its level in the last known quarter. This essentially measures the impact of past changes; it is not a forecast. This figure must be treated with caution since, as discussed in previous *Commentaries*, the initial *QNA* data for a given year tend to be subject to relatively large revisions when the annual *National Income and Expenditure Accounts* appear.

investment, consumption and exports throughout 2009 with a forecast fall of 8.3 per cent in GDP for 2009 as a whole. For 2010 our forecast of -1.1 per cent implies a very small pick-up in economic activity in the second half of 2010 as shown in Figure 3.

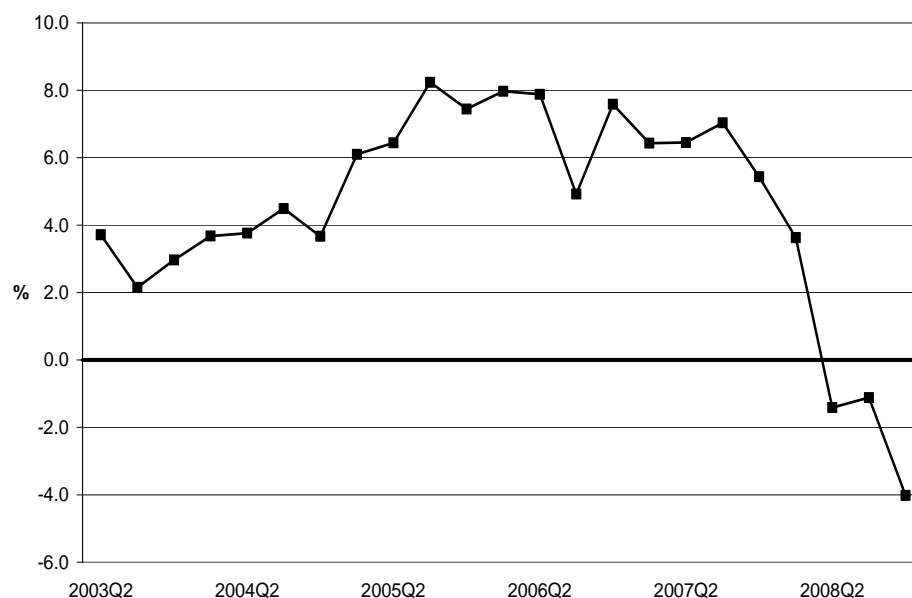
Table 2: Implied Carryover

	2008	Carryover 2009	QEC Forecast 2009	QEC Forecast 2010
	%	%		
Private Consumer Expenditure	-0.8	-1.6	-7.0	-3.0
Public Net Current Expenditure	2.1	-0.3	-0.4	0.0
Investment	-20.1	-14.6	-31.2	-11.6
Exports	-0.4	-2.4	-5.0	-2.0
Imports	-4.3	-4.6	-9.3	-5.2
GDP	-2.3	-5.0	-8.3	-1.1
GNP	-3.1	-3.2	-9.2	-1.2

Consumption

Recent trends in consumption can be derived from the *Quarterly National Accounts* from the last quarter of 2008 (QNA) and from the retail sales index with information up to January 2009. Both sources show a dramatic deterioration in recent months. Looking first at the QNA, the emerging trend through 2008 is shown in Figure 4. Consumption was 3.6 per cent higher in Q1 2008 relative to Q1 2007. However, falls were recorded in Q2 and Q3, of -1.4 and -1.1 per cent respectively. For Q4, the pace of contraction increased, with consumption in the quarter 4 per cent lower than in Q4 2007. For 2008 as a whole, consumption fell by 0.8 per cent.

Figure 4: Year-on-Year Growth in Personal Consumption, Constant Prices



Source: *Quarterly National Accounts*, Central Statistics Office.

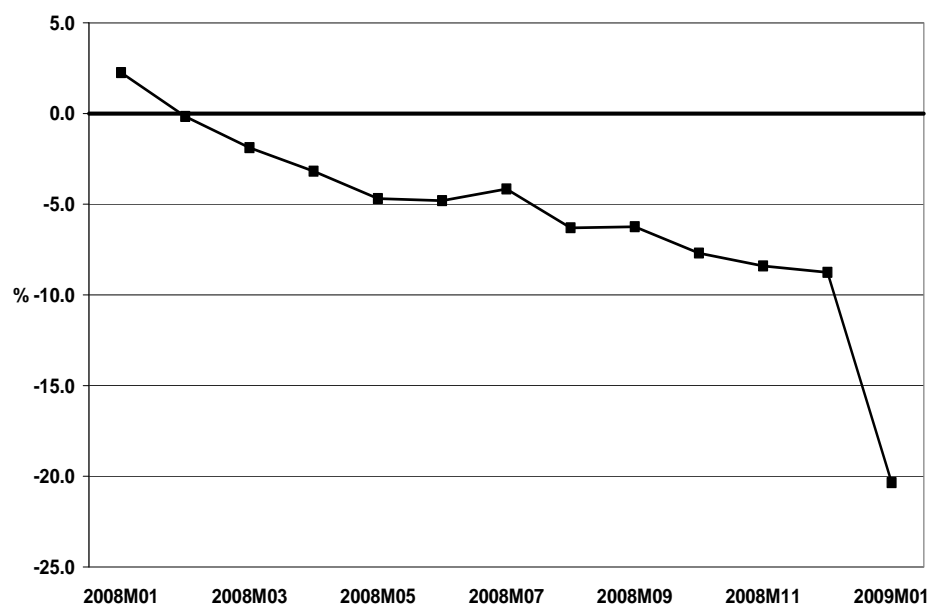
Note: Growth rate is measured as percentage change relative to the corresponding period of the previous year.

Table 3: Gross Fixed Capital Formation

	2007	% Change in 2008		2008	% Change in 2009		2009	% Change in 2010		2010
	€m	Volume	Value	€m	Volume	Value	€m	Volume	Value	€m
Housing	22,037	-26.9	-29.7	15,498	-46.9	-50.7	7,633	-1.7	-8.0	7,021
Other Building	13,436	-2.6	-2.5	13,103	-20.0	-28.0	9,434	-20.0	-28.0	6,793
Transfer Costs	3,606	-45.7	-51.5	1,750	-35.0	-40.0	1,050	-15.0	-20.0	840
Building and Construction	39,079	-20.0	-22.3	30,351	-34.5	-40.3	18,118	-12.2	-19.1	14,654
Machinery and Equipment	11,061	-19.8	-19.2	8,938	-20.0	-20.8	7,079	-10.0	-10.9	6,307
Total	50,140	-19.9	-21.6	39,289	-31.2	-35.9	25,196	-11.6	-16.8	20,961

Turning to the retail sales index, we can see how the situation evolved during the course of 2008, and into January 2009, on a month-by-month basis. Looking at Figure 5, we can see that the year began with positive growth in retail sales, including the motor trade. Sales in January 2008 were 2.3 per cent higher than in January 2007. The growth rate slipped into negative territory in February 2008 and since then has generally been on a downward trend. However, the fall in January 2009, at over 20 per cent represents a significant acceleration in the downward trend. Excluding the motor trade, the fall in the volume of retail sales in January (relative to January 2008) was a more modest 8 per cent. The volume fall for the motor trade itself was 42.2 per cent. As noted by the CSO in its retail sales release, the year-on-year decreases in both the value and volume of retail sales for January 2009 were the largest since records began (1974 in the case of volume records; 1962 for value records).⁷

Figure 5: Year-on-Year Volume Growth in the Retail Sales Index



Source: Central Statistics Office.

Note: Growth rate is measured as percentage change relative to the corresponding period of the previous year.

The KBC/ESRI *Consumer Sentiment Index* showed a value of 44.1 in March. This was essentially unchanged from the February reading, but represents a large fall from the reading in March 2008 of 63.3 per cent. The part of the index capturing expectations and perceptions of the future showed a reading of just 22.5 per cent, thereby suggesting on-going caution on the part of consumers.

Turning to our forecasts, it is clear that employment falls, tax increases and wage falls will all lead to a fall in consumption. However, based partly on the readings from the *Consumer Sentiment Index*, we expect the fall in

⁷ It should be noted that some element of the fall in retail sales is related to increases in cross-border shopping. However, no reliable data is available on the precise volume involved.

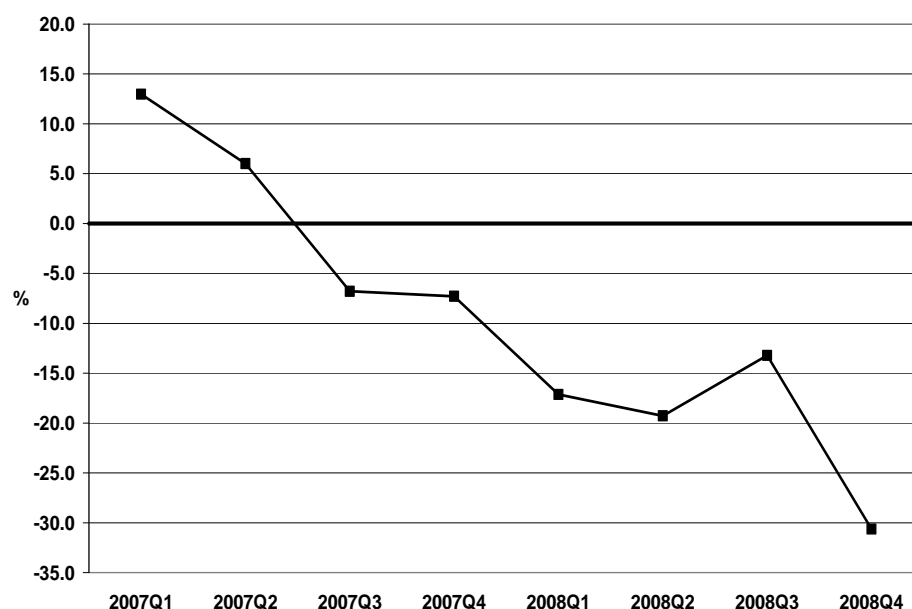
consumption in 2009 to be greater than that implied by falls in disposable income. On-going uncertainty is likely to lead to an increase in the savings rate, thereby dampening consumption to a greater degree. This uncertainty arises not just from possible job losses but also from possible tax increases in 2010 and beyond. For 2009, we expect consumption to fall by 7 per cent in volume terms. Implicit in this annual figure is a lessening in the pace of contraction during the course of the year. Our expectations on prices for this year (discussed below) lead us to expect a fall in the consumption deflator of 1 per cent in 2009; hence, the value of consumption is expected to fall by 8 per cent. For 2010, we expect consumption to fall by 3 per cent in volume terms and by 2.5 per cent in value terms.

Investment

The recent trend in investment, as seen in the *QNA*, reveals yet another dimension to the deteriorating economic situation. For the year as a whole investment fell by 19.9 per cent. The contraction in housing investment, which began in 2007, accelerated in 2008 with a volume fall of 26.9 per cent recorded. Growth in investment in machinery and equipment had been strong in 2007, at 13.5 per cent, although much of this arose due to purchases of aeroplanes. Excluding transport equipment, investment in machinery and equipment grew by only 1.2 per cent. However, 2008 showed a large contraction in machinery and equipment, of 19.8 per cent.

The trend by quarter over the last two years is shown in Figure 6 and the pattern is clear. The growth rate was positive in the first two quarters of 2007 but turned negative in Q3. The pace of contraction has generally accelerated during 2008, with the decline in Q4 2008 being particularly pronounced at -30.6 per cent.

Figure 6: Year-on-Year Growth in Investment, Constant Prices



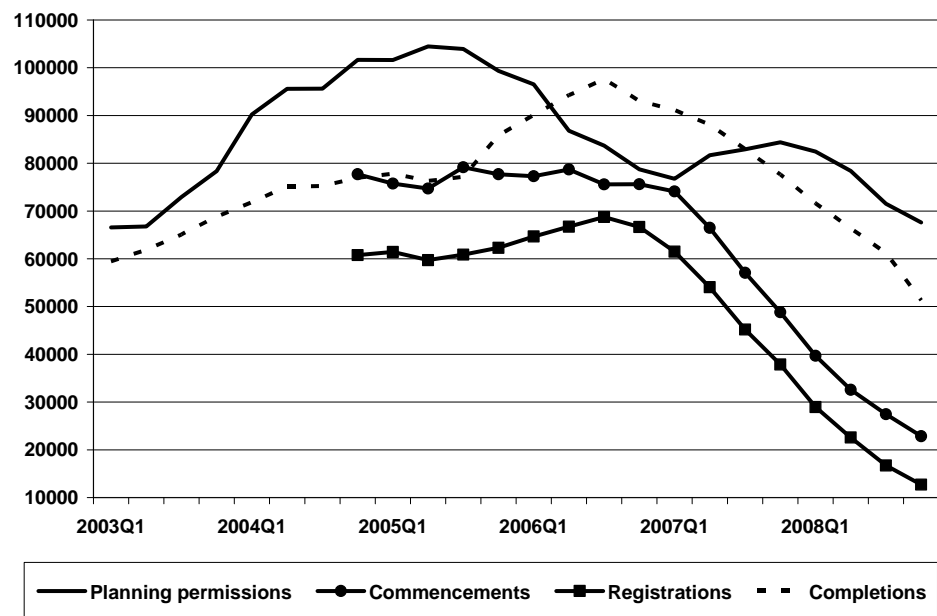
Source: *Quarterly National Accounts*, Central Statistics Office.

Note: Growth rate is measured as percentage change relative to the corresponding period of the previous year.

As shown in Figure 7, house completions in 2008 amounted to 51,324. This level of completion exceeded what we had expected for most of last year, our forecast in the latter part of last year had been in the range of 45,000 to 47,000. However, the figures on commencements and registrations in the last quarter of 2008 suggest that the level of completions in 2009 will be a good deal lower than this. We now expect to see 17,500 house completions in 2009, followed by 15,000 in 2010. These levels of housing output translate in to percentage volume falls of 46.9 in 2009 and 1.7 in 2010.

House prices continue to decline, as measured by the permanent tsb/ESRI *House Price Index*. The latest figures from the index showed prices nationally to be 9.8 per cent lower in January 2009 compared with January 2008. According to the Index, prices in January were 17 per cent below their peak value in February 2007 and the pattern of monthly declines shows no evidence of an easing in the pace of decline.

Figure 7: Housing Statistics, Annualised Numbers



Source: Department of the Environment, Heritage and Local Government.

As regards non-housing building and construction, we expect sharp downturns in both 2009 and 2010. The general economic slowdown is likely to deter investment in commercial and retail building, with tighter lending conditions adding a further dampening effect. The measures announced in the Supplementary Budget earlier this month will also act to reduce building and construction activity beyond the housing sector.⁸ Based on these reasons, we expect non-housing building and construction

⁸ We assume that in both 2009 and 2010, the budget numbers take account of a fall in the price of building and construction investment so that while volume public investment in building and construction is estimated to fall by almost 30 per cent between 2008 and 2010, the fall in volume is half that at 15 per cent.

to contract in volume terms by 20 per cent in both 2009 and 2010.⁹ Adding housing and other building together, we expect volume declines of 34.5 per cent in 2009 and of 12.2 per cent in 2010.

As noted above, investment in machinery and equipment contracted by 19.8 per cent in 2008. A poor business environment in 2009 and 2010 is likely to lead to further falls in investment in machinery and equipment and so we are forecasting a fall in volume terms of 20 per cent this year, followed by another fall, of 10 per cent, in 2010.

Overall, we expect investment to fall by 31.2 per cent in 2009 and by 11.6 per cent in 2010. These large falls will see investment declining as a share of GNP from 31.1 per cent in 2007 to 15.4 per cent in 2010. At one level, this shift represents a welcome move away from an over-reliance on house-building, with house-building declining from a GNP share of 14.9 per cent in 2005 and 2006 to 5.2 per cent in 2010.

Box: Measuring House Prices in Ireland¹⁰

By David Duffy

With house prices falling in countries such as the US, the UK and Ireland, the issue of house price measurement has emerged as a key concern. As with many economic statistics, the measurement of house prices is challenging. No two dwellings are identical. It can be difficult to observe reliably a price unless the dwelling is actually sold. Generally, houses are only sold infrequently and so in any time period prices are not observed for most houses. House sales usually are the result of negotiation and so the eventual sale price may differ considerably from the advertised price.

Probably the simplest approach is to use the average of all house prices observed in a particular period, such as the Department of the Environment, Heritage and Local Government measure. An alternative approach is the repeat sales methodology, a variation of which is used to construct the Sherry FitzGerald barometer. Finally, there are measures using hedonic regression to control for differences in the mix of properties transacted in each period, used by permanent tsb and daft.ie. In general, research does not favour the simple average approach but instead prefers a methodology that takes account of the changing mix of properties transacted in each period, such as the hedonic regression approach. In recent times some differences have emerged between the measures used for the Irish housing market, for example see Table A.

⁹ Our view on this point has been informed by John McCartney, 2008. "An Empirical Analysis of Development Cycles in the Dublin Office Market 1976-2007", *Quarterly Economic Commentary*, Winter.

¹⁰ More detail is available in ESRI Working Paper No 291.

Table A: Alternative House Price Measures

Methodology	Source	Peak	Decline from Peak to-date %	Latest Data
Average Price - New	DoE	Q2 2007	-9.1	Q3 2008
Average Price - Existing	DoE	Q3 2006	-13.9	Q3 2008
Hedonic Agreed Price	permanent tsb	January 2007	-18.5	March 2009
Hedonic Asking Price	Daft.ie Sherry	February 2007	-19.7	March 2009
Repeat Valuation	FitzGerald	Q4 2006	-30.2	Q1 2009

The belief that the measures are somehow underestimating the true extent of the decline in house prices to date may reflect a change in base when switching from calculating a price increase to calculating a price decrease. It is possible that this change in base leads people to misinterpret the current scale of decline relative to the increases reported in previous years. A move in prices from €250,000 to €300,000 represents an increase of 20 per cent. However, if prices were to fall from €300,000 to €250,000, then this is a smaller change of -16.7 per cent.

A number of other explanations may also be put forward. Some of the difference results from the fact that the methodologies are not the same, and the point in the transaction cycle at which the house price is measured also varies. As Table 1 shows the latest available data does not all relate to the same time period. The Department of the Environment uses the price at loan approval stage, daft.ie is based on asking price, Sherry FitzGerald is an estimate of the selling price, while permanent tsb data uses the agreed sale price. The published permanent tsb index value is a 3 month moving average. A transaction features in the index when the mortgage is drawn down. Thus, there is a lag between agreement of the sale price and when that sale price enters the index. While use of price at the loan approval stage might reduce the lag, such an approach is not without its own difficulties. Data collected at the loan approval stage may not proceed to completion or may ultimately proceed with another lender. While approval may be sought for a particular property the final transaction may be on a different property.

The daft.ie index is calculated using asking price. In many cases the final agreed price may differ, sometimes substantially, from the advertised sale price. If the transaction is a private treaty sale, the final price may not be made public. During the Irish market boom period many media reports highlighted the extent to which the advertised sale price was exceeded at auction. It now seems likely that the reverse is occurring during the downturn.

An implicit assumption of the repeat valuation method employed by Sherry FitzGerald is that a house's quality remains broadly the same over time and so any change in a house's price or valuation is due to change in market prices. Over time, homeowners spend money on repair,

maintenance and improvement. If this investment maintains the quality of the dwelling it serves to aid the accuracy of the repeat valuation measure. If the money spent on home improvement is not captured in the valuation the methodology may not capture the extent of the house price change.

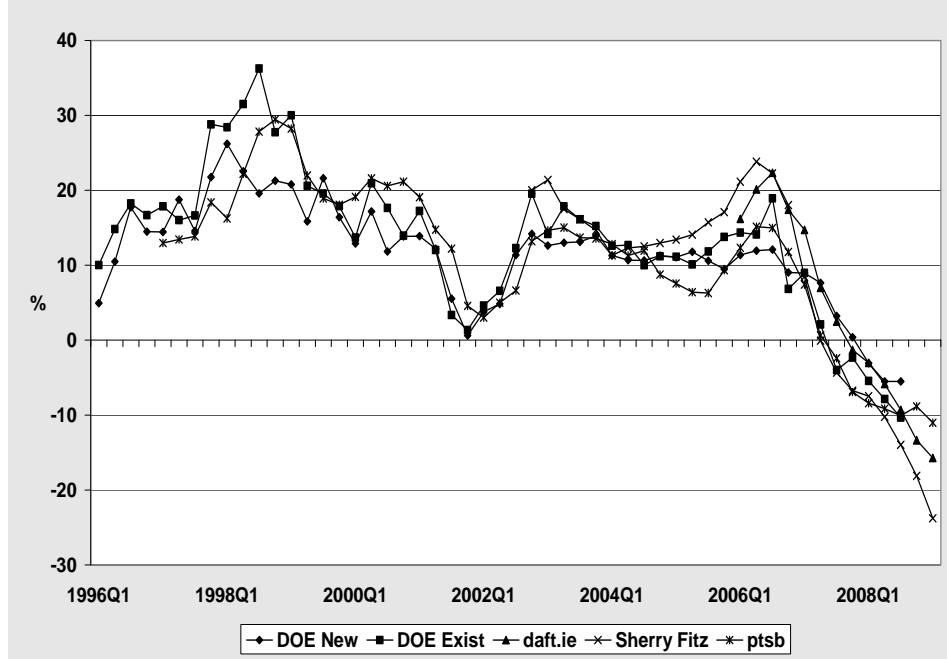
Any of the methodologies may be biased if estimated using unrepresentative samples. Indices based on mortgage datasets may be subject to some sample selection bias as they are dependent on the lenders' mortgage book and so may depend on how competitive that lender is.

Generally, the number of characteristics included in the hedonic function underlying a house price index is fairly small. An implication is that while the index appropriately adjusts for changes in major characteristics, such as house size, it may not be able to adjust for changes in unobserved characteristics. For example, as the property market started to slow in Ireland, there were increasing reports of incentives to attract buyers, such as fitted kitchens. The index does not record fitted kitchens as a major characteristic and so house prices change as measured by the index may not have slowed as quickly as the market.

It is also true that most hedonic indices record the presence of an attribute but do not record the quality of this attribute. In keeping with the example above a fitted kitchen could cost €10,000 or could cost €50,000. If such unobserved characteristics were more common in dwellings that sell at certain phases of the price cycle then house price inflation may be over or under stated.

The different methodologies for measuring house price change are valid as there are different concepts of house price, such as average price or the price of a typical house. It is worth noting that although the methodologies differ in how they are constructed and in the absolute price levels they record the alternative house price series show very similar trends over time. Some of the differences in measured prices or rates of change reflect the use of different methodologies, different datasets and measure the price at a different point in the transaction cycle. Research on the topic of house price measurement has favoured methodologies that take account of the changing mix of properties between periods, such as the hedonic methodology. However, each methodology has advantages and disadvantages. The main conclusion would be that observers of the housing market should be careful not to over interpret the results of one single measure.

Figure A: House Price Inflation, Alternative Measures (Annual Averages)



Government Spending and Public Finances

The deterioration in the public finances which was a feature of 2008 has continued and accelerated in 2009. The March Exchequer Returns show that tax revenues in the first quarter of 2009 were €2.6 billion lower than in the first quarter of 2008, a fall of 23.4 per cent. Total net voted expenditure was €680 million higher in Q1 2009 relative to Q1 2008, a rise of 6 per cent. Much of this increase is related to increased unemployment-related payments. As a result of these divergent trends, the Exchequer deficit for the first three months of this year was €3.7 billion. For the same period in 2008, it was just €354 million.

Looking across individual tax headings, the largest proportional falls were for capital taxes. Receipts from Capital Gains Tax were 70.3 per cent lower in Q1 2009 compared with Q1 2008. For Stamp Duties, the corresponding figure was minus 62.1 per cent. However, the broadening of the economic slowdown beyond property is now very evident through other taxation headings. Corporation tax receipts were by almost one half at -43.6 per cent. The fall in consumer spending is seen through declines in receipts from excises (-31.9 per cent), customs (-27.3 per cent) and VAT (-18.3 per cent). Income tax is down by a more modest 6.5 per cent, although the 2009 figure is boosted by the introduction of the income levy in the Budget of October 2008.

The on-going deterioration in the public finances has prompted the government to introduce two sets of emergency measures. The first set was announced at the beginning of February, with the aim of achieving savings of €2 billion in a full year. The largest single measure was the imposition of the public sector pension levy. In gross terms, this was to raise €1.4 billion although the tax treatment of the levy meant that a net amount of just under €1 billion would be collected.

The second set of measures was announced in the Supplementary Budget at the beginning of April. On the tax side, increases totalling €1.8 billion were introduced, with the full-year yield being €3.6 billion. The largest items under the tax heading related to increases in the income and health levies and the increasing of the employees' PRSI ceiling. Combined, these items are budgeted to yield €1.3 billion in the remainder of 2009 and €2.8 billion in a full year, representing the dominant element of the total increase in tax revenue. Measures to reduce current spending amounted to €886 million for the remainder of 2009, and €1.2 billion in a full year. On the capital side, savings of €576 million were included. Overall, and including the February measures, the full year effect is to raise taxation (3.6 per cent) and cut expenditure (3.8 per cent) by similar amounts. These cuts are equivalent to 4.4 per cent of GDP.

Table 4: Public Finances

	2007 €m	% Change	2008	% Change	2009	% Change	2010
Current Revenue	47,887	-12.7	41,624	-18.8	33,941	6.2	36,057
Current Expenditure	40,896	9.4	44,693	3.7	46,396	9.4	50,737
<i>of which: Voted</i>	36,959	10.5	40,821	-0.7	40,541	5.9	42,941
Current Surplus	6,991	-142.2	-3,069	322.6	-12,455	17.9	-14,680
Capital Receipts	1,408	-0.7	1,398	7.2	1,499	11.1	1,665
Capital Expenditure	10,019	10.4	11,043	-3.0	10,735	-35.1	6,972
<i>of which: Voted</i>	7,650	12.1	8,576	-20.0	6,864	-10.5	6,140
Capital Borrowing	-8,610	12.2	-9,645	-4.4	-9,236	-42.5	-5,307
Exchequer Balance	-1,619.2		-12,714.0		-21,690.8		-19,986.7
as % of GNP	-1.0		-8.1		-15.6		-14.7
General Government Balance*	442.8		-13,277.0		19,975.7		-18,806.0
as % of GDP	0.2		-6.4		-12.0		-11.5
Gross Debt as % of GDP	24.8		41.1		57.7		70.3
Net Debt as % of GDP**	12.0		20.0		39.7		55.3

* 2008 - 2010 numbers are based on National Accounts estimates.

**Net of NPRF, Social Insurance and Exchequer Balances.

In addition to the specific measures announced for 2009, the Supplementary Budget also included a statement on the public finances adjustments which the Government intends to implement in 2010 and 2011. According to this statement, 2010 will see further adjustments amounting to €4 billion, with €1.75 billion in tax increases, €1.5 billion in reductions in current spending and €750 million in reductions in capital spending. For 2011, a total package of €4 billion is envisaged, spread across tax, current spending and capital spending as follows: €1.5 billion, €1.5 billion and €1 billion respectively. Among the taxation measures being

considered by the government are the taxation of child benefit,¹¹ the introduction of a carbon tax, some form of property tax and the elimination of reliefs and exemptions.

In preparing our forecasts for the public finances this year and next, we have factored in the broad figures on tax and spending that have been included in the various announcements by the Government. For 2010, we do not have precise details on which taxes will be increased and on how spending will be reduced so we have had to make some operational assumptions. As an illustrative package, we have increased income tax by €850 million, raised excise taxes by an additional €100 million. The other €800 million has been allocated to a carbon tax (€600 million) and a property tax (€200 million). On expenditure we have imposed in full a cut of €1.5 billion on current spending on goods and services and €750 million on the capital spend.

We now expect the government to collect just under €34 billion in current revenue in 2009, a fall of 18.8 per cent relative to 2008. With current spending forecast at €46.4 billion, the deficit on the current side is expected to be €12.5 billion. When combined with the capital deficit of €9.2 billion, the Exchequer Deficit will amount to €21.7 billion. On a general government basis, this implies a deficit of €20.0 billion or 12.0 per cent of GDP. This figure is higher than the deficit figure in the Supplementary Budget of 10.75 per cent. The difference partly arises from our lower forecast from net current revenue relative to that of the Department of Finance, due in turn to a lower forecast for growth this year. Where we envisage current revenue of €33.9 billion, their figure is €35.2 billion. It is also partly related to our lower estimate for nominal GDP.

For 2010, some recovery in current revenues is now anticipated based in large part on the level of tax increases to which the Government has committed itself. Current revenues are expected to rise to €36.1 billion, an increase of 6.2 per cent on the level expected in 2009. When combined with forecasts for spending, the overall impact is for the general government deficit to fall in 2010 relative to 2009, to 11.5 per cent of GDP.

The gross general government debt is now expected to reach 57.7 per cent of GDP in 2009 and 70.3 per cent in 2010. At the end of 2008 the net debt figure in Ireland was just 20 per cent of GDP compared to a gross debt figure of 41 per cent. The difference between these two figures was primarily due to the National Pension Reserve Fund (€16.4 billion), the Social Insurance Fund (€2.8 billion) and cash balances (€20 billion). In 2009 it is estimated that the Social Insurance Fund will be exhausted due to the rapid rise in unemployment. The NPRF is also likely to shrink in value, mainly due to plans for recapitalisation of the banks using these funds.

¹¹ Means-testing of child benefit payments was also mentioned by the Minister in his speech as a possible way of reducing the cost of the payment.

Therefore we expect net debt as a percentage of GDP to rise more rapidly than the gross debt figure, reaching over 55 per cent of GDP in 2010.

These figures do not take account of increases in the debt that will result from the establishing of the National Asset Management Agency and the acquiring of property related assets from the banks. Excluding these items, our forecasts suggest that debt interest payments as a share of current expenditure will rise rapidly from under 4 per cent in 2008 to over 8 per cent in 2010. These calculations are made assuming that the risk premium on Irish government debt payments is approximately 3 per cent in 2009, falling to 2 per cent during 2010.

At the time of writing, it is not yet known what price will be paid by NAMA for the portfolio of property loans it is to buy. However it is clear that this will increase the level of government debt substantially for many years. Even if NAMA were eventually to generate a profit over the long-term on this portfolio, so that all this debt is eventually repaid, the costs in the interim for the taxpayer will be high, resulting from a higher stock of debt and the higher risk premium that is likely to attach to government debt because of this exposure.

In terms of the level of public consumption in 2009 and 2010, the Supplementary Budget forecasts a marginal volume fall in 2009 of -0.4 per cent and no change in volume growth in 2010. In this context we estimate that the deflator for public consumption could fall by over 7 per cent in 2009 and by over 5 per cent in 2010.

Box: Distributional Impacts of Budget 2009

By Tim Callan, Claire Keane and John Walsh

Incomes will change substantially between 2008 and 2009 for several reasons: some individuals will see substantial cuts in wages, others will lose their jobs. Here, however, we focus on the impact of Budgetary policy on disposable incomes. For a reliable picture of the impact of Budget 2009 across family types and across the income distribution we must analyse how the budgetary changes affect a large-scale representative sample of the population rather than a handful of hypothetical families. *SWITCH*, the ESRI tax-benefit model is based on anonymised information from the CSO's Survey on Income and Living Standards, updated and adjusted to represent the 2009 situation. We concentrate on measuring the impact of the total package for 2009, incorporating the October 2008 Budget and subsequent amendments, the public service pension levy, and the Supplementary Budget's levies, PRSI increases, restrictions on mortgage interest relief and reductions in some welfare payments.

Official measures of budgetary impact tend to focus on changes relative to the "opening budget", under which both welfare and tax parameters are frozen in nominal terms. We have demonstrated in a series of papers to the

Budget Perspectives conference¹² that this is not a neutral benchmark for the analysis of distributional impact. Implementing the “opening budget” would itself involve differential income growth for welfare recipients, low, middle and high income earners. Instead, we focus on measuring budgetary impact relative to a neutral benchmark, which can be approximated by indexing welfare payments, tax credits and tax bands in line with wage growth. The same logic applies now, when wages are declining in the private sector, and public sector pay is subject to a new pension-related levy. Implementation of a policy indexed to the average fall in wages would mean that incomes would decline by the same percentage for all levels of income. The rate of decline in wages is uncertain – this *Commentary* provides for a 3 per cent fall in average wages between 2008 and 2009. In the present analysis, we allow for an average fall of 2 per cent, but do not attempt to capture the effect of the elimination of the Christmas bonus, which amounts to around 1 per cent of total welfare expenditure. On balance, these factors will tend to cancel out when it comes to assessing the relative position of wage earners and those relying on welfare payments.

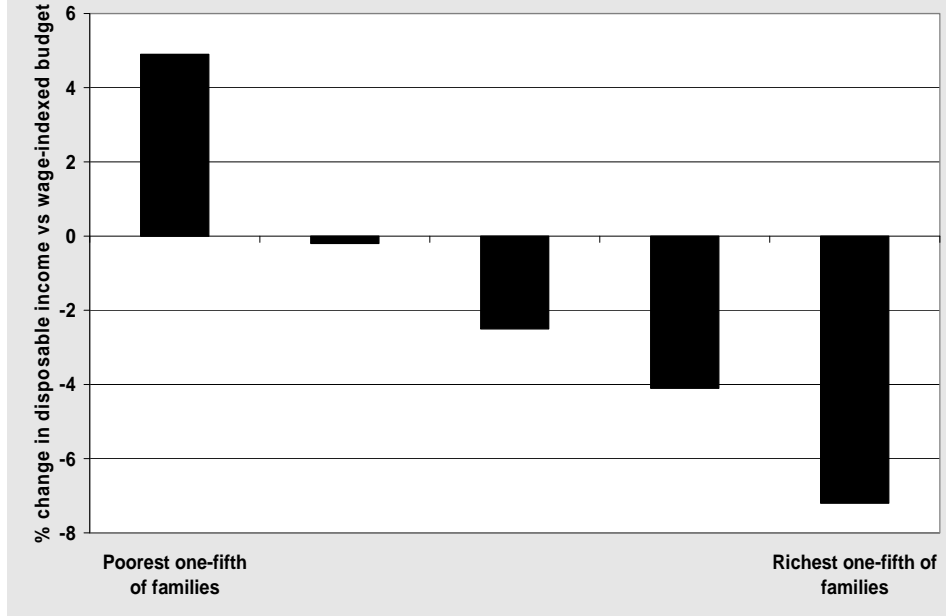
Taken together, we estimate that the Budgets of October 2008 and the Supplementary Budget of April 2009 will reduce household income by about 4 per cent, compared with the impact of a neutral budget. But the extent of the fall in income varies sharply across income levels, as illustrated in the accompanying graph. Average incomes for the poorest one-fifth of the population are set to rise by close to 5 per cent more than under the benchmark policy. For the next one-fifth of the population incomes on average are broadly unchanged – though there are of course gains and losses within that group. Average losses for the middle and upper income groups range from 2.5 per cent to over 7 per cent. Overall the Budget package is, therefore, strongly redistributive, with income gains for those with the lowest incomes and the percentage losses rising with income. (Similar remarks apply if the benchmark used is the traditional one of no change in nominal values of welfare and tax parameters.) Shifts of this magnitude take place rarely and usually over a sequence of budgets: the magnitude of these shifts in a single budget has few if any precedents.

What about the impact across different family types? We find that single persons in employment and dual-earner couples with children are set to lose about 6 per cent of their disposable income. One- and two-earner couples without children, and one-earner couples with children are expected to lose between 4 and 5 per cent of their income. Couples with and without children, relying wholly on welfare, as well as lone parents, are set to gain by 3 to 4 per cent relative to the indexation benchmark. The single unemployed group includes young people living at home whose benefit payments have been reduced, and see a slight loss on average. Pensioners, as a group, have incomes from welfare pensions and occupational pensions. As a result they see gains of 1 to 2 per cent,

¹² For example, T. Callan, M. Keeney and J.R. Walsh, 2001. “Income Tax and Welfare Policies: Some Current Issues” in T. Callan and D. McCoy (eds.), *Budget Perspectives: Proceedings of Conference held on 9 October 2001*, Dublin: The Economic and Social Research Institute.

compared with gains of 3 to 4 per cent for others who are fully reliant on welfare payments for their incomes.

Figure B: Distributional Impact of Budget 2009 (October 2008 and April 2009 Combined)



Exports

The *Quarterly National Accounts* for Q4 2008 estimate that the volume of exports fell by 0.4 per cent in 2008, with merchandise exports falling by 0.6 per cent and services exports by 0.1 per cent. The pace of the decline in exports accelerated throughout the year, and in Q4 exports were down 4.9 per cent in volume terms compared to the same period in 2007. In value terms, total exports declined by 0.7 per cent in 2008.

Merchandise export growth decelerated significantly throughout the first half of 2008, and following a particularly poor performance in Q4 merchandise exports registered an annual decline of 0.6 per cent in volume terms. The contraction in value terms was considerably larger, estimated at 3.5 per cent. This is consistent with the decline in merchandise export prices throughout 2008. Overall, we expect merchandise exports to decline by 5 per cent in volume terms this year, and by 4 per cent in value. For 2010 we are forecasting a further 2 per cent decline in volume, and a decline of 1 per cent in value.

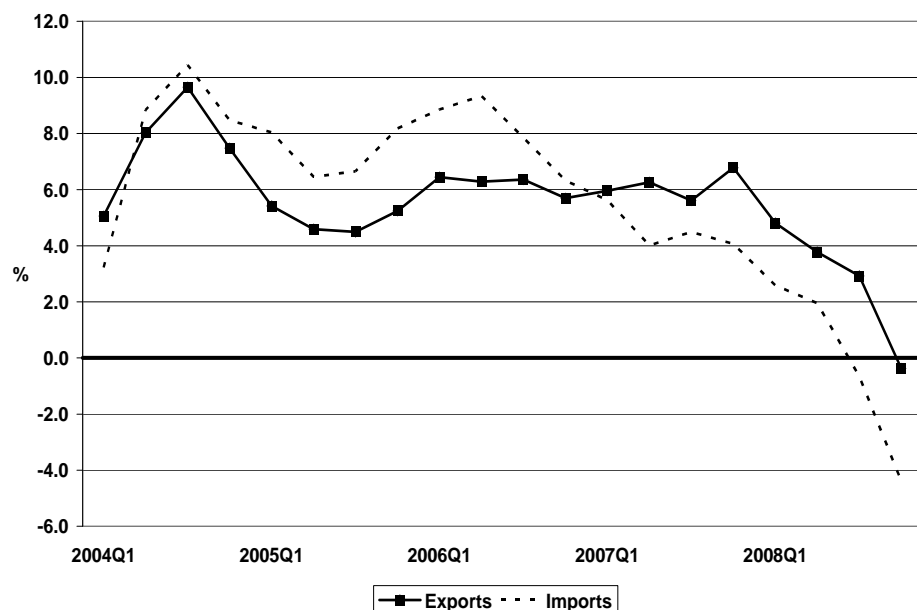
Table 5: Exports of Goods and Services

	2007			% Change in 2008			2008			% Change in 2009			2009			% Change in 2010			2010		
	€m	Volume	Value	€m	Volume	Value	€m	Volume	Value	€m	Volume	Value	€m	Volume	Value	€m	Volume	Value			
Merchandise	84,300	-0.6	-3.5	81,317	-5.0	-4.0	78,064	-2.0	-1.0	77,284											
Tourism	4,426	-4.6	-2.2	4,327	-3.1	-5.0	4,111	-3.0	-2.0	4,028											
Other Services	61,224	0.2	3.3	63,263	-5.1	-5.0	60,100	-1.9	-2.0	58,898											
Exports of Goods and Services	149,950	-0.4	-0.7	148,907	-5.0	-4.5	142,275	-2.0	-1.5	140,210											
FISIM Adjustment	1,440			1,430			1,358			1,331											
Adjusted Exports	151,390	-0.4	-0.7	150,337	-5.0	-4.5	143,633	-2.0	-1.5	141,541											

There was no growth in the volume of services exports in 2008, while in value terms they grew by 2.9 per cent. The *Balance of Payments* statistics provide a breakdown of services exports in value terms, and confirm the downturn across most sectors. Financial services exports contracted by 7.2 per cent in 2008, communications by 7.6 per cent and tourism exports by 2.2 per cent. The pace of growth in computer services and trade-related business services also fell considerably from 2007 levels – the latter grew by 9.8 per cent in value in 2008, following growth of 61.2 per cent in 2007. We expect non-tourism services exports to decline by 5.1 per cent in volume terms in 2009, and to decline by 5 per cent in value. We expect tourism exports to decline by 3.1 per cent in volume and by 5 per cent in value. For 2010 we are forecasting a further 1.9 per cent decline in the volume of non-tourism services exports, and a decline of 2 per cent in value. We expect tourism exports to fall by a further 3 per cent in volume and 2 per cent in value.

With the majority of our main trading partners now in a deep recession, the outlook for Irish exports is unsurprisingly bleak. Overall we expect exports to fall by 5 per cent this year in volume terms and by 4.5 per cent in value terms. For 2010 we are forecasting a further 2 per cent decline in volume and a 1.5 per cent decline in value. However, bearing in mind that the prospects for the international economy next year remain highly uncertain, we do expect to see a halt in the decline of Irish exports by the final quarter of 2010, in line with the expected signs of a modest recovery in the Euro Area and US economies. While our projections suggest that the export performance this year will be disappointing by our recent standards, it is worth noting that by international standards a contraction of 5 per cent in volume would be relatively modest. Exports are expected to fall by 9.8 per cent in the UK, by 11.4 per cent in France and by 16.5 per cent in Germany. For the OECD as a whole, export volumes are expected to fall by 14 per cent.

Figure 8: Exports and Imports Volume Growth Rates (Annual Averages)



Source: *Quarterly National Accounts*, Central Statistics Office.

Imports

According to the preliminary estimates from the latest *Quarterly National Accounts*, the volume of imports of goods and services contracted by 4.4 per cent in 2008 on an annual average basis. While services imports grew by 3.4 per cent, the volume of merchandise imports fell by a massive 13 per cent. The value of overall imports fell by 2.2 per cent in 2008. The latest *Balance of Payments* statistics suggest that growth in the value of tourism imports remained relatively strong, estimated at 12 per cent. The value of non-tourism service imports grew by 5.1 per cent, while merchandise imports contracted by 11 per cent in value.

Merchandise imports contracted sharply in 2008, consistent with the fall in consumption and the steep decline in expenditure on machinery and equipment. In the final quarter of 2008 the volume of merchandise imports was down 25.8 per cent on the same period in 2007. The value of merchandise imports also fell sharply throughout the year, and the latest *External Trade* statistics show the decline in import values across a range of goods. Annual growth in the value of food and beverage imports fell significantly from the high levels registered in 2007. Food imports grew by just 0.1 per cent in value, while the value of beverage imports contracted by 13.8 per cent. Growth in the value of petroleum imports fell to 9.8 per cent – a substantial moderation from previous levels, while imports of road vehicles contracted by 29 per cent in value in 2008. We now expect merchandise imports to fall by 13.7 per cent in volume this year, and by 15 per cent in value. In 2010 we expect a further contraction of 4 per cent in volume and 5 per cent in value.

Non-tourism services imports grew by 2.6 per cent in volume in 2008. Tourism import growth was particularly robust, estimated at 10.9 per cent in volume terms. We expect this to moderate significantly in 2009, in line with our forecast for a sharp contraction in private consumer expenditure. Overall we expect tourism imports to contract by 2.5 per cent in volume this year, and by 3 per cent in value. We are forecasting a further 1 per cent fall in the volume of tourism imports next year, and a 0.5 per cent fall in value. For non-tourism service imports we expect a contraction of 6.4 per cent in volume this year and a contraction of 6 per cent in value. For 2010 we are forecasting a further decline of 6.6 per cent in volume, and 6 per cent in value.

Consistent with the downward revisions to our forecasts for private consumption and investment growth, we have cut our overall import growth forecast. We now expect the volume of imports to contract by 9.3 per cent in 2009 and by a further 5.2 per cent in 2010. In value terms we are forecasting a contraction of 9.7 per cent this year and 5.3 per cent next year.

Table 6: Imports of Goods and Services

	2007	% Change in 2008		2008	% Change in 2009		2009	% Change in 2010		2010
	€m	Volume	Value	€m	Volume	Value	€m	Volume	Value	€m
Merchandise	61,840	-13.0	-11.0	55,038	-13.7	-15.0	46,782	-4.0	-5.0	44,443
Tourism	6,389	10.9	12.0	7,157	-2.5	-3.0	6,942	-1.0	-0.5	6,908
Other Services	62,130	2.6	5.1	65,278	-6.4	-6.0	61,361	-6.6	-6.0	57,680
Imports of Goods and Services	130,359	-4.4	-2.2	127,473	-9.3	-9.7	115,086	-5.2	-5.3	109,030
FISIM Adjustment	658			645			608			575
Adjusted Imports	131,017	-4.4	-2.2	128,118	-9.3	-9.7	115,694	-5.2	-5.3	109,606

Balance of Payments

The sharp contraction in merchandise imports in 2008 resulted in a 17 per cent increase in the merchandise trade surplus. However, the deficit in services trade grew by 68.9 per cent. The overall result was an increase of 9.4 per cent in the trade surplus in goods and services, and the total trade balance for 2008 is estimated at 13.7 per cent of GNP. Our projections for merchandise exports and imports imply a further increase of 19 per cent in the merchandise trade surplus this year, followed by an increase of 5 per cent in 2010. We expect the services trade deficit to fall by 15.5 per cent this year and by a further 59.4 per cent in 2010. This implies an increase in the total trade surplus of 26.8 per cent this year and 14.7 per cent next year. We estimate a total trade balance of 19.6 per cent of GNP in 2009, rising to 23 per cent of GNP in 2010.

With regard to net factor flows, the most recent *Balance of Payments* data indicate that the net factor income deficit fell by 0.4 per cent in 2008. Direct investment income fell by 6.2 per cent, while portfolio and other investment income fell by 1.1 per cent, resulting in a decline in total credit flows of 1.7 per cent. Total debit flows fell by 1.4 per cent. We expect the net factor income deficit to contract by a further 3.7 per cent in 2009 and by 0.5 per cent in 2010. Combined with the increases in the trade surplus, this will result in a narrowing of the current account deficit from 5.3 per cent of GNP in 2008 to 0.9 per cent of GNP in 2009. We expect the current account to move into surplus next year, with an estimated balance of 2.1 per cent of GNP.

Table 7: Balance of Payments*

	2007 €m	Change %	2008 €m	Change %	2009 €m	Change %	2010 €m
Merchandise Trade Balance	22,460	17.0	26,279	19.0	31,282	5.0	32,840
Service Trade Balance	-2,869	68.9	-4,845	-15.5	-4,093	-59.4	-1,661
Trade Balance in Goods and Services on BoP basis	19,591	9.4	21,434	26.8	27,189	14.7	31,180
% of GNP	12.2		13.7		19.6		23.0
Total Debit Flows	111,566	-1.4	110,030	-8.3	100,868	-1.3	99,595
Total Credit Flows	82,957	-1.7	81,543	-9.9	73,432	-1.6	72,289
Net Factor Flows	-28,609	-0.4	-28,487	-3.7	-27,436	-0.5	-27,306
Net Current Transfers	-1,283		-1,328		-1,328		-1,328
Balance on Current Account	-10,301		-8,381		-1,576		2,546
Capital Transfers	62		11		300		300
Effective Current Balance	-10,239		-8,370		-1,276		2,846
% of GNP	-6.4		-5.3		-0.9		2.1

* This table includes adjustments to *Balance of Payments* basis.

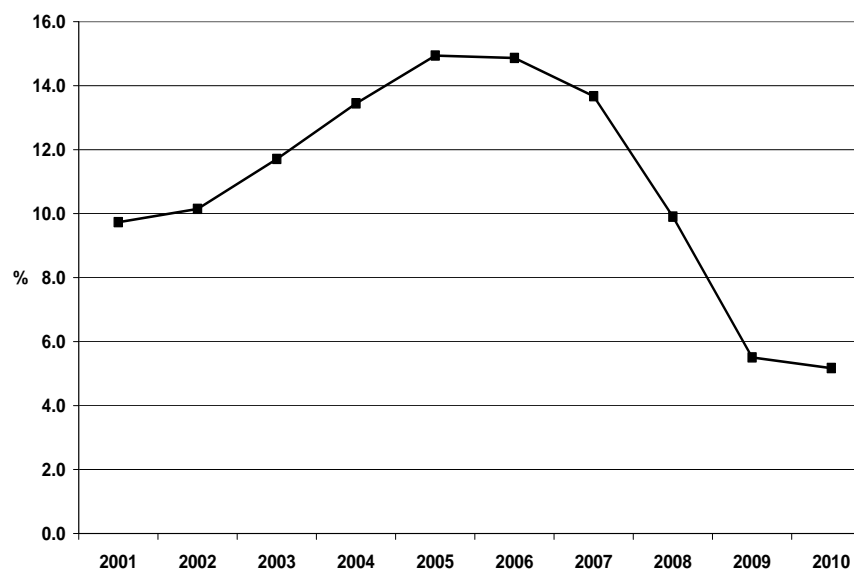
Measures of Growth

Summing up over the demand components discussed in the previous sections leads us to forecast a decline of 9.2 per cent in GNP in 2009 and of 1.2 per cent in 2010¹³. Adjusting for changes in the terms of trade and for international transfers, the fall in Gross National Disposable Income is forecast to be moderately less, at 8.4 per cent in 2009 and 0.6 per cent in 2010. Combining these falls in output with the fall already experienced in 2008 (of 3.1 per cent in GNP), our forecasts suggest that Ireland's economy will contract by around 14 per cent over the three years 2008-2010. By historic and international standards, this is a truly dramatic development. Between 1990 and 1993, real GDP in Finland declined by 11 per cent, the largest such decline for an industrialised country since the 1930s.

Table 8: Measures of Growth

Growth Indicators	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
GNP	8.5	9.5	3.8	2.9	5.9	4.5	5.8	6.3	4.1	-3.1	-9.2	-1.2
GNP adj for Terms of Trade	8.2	8.3	4.9	4.0	4.7	3.7	4.7	5.4	1.6	-5.5	-8.3	-0.6
GNDI	7.8	7.8	4.0	4.4	4.4	3.7	4.5	4.8	1.1	-5.5	-8.4	-0.6
National Resources	7.3	8.5	3.4	4.2	4.0	3.8	4.5	4.7	1.0	-5.5	-8.2	-0.6
GNP per capita (constant prices)	7.4	8.1	2.3	1.0	4.2	2.8	3.5	3.7	1.8	-4.9	-9.3	-1.4
Consumption per capita (constant prices)	7.8	8.2	3.6	2.2	1.4	2.2	4.8	4.4	3.9	-2.7	-7.1	-3.1
Investment in Housing/GNP	8.8	9.1	9.7	10.1	11.7	13.4	14.9	14.9	13.7	9.9	5.5	5.2
Investment/GNP	27.2	27.2	26.7	26.4	26.4	28.6	31.4	31.2	31.1	25.1	18.2	15.4
Domestic Demand						4.1	8.7	6.2	3.7	-5.7	-12.2	-3.5

Figure 9: Housing as a Percentage of GNP



¹³ Given our forecasts for net outflows, the decline in GNP per capita in both years is marginally steeper (at -9.3 per cent in 2009 and -1.4 per cent in 2010).

Sectoral Output

While distilling positive notes from Table 8 is clearly difficult, we will draw attention to housing as a proportion of GNP (see Figure 9). In 2005 and 2006, housing accounted for almost 15 per cent of GNP. As was discussed at the time, this was unsustainable and subsequent events have confirmed this. Based on our forecasts, this rate should fall to 5.2 per cent in 2010. This suggests that the contraction in house-building will have been completed by 2010 and so the housing contraction which has placed such a drag on the economy will essentially be over.

The *Quarterly National Accounts* for Q4 2008 show that industrial output (including building and construction) fell by 4.3 per cent in 2008. For industry, excluding building and construction, output was essentially static, growing at just 0.3 per cent. Building and construction output fell by 16 per cent.

Building and construction posted quarter-on-quarter declines (seasonally adjusted) throughout 2008. The decline in Q2 was relatively modest at -1.6 per cent; however, in the other three quarters, the declines ranged from -7.7 per cent (Q3) to -8.9 per cent (Q4). In contrast, other industrial output had been growing quarter-on-quarter through the first three quarters of 2008; 0.8 per cent in Q1, 0.2 per cent in Q2 and 1.9 per cent in Q3. However, output plunged by 10.2 per cent in Q4.

The most recent data from the index of industrial production shows that output across all productive industries was 1 per cent lower in the first two months of 2009 compared with the same period in 2008. The decline between Q4 2007 and Q4 2008 was much larger at 8 per cent and so in more normal times this might have been interpreted as signalling an easing in the pace of contraction. However, in the current context it would be unwise to jump to such a conclusion with any degree of certainty. The decline in output between Q4 2007 and Q4 2008 was similar across the traditional and modern sectors. In the modern sector, the fall was 8.2 per cent; in the traditional sector, the fall was 7.1 per cent.

Turning to our forecasts, we expect building and construction to decline again in 2008, by 34.5 per cent in volume terms. As discussed in the section on *Investment* above, this decline is resulting from the ongoing contraction in house-building and from the lower rates of activity in commercial building. As a result of the emergency fiscal measures announced in recent months, we have now factored in a fall in public infrastructure activity also.¹⁴ We expect other industry to decline by 2 per cent in volume terms in 2009. Overall, industrial output (including building and construction) is expected to fall by 10 per cent in 2009. For 2010, the pace of contraction in building and construction should ease and we expect a fall in output of 12 per cent. Output in other industry is expected to stabilise in 2010, relative to 2009. Overall, we expect to see a fall in industrial output (including building and construction) of 2.2 per cent in 2010.

¹⁴ See footnote 7.

Table 9: GDP by Sector

	2007	% Change		2008	% Change		2009	% Change		2010
	€m	Volume	Value	€m	Volume	Value	€m	Volume	Value	€m
Agriculture	4,206	0.6	0.0	4,206	1.0	10.1	4,630	1.0	15.3	5,337
Industry:	56,403	-4.3	-5.0	53,565	-10.0	-11.6	47,332	-2.2	-3.2	45,800
Other Industry	39,701	0.3	1.0	40,098	-2.0	-2.0	39,296	0.0	0.0	39,296
Building & Construction	16,702	-16.0	-19.4	13,467	-34.5	-40.3	8,036	-12.0	-19.1	6,504
Services:	109,317	0.1	0.6	109,921	-6.3	-7.1	102,072	-0.9	-3.0	98,973
Public Administration & Defence	5,797	2.1	6.1	6,154	-0.9	-8.3	5,643	-0.5	-6.2	5,293
Distribution, Transport and Communications	27,411	-5.0	-3.4	26,473	-6.0	-3.8	25,458	-2.0	-0.5	25,337
Other Services (including rent)	76,109	1.5	1.6	77,295	-6.6	-8.2	70,971	-0.6	-3.7	68,343
GDP at Factor Cost	169,927	-1.4	-1.3	167,692	-7.4	-8.1	154,034	-1.3	-2.5	150,110

For services, the *QNA* Q4 2008 show that the sector on average was static in output terms between 2007 and 2008. However, there was a significant divergence across the sectors in terms of output changes. Public administration and defence and other services (including rent) posted annual volume increases of 2.1 per cent and 1.5 per cent respectively. In contrast, distribution, transport and communications contracted in volume terms by 5 per cent. In spite of divergent trends in output over the course of 2008, all three sub-sectors were showing quarter-on-quarter declines in Q4 2008 (seasonally adjusted). For public administration and defence, the decline was a negligible 0.1 per cent. For distribution, transport and communications and other services (including rent), the declines were more significant, at 2.1 per cent and 2.3 per cent respectively.

Looking ahead, the volume output in the services sector is expected to decline by 6.3 per cent in 2009. The fall will be just under 1 per cent in public administration and defence but is forecast to be just over 6 per cent in both distribution, transport and communications and services (including rent). While all three sub-sectors are expected to contract again in 2010, the pace of decline will be slower with the sector as a whole declining in volume terms by an anticipated 0.9 per cent.

Agriculture grew by 0.6 per cent in volume terms in 2008. In our forecasts, we include volume growth rates of 1 per cent for agriculture in both 2009 and 2010.

Employment

The *Quarterly National Household Survey* for Q4 2008 showed employment to be 86,900 lower in that quarter relative to Q4 2007. In percentage terms, this was a fall of 4.1 per cent. A total of 170,600 were counted as unemployed, up from 101,000 in Q4 2007. This 70 per cent increase in the numbers unemployed over the course of a year is yet another stark illustration of the downward trend in the economy. As with all other elements of the economic downturn, comparisons between Q4 2007 and Q4 2008 fail to capture the accelerating pace of the downturn during the course of the year. In Figure 10 we show quarter-on-quarter changes in employment from Q1 2006 to Q4 2008 (seasonally adjusted) and the within-year trend becomes more apparent.

Of the almost 90,000 job losses between Q4 2007 and Q4 2008, 45,900 were in construction. That construction would have experienced such a high rate of job losses (16 per cent over the year) is perhaps unsurprising at this stage, given the well-documented contraction in the sector. The wholesale and retail sector experienced 18,200 job losses; while 12,400 jobs were lost in “other productive industries”.

According to the *QNHS* for Q4 2008, the rate of unemployment was 7.7 per cent at that time. However, the trend in the Live Register since the beginning of 2009 points to a further rapid rise in unemployment. At the end of March 2009, there were 372,800 people “signing on”. This was an increase of 173,300 on March 2008, when the number on the Live Register was just under 200,000. Based on these figures, the CSO estimate that the

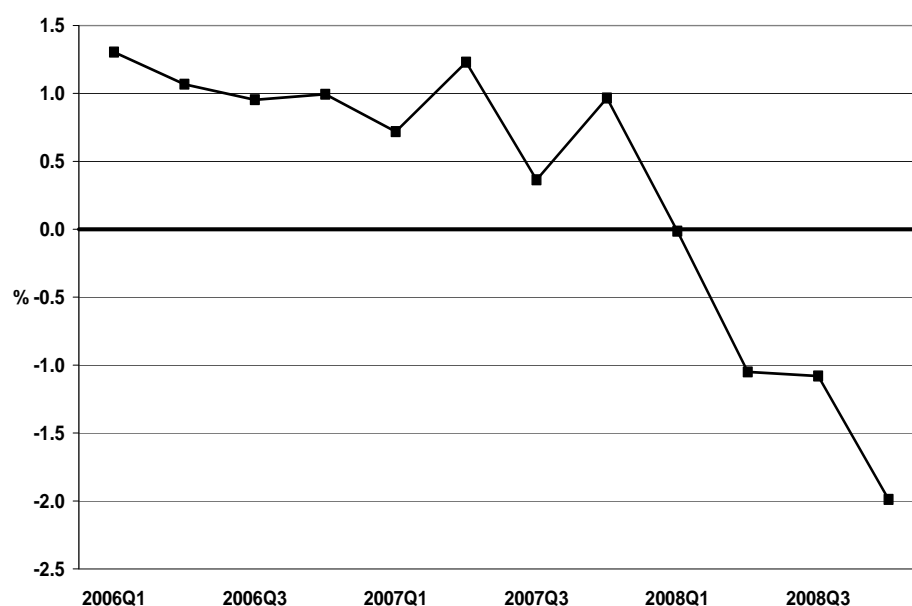
seasonally adjusted standardised unemployment rate was 11 per cent in March.¹⁵

Table 10: Employment and Unemployment

	Annual Averages 000s			
	2007	2008	2009	2010
Agriculture	116.1	119.4	116.3	114.3
Industry	577.6	541.0	448.2	398.9
Services	1,423.4	1,443.8	1,352.5	1,300.9
Total at Work	2,117.0	2,104.2	1,916.9	1,814.1
Unemployed	100.5	136.7	292.2	365.5
Labour Force	2,217.5	2,240.9	2,209.1	2,179.6
Unemployment Rate %	4.5	6.1	13.2	16.8
Net Migration	67.3	38.5	-30.0	-30.0
of which: Inward Migration	109.5	83.8	20.0	20.0
Change in Participation Rate*	1.2	-0.3	-1.3	-1.2

* Note: Participation rate measured as share of population aged 15-64 years; based on Q2 figures as are migration figures.

Figure 10: Quarter-on-Quarter Employment Growth (Seasonally Adjusted)



Source: *Quarterly National Household Survey*, Central Statistics Office.

¹⁵ Ordinarily we would not use the Live Register as an indicator of unemployment because of the well-known difficulties that arise from the presence on the Live Register, for example, of part-time employees and others who would not fit the ILO definition of “out of work but seeking work”. Indeed, using the Live Register as a count of the unemployed will overstate the amount relative to the ILO measure. Nonetheless, the rapidly changing situation in the labour market means that a premium attaches to the latest information and hence our use of the data from the Live Register.

Latest figures from the Live Register also provide some tentative insights into the relative incidence of unemployment across nationals and non-nationals. While the proportionate increase in the number of nationals on the Live Register in the year ending March 2009 was 77.2 per cent, the corresponding figure for non-nationals was 143 per cent. Across non-nationals, the proportionate increases differ. For UK citizens living here, the increase was 74.3 per cent and so similar to that of Irish nationals. However, for citizens of the EU's Accession States, the numbers on the Live Register increased by 225 per cent (from 13,403 in March 2008 to 43,559 in March 2009).

Turning to our forecasts, we now expect employment in 2009 to be 187,300 lower than in 2008, on an annual average basis. Corresponding to this fall in employment, we expect to see the number unemployed averaging 292,200 in 2009, an increase of 155,500 on the 2008 figure (or 114 per cent). This implies that the unemployment rate would average 13.2 per cent. This estimate of the rise in unemployment is based in part on expected net outflows of 30,000 in each of the years ending April 2009 and April 2010. In truth, and as discussed in the last *Commentary*, forecasting net outflows is extremely difficult given our lack of previous observations on the behaviour of Ireland's immigrants in a downturn. Our forecast of unemployment is also based on an anticipated fall in participation of 1.3 per cent in 2009.

For 2010, we expect further employment falls, amounting to 102,800. This would be equal to a 5.4 per cent fall on the forecast level of employment in 2010. We expect unemployment to rise by a further 73,300 and the rate to average 16.8 per cent in 2010. However, it is important to point out that our figures for 2010 are based on an expectation of a levelling off in the numbers unemployed in 2010; the rise in average unemployment between 2009 and 2010 is largely the result of carryover.

Incomes

As discussed in recent *Commentaries*, the latest data on earnings come from a variety of CSO sources, as the CSO continues to move from its sectoral earnings surveys to a single *Earnings, Hours and Employment Costs Survey* (EHECS). In Table 11, we show the most recent data on annual earnings growth for a sub-set of sectors. In general terms, the table reveals a picture of strong wage growth in industry up to the third quarter of 2008. Wage growth was much weaker in financial and insurance activities, motor trade, wholesale trade and business services, again up to Q3 2008. Referring back to our discussion of sectoral output above, it will be recalled that industry (excluding construction) had not experienced a severe downturn until Q4 of 2008, when output fell quarter-on-quarter by 10.2 per cent (seasonally adjusted). Distribution, transport and communications had been experiencing contraction throughout 2008. The trends in earnings across the sectors may reflect this.¹⁶

¹⁶ Ideally, we would like more current information on wage trends as it is a crucial variable in determining likely trends in the overall economy, given the link with competitiveness.

Taking account of the public service pension levy (which we treat as a pay cut) and anticipated falls in earnings due to the remarkably slack labour market, we expect wages to fall by 3 per cent in nominal terms in 2009. The rapid rise in unemployment, all else being equal, might have led us to expect a steeper decline but declines in nominal wages are not often observed, even in recessionary times. In addition, the tax increases may have lessened the willingness of workers to accept steeper cuts. This, of course, touches on a broader issue of the difficulty of achieving balance in the public finances through income tax increases. We return to this issue in the *General Assessment* below.

Table 11: Annual Wage Growth (Based on Weekly Earnings, Except for Construction which is Hourly)

	2007Q3	2007Q4	2008Q1	2008Q2	2008Q3	2008Q4
EHECS:						
Industry (B-E)	5.1	5.2	5.0	4.4	5.1	
of which						
Manufacturing (C)	5.3	5.8	5.3	4.6	4.9	
Financial and insurance activities (K)	10.2	1.8	0.8	0.1	1.8	
Sectoral Surveys:						
Public Sector (excluding Health)	4.4	4.6	4.3	3.4	3.1	
Motor trades (50)	7.8	6.0	4.5	2.7	0.9	
Wholesale trade (51)	3.7	2.0	1.3	1.4	1.3	
Retail trade (52)	4.5	5.3	6.3	5.8	5.1	
Business services (55-64, 70-74)	5.4	3.9	3.8	2.7	1.8	
Construction	4.8	5.8	5.8	5.0	3.4	1.2

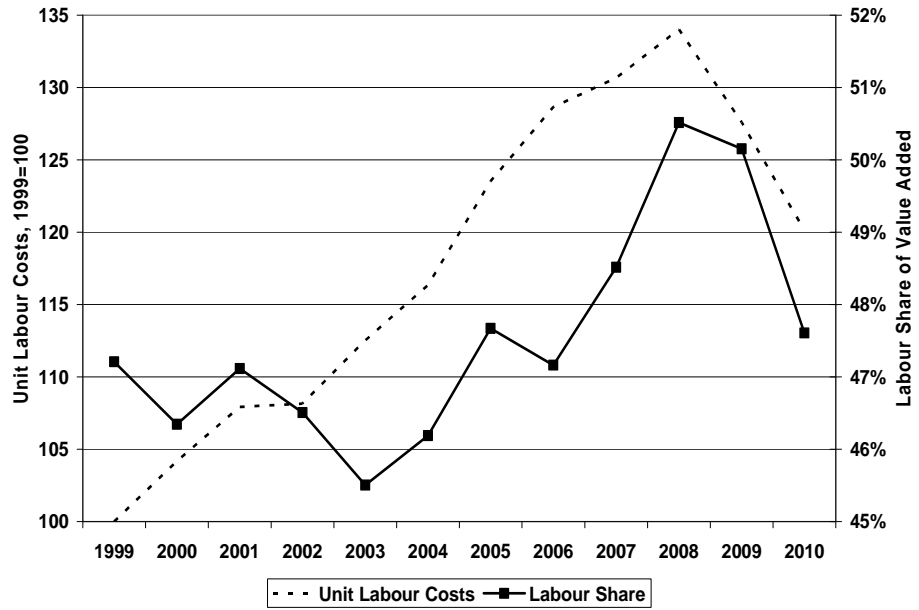
With wages forecast to fall by 3 per cent and employment forecast to fall by almost 9 per cent, we expect non-agricultural wages to fall by 12 per cent in 2009. Transfers are forecast to increase by 24.8 per cent, due to the combined effects of increases in last October's Budget and very high rates of increase in the numbers on the Live Register. Overall, we expect personal disposable income to fall by 4 per cent in 2009. With consumption (in nominal terms) falling by a steeper 7.9 per cent, we expect the savings rate to increase to 10.1 per cent.

In 2010, further wage falls of -1.6 per cent are expected. Again with employment falling, non-agricultural wages are forecast to fall by 7.1 per cent. Given that the tax changes announced in April will apply over the full year in 2010, and also that they will be added to, direct personal taxes are forecast to rise by 8 per cent next year. Personal disposable income will fall again in 2010, but with the 2009 pattern of consumption falling more steeply being repeated, the savings rate will rise again.

Table 12: Personal Disposable Income

	2007			2008			2009			2010	
	€m	%	€m	€m	%	€m	€m	%	€m	€m	
Agriculture, etc.	3,456	0.0	0	3,456	12.5	431	3,887	12.9	500	4,387	
Non-Agricultural Wages	78,211	1.1	840	79,050	-12.0	-9,484	69,567	-7.1	-4,946	64,621	
Other Non-Agricultural Income	17,300	8.0	1,390	18,689	-3.9	-736	17,953	23.7	4,263	22,216	
Total Income Received	98,966	2.3	2,229	101,196	-9.7	-9,789	91,407	-0.2	-183	91,224	
Current Transfers	19,767	11.1	2,199	21,966	24.8	5451	27,416	4.2	1,148	28,564	
Gross Personal Income	118,733	3.7	4,428	123,161	-3.5	-4,338	118,823	0.8	965	119,789	
Direct Personal Taxes	23,562	-0.8	-189	23,372	-1.6	-378	22,995	8.0	1,838	24,832	
Personal Disposable Income	95,172	4.9	4,617	99,789	-4.0	-3,960	95,828	-0.9	-872	94,956	
Consumption	91,582	2.2	2,021	93,603	-7.9	-7,423	86,180	-2.5	-2,167	84,013	
Personal Savings	3,590			6,186			9,648			10,943	
Savings Ratio	3.8			6.2			10.1			11.5	
Average Personal Tax Rate	19.8			19.0			19.4			20.7	

Figure 11: Labour Share of GNP



Before leaving this discussion of incomes, it is useful to combine forecasts for wages with those of employment and GNP and to derive the implied series for labour’s share of GNP. In *Commentaries* over the course of 2006 and 2007, we regularly made reference to the loss of competitiveness being experienced by the economy. In illustrating this loss, we sometimes drew attention to the upward trend in labour’s share of GNP. As shown in Figure 11, between 2003 and 2008, this share rose from 45.5 per cent to 50.5 per cent. If our forecasts are correct, the share should fall to 47.6 per cent by 2010. This would imply a competitiveness gain for the economy, thereby placing the economy in a stronger position to participate in a global upturn.

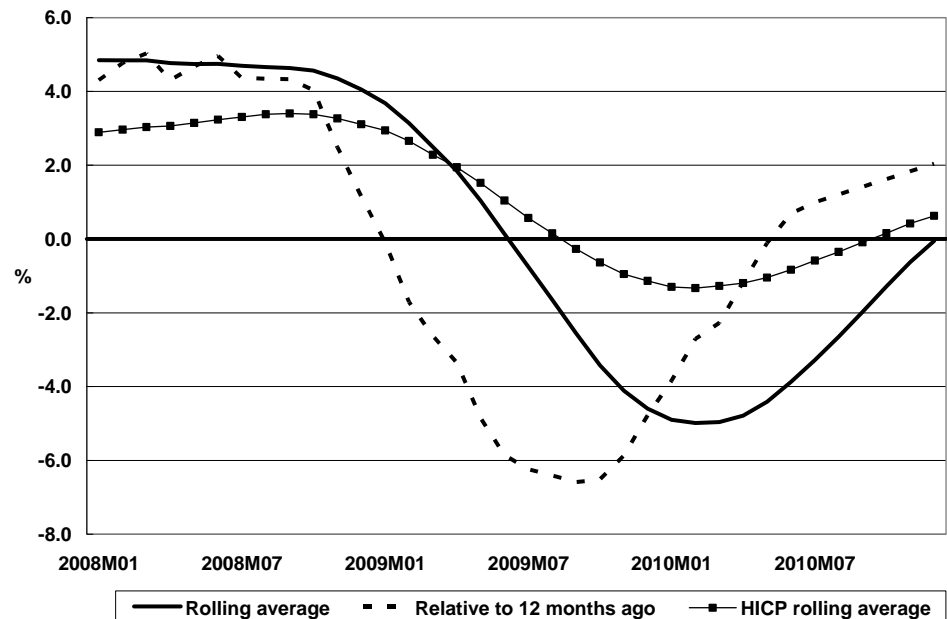
Consumer Prices

The annual average rate of inflation, measured by the Consumer Price Index, was 4.1 per cent in 2008. Inflationary pressures eased substantially towards the end of the year, and in December the CPI was just 1.1 per cent higher than in December 2007. The year-on-year rate of inflation turned negative in January 2009, and by March the CPI was 2.6 per cent lower than in March 2008.

The mortgage interest component has been the primary source of downward pressure on the overall Consumer Price Index in recent months. In March 2008 the mortgage interest component made a positive contribution of 1.5 percentage points to the year-on-year rate of inflation. Twelve months later it is making a negative contribution of 1.9 percentage points. Since October 2008, the European Central Bank has cut its main refinancing rate six times, by a cumulative 300 basis points, and the majority of Irish mortgage lenders have committed to passing on these rate cuts in full. According to figures from the Central Statistics Office, the average home purchase loan interest rate fell by 200 basis points between September and February. We would expect to see a further reduction over the coming months, as 75 of the 300 basis points cut came in March and

April and so have yet to fully feed through to the Consumer Price Index (CPI).

Figure 12: CPI Inflation Rate



Source: *Consumer Price Index*, Central Statistics Office.

Much of the volatility in the CPI throughout 2008 resulted from fluctuations in international commodity markets, and their effect on the prices of food and oil-related products. Commodity prices have fallen significantly from their peaks of last July, and this has fed through to the prices of petrol, diesel and home-heating oil. In March 2009, these three sub-indices registered year-on-year decreases of 14 per cent, 23 per cent and 40 per cent respectively. The pace of food price inflation peaked in March 2008, increasing by 9.6 per cent compared to the same month in the previous year. In March 2009 the year-on-year food price inflation rate was estimated at -0.6 per cent.

The fall in food price inflation may also be the result of recent exchange rate movements. The sharp depreciation of sterling relative to the euro since October 2008 has put downward pressure on import prices, which in turn feeds through to domestic retail prices. This is most apparent among goods such as food, clothing and footwear, which are imported from the UK on a large scale. The clothing and footwear sub-indices of the CPI have fallen substantially in recent months, registering year-on-year decreases of 8.7 per cent and 8.5 per cent respectively in March 2009.

According to the EU *Harmonised Index of Consumer Prices* (HICP)¹⁷ Ireland's inflation rate averaged 3.1 per cent in 2008. The HICP does not include mortgage interest, and as a result it is not as sensitive to movements in ECB interest rates as the CPI. In spite of this, the year-on-year HICP

¹⁷ The HICP excludes mortgage interest, building materials, concrete blocks, union subscriptions, motor car insurance, dwellings insurance, motor car tax and motorcycle tax.

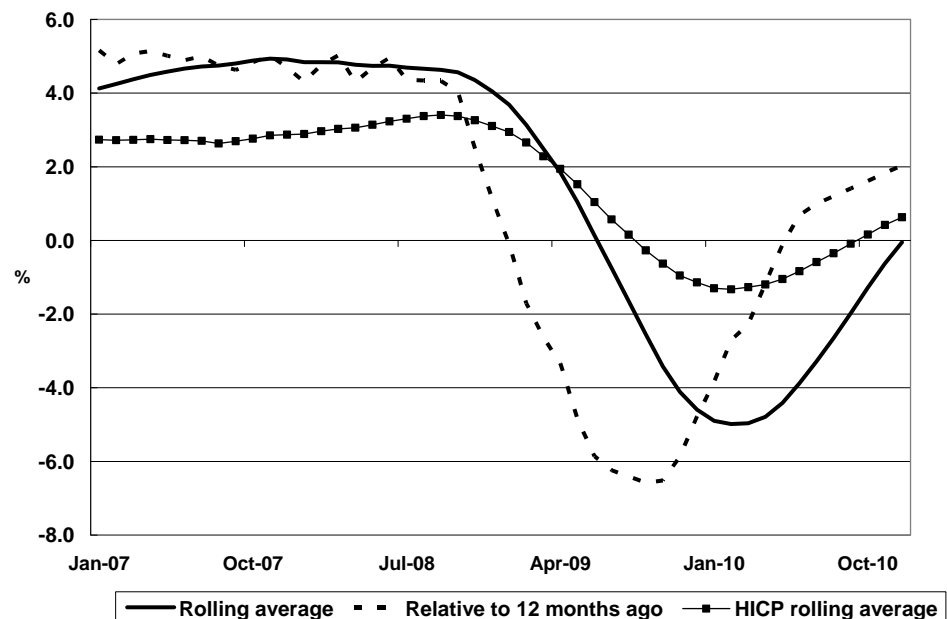
inflation rate was -0.7 per cent in March, and we expect this to moderate further throughout the year, in line with lower commodity prices and a further deterioration in domestic demand. We are forecasting an average rate of HICP inflation of -1.1 per cent this year, and 0.6 per cent next year.

Table 13: Inflation Measures (%)

	2004	2005	2006	2007	2008	2009	2010
CPI	2.2	2.4	3.9	4.9	4.1	-4.6	0.0
Mortgage Interest	5.4	12.3	31.4	40.4	15.0	-42.2	-10.8
HICP (Ireland)	2.3	2.2	2.7	2.9	3.1	-1.1	0.6
HICP (Euro Area)	2.1	2.2	2.2	2.1	3.4	0.6	0.7

Our forecasts for CPI inflation are dependent on our assumptions regarding future ECB interest rate decisions. In recent months the Governing Council has slashed interest rates by 3 per cent to 1.25 per cent, and signalled the likelihood of a further reduction when it meets again in May. However, we do not see the main refinancing rate falling below 1 per cent, and so we have assumed a further 25 basis point cut next month. Our forecasts also take account of a 10 per cent fall in electricity prices and a 12 per cent fall in gas prices, due to take effect on May 1 2009. Overall we expect CPI inflation to average -4.6 per cent this year, and we are forecasting no change in the CPI in 2010.

Figure 13: Inflation Profile 2007-2010 (Forecast April 2009 Onwards)



As with many of the *Commentaries* in the last two years, we have once again found ourselves during the preparation of this report in a situation where most of the incoming data is more negative than we would have expected. For example, on the international front the rate of job losses in the US in the first part of this year has been extraordinary, with 3.3 million jobs being shed in the five months to the end of March 2009. The forecast from the OECD that Germany will contract by 5.3 per cent is in sharp contrast to earlier expectations that Germany would escape the worst of the global recession. For Ireland, the rate of job losses in the first three months of this year exceeded all expectations, with 80,000 joining the Live Register between January and March. The wave of poor data led us to cut our growth forecast for 2009, from -4.6 per cent in our *Commentary* of Winter 2008 to -9.2 per cent (on a GNP basis).

While the overall picture is clearly highly negative, we can point to some positive developments since our Winter *Commentary*. The principal positive developments within Ireland have been the policy announcements on emergency fiscal measures in February and April. We began to voice serious concerns about the trajectory of the public finances in our Autumn *Commentary*. We returned to the theme in our Winter *Commentary* when we called for wage cuts in the public sector to be considered and for tax increases to be implemented as part of an overall strategy to restore the public finances to a sustainable path.

The measures adopted by the Government in February and April were an appropriate start to this process. The public sector pension levy was in line with our general view that reductions through pay were to be preferred over reductions in numbers in the public sector, in cases where useful public services were being provided. The amount of savings achieved through the February and April measures struck a balance between fiscal sustainability on the one hand and avoiding an overly deflationary impact on the other. We were of the view that the huge fall in the tax share which occurred in 2008 would ultimately have to be restored in Ireland if an appropriate level of public services was to be provided. For this reason the tax increases announced for 2009, while unpleasant, can be viewed as part of an appropriate longer-run fiscal strategy.

The other major announcement in April's Supplementary Budget concerned the establishment of the National Asset Management Agency. It is not possible to give a definitive evaluation on the merits of this initiative because in particular, the discount rate which will be applied when the assets in question are acquired will be critical. Too low a discount rate could see long-run losses for the taxpayer; too high a discount could lead to a need for further recapitalisation of the banks by the State and ultimately to full nationalisation. The process through which the discount will be determined is currently unclear.

Whatever the details, the fact that a comprehensive plan is being put in place to deal with the banking crisis is a positive development. In particular, greater clarity over the amount of losses that will ultimately be incurred by the banks as a result of the property collapse will allow an element of uncertainty to be removed from the banking system. A general principle

that applies is that the earlier a resolution can be found to the banking crisis, the better this will be in terms of providing an environment for recovery. This assumes, of course, that the design of policy tools are well thought out. At one level, the desirability for a speedy and comprehensive resolution to the issue would suggest that nationalisation may be the preferred option. Nationalisation would also ease concerns over the correct pricing of assets. However, this route is not without complications, both legal and political.

In broad terms, the amount by which the Government plans to reduce the deficit in 2010 appears correct. As the April measures were introduced with limited time and scope available to craft a package of tax measures that would be least distortionary, the focus on income tax was understandable. However, in framing Budget 2010, we would hope to see a more refined approach to any tax increases and assume that the recommendations of the Commission on Taxation will assist in this regard. We would be fearful that any further over-reliance on income taxes in particular might work against wage falls which are, in turn, vital to the restoration of competitiveness. Movements in the direction of property and carbon taxes would be preferable. We would also argue for the balance of fiscal adjustment to move onto the expenditure side, in particular current expenditure.

On spending, the relative ease with which capital spending can be deferred relative to the cutting of current spending could generate a temptation to rely on the former as opposed to the latter. However, we would stress that infrastructural developments that will provide significant returns to the economy in the long-run should be prioritised. In the context of capital spending, we would repeat another point made in earlier *Commentaries*, that is, the importance of exploiting construction and land cost reductions in the public capital programme. The proposed review of top level pay rates by the Review Body on Higher Remuneration in the Public Sector provides a further opportunity to contain costs in current spending and to impact more broadly on pay rates and hence competitiveness.

On the assumption that the work on bringing greater stability to the public finances and to the banking system continues, these two significant challenges to the health of the economy are now being addressed. Another huge challenge facing the economy was the loss of competitiveness experienced in recent years. Our forecasts include an expectation of wage falls in 2009 and 2010. We also envisage increases in productivity partly as a result of large job losses this year and next. If these forecast trends prove to be correct, they would go some way towards restoring competitiveness. This in turn would lead to a greater likelihood of Ireland benefitting from a global upturn. In this context, it is important to stress again a point made earlier about the need for the balance of fiscal adjustment to move onto current spending. To the extent that tax increases can feed into wage demands, such increases work against the goal of restoring competitiveness.

A global upturn seems to remain, however, just out of sight. Some optimism may be warranted as a result of increased efforts on the part of the Federal Reserve and the Bank of England to inject greater liquidity through quantitative easing. In addition, the fiscal stimulus packages announced by the US Government and others may begin to impact in the latter part of 2009. Some data coming out of the US has prompted some commentators to begin to sound more positive on economic prospects. For example, first quarter profit announcements from JP Morgan, Goldman Sachs and Wells Fargo have exceeded market expectations, partly as a result of an increase in mortgage refinancing. This is turn is being seen as the lagged result of interest rate cuts and so evidence of positive effects of monetary policy finally working through.

The global upturn will be the critical factor in determining Ireland's return to growth and so the focus of policy should still centre on ensuring that Ireland is well-placed to benefit from that international upturn. Mounting public debt and a prolonged financial market crisis would be two potential obstacles but we are hopeful that these can be removed. Private sector wage rates are not directly influenced by government policy. However, to the extent that tax policy, public-sector wage policy and the (revived) partnership process can assist in restoring wage and general cost competitiveness, they should be deployed accordingly.

WHY WORRY ABOUT CLIMATE CHANGE?

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Ireland is subject to strict greenhouse gas emission reductions under EU climate policy. Part of the target will be met by buying offsets abroad, but the remainder will have to be realised domestically. The current economic crisis is reducing greenhouse gas emissions. This may get us close to compliance with our targets under the Kyoto Protocol. However, recession cannot be treated as a long-term answer to climate change problems. Policies aimed at keeping the growth of greenhouse gas emissions in check are needed. Such policies mean higher taxes and more expensive energy, transport and food. How can this be justified?

Carbon dioxide and methane are the two most important greenhouse gases, resulting from the burning of oil, coal and gas, and the production of dairy and beef, respectively. Greenhouse gases change the energy balance of the atmosphere, trapping more energy on the planet, and heating up the atmosphere. This is elementary physics, established in the early 19th century by among others John Tyndall from Co. Carlow. Although there are still people who argue that there are other processes in the atmosphere that will cancel out the enhanced greenhouse effect, the science is well-established and future global warming is beyond reasonable doubt.

For some people, this is sufficient reason for action. The planet is warming. This is humankind's fault. It has to stop. Such reasoning is wrong. Just because something is new and different does not make it wrong. Climate change will take us into uncharted territory, but so do many other things.

Other people emphasise the worst case scenario. That is just scaremongering. One can easily paint a dramatic picture of the impact of climate change. Sea level rise is a good example (Tol *et al.*, 2006). If Greenland melts and West Antarctica slides, sea level would rise by 15 metres. All the deltas would go under, including the coastal plains of Bangladesh and the Netherlands. Hundreds of millions of people would have to flee. This is scary – until one realises that this would happen, if at all, over a time scale of 1,000 years. The likely scenario for this century is a sea level rise of 50 cm – that is,

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half a centimetre per year. Coastal engineers should be able to keep up with that.

The solution to the climate problem is not costless (Tol *et al.*, 2008). Climate policy will hurt the poor, it will hurt farmers, and it will hurt energy producers. Economists are able to design policies that would minimise costs, and even turn a small benefit. Engineers are even more optimistic about the costs of greenhouse gas emission reduction, pointing to the potential for substantial gains in energy efficiency at low cost. Unfortunately, such proposals work under ideal circumstances only. Because of political constraints, actual policies are never as sophisticated and smart as academics would like – and the costs to society are invariably higher than necessary.

The costs of climate policy are real and immediate. The exchequer has reserved €270 million for the period 2008-12 to finance greenhouse gas emission reduction abroad.¹ The forced growth of wind power is driving up the price of electricity in Ireland. How do these costs compare to the benefits of climate policy? Can these benefits be measured? Can they be compared to the cost? Such research has now been carried out for over 30 years, and the first robust insights are emerging.

Estimating the impact of climate change is a daunting task, first of all because climate has such a wide range of effects. Sea level rise is mentioned above, but climate change also affects the demand for winter heating, the demand for summer cooling, the supply of wind and water power, river floods, surface and groundwater resources, the demand for water, crop yields, agricultural pests and pathogens, farm animal welfare and productivity, and tourism flows. Climate change also affects human health, through heat and cold stress that enhance cardiovascular and respiratory problem, and through water-, food-, and vector-borne diseases such as salmonellosis and malaria. And climate change would have profound impacts on nature and biodiversity.

Estimating the impact of climate change is also difficult because climate change is so uncertain. The uncertainty begins with the future number of people, their wealth, their energy and their emissions, continues with the response of the atmosphere and oceans to greenhouse gas emissions, includes the vulnerability of future societies to climate change, and ends with the uncertainty about the impacts themselves.

The impacts of climate change are uncertain and vary between sectors, between countries, and over time. Depending on the impact, place, time, and study, one can find large or small impacts, and positive or negative ones. In

¹ Under the provisions of the Kyoto Protocol of the United Nations, countries are allowed to finance projects that reduce emissions in other countries and count these as their own emission reductions. In the Irish media, such payments are regularly portrayed as Kyoto fines. This is incorrect, first, because this is a normal market transaction and second, because there are no fines for non-compliance with targets of the Kyoto Protocol.

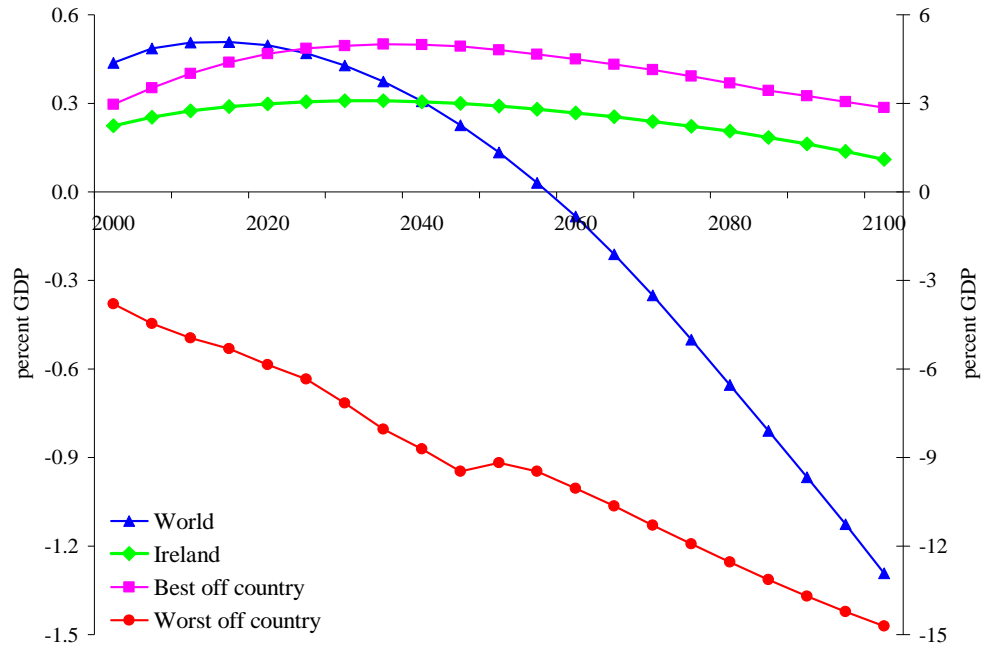
order to provide an overall estimate of the seriousness of climate change, economists have aggregated all impacts, using money as the numeraire. For some impacts, e.g., the cost of dyke building, money is the natural metric. For other impacts, e.g., the impact on human health, the methods of monetary valuation have to be used. This introduces additional uncertainty and even controversy into the analysis (Pearce *et al.*, 1996).

The following insights emerge from the economic literature on the impact of climate change (Tol, 2009):

1. The impact of climate change is relatively small. The average impact on welfare is equivalent to losing a few per cent of income. That is, the impact of a century worth of climate change is comparable to the impact of one or two years of economic growth.
2. Although the impact of climate change may be small, it is real and it is negative. Climate change is likely to have a positive impact in the first half of the 21st century, and impacts turn negative later. The initial positive impacts are irrelevant for policy. The workings of the climate system are so slow that they cannot be avoided even if emissions were to fall to zero tomorrow. The part of climate change that can be influenced by climate change, has net negative impacts.
3. Impacts are much more negative in poor countries than in rich ones. This is because poor countries tend to be in hotter places already, poor countries have a greater share of their economic activity in exposed sectors such as agriculture, and because poor countries have greater difficulty in successfully adapting to climate change.

Figure 1 illustrates these points. It depicts the total economic impact of climate change. The impact on Ireland is small, but this hides large positive impacts on winter mortality and heating, and large negative impacts on summer cooling and biodiversity, particularly coastal wetlands. For Ireland, the turning point is around 2035 – that is, incremental impacts are negative. For the world average, incremental impacts turn negative by 2020 already, and total impacts are negative as of 2060. Note that impacts do not exceed 1.3 per cent of GDP in the 21st century. The world average hides large differences between countries. Figure 1 also displays the impact on the best-off country (Canada) and the worst-off country (the Maldives in the first half of the century, and the Congo in the second half). The world average economic impact is positive at first because rich countries in the temperate zone dominate the world economy. The majority of the people on the planet are already negatively affected by climate change.

Figure 1: Welfare Gain or Loss from Climate Change: Ireland, the World and Countries Losing/Gaining Most from Climate Change, 2000-2100*



*Graphs show the total economic impact of climate change, expressed in welfare-equivalent income loss (per cent of GDP) for Ireland and the World (left axis) and for countries losing and gaining most (worst off/best off) from climate change. Based on Tol (2002a,b).

Estimates of the total economic impact of climate change are interesting, but not particularly relevant. Climate change cannot be altogether avoided, so the benefits of climate policy are but a fraction of the impact of climate change. In fact, any policy decision has only a miniscule effect on climate change. Therefore, the marginal impact of emissions is a more appropriate indicator for policy evaluation. This is commonly referred to as the social cost of carbon. It equals the net present value of the incremental impacts caused by a small increase in emissions.

There are many estimates of the social cost of carbon in the economic literature. A number of insights emerge from this literature (Tol, 2005):

- a) The social cost of carbon depends strongly on a number of ethical assumptions, particularly how much one cares about risk, about impact on other countries, and about the future. This is no surprise, as climate change is a long-term, global, and uncertain problem. However, decisions are made every day that reflect how much we care about the future, foreign lands, and risk. If one uses revealed preferences to set the value of these ethical assumptions, then one finds that the social

- b) Studies that have been subject to peer-review tend to be more optimistic about climate change than studies that have had no quality control. That is, a lot of the scaremongering is not based on sound science. The Stern Review is the best-known example of pseudo-scientific exaggeration (Yohe and Tol, 2007).
- c) Estimates have become less pessimistic over time.
- d) Uncertainties are large and negative surprises are more likely than positive surprises. That is, the risk premium is a large share of the estimated social cost of carbon cited above.

What does this all mean for Ireland? To date, Ireland's climate policy was determined by the European Union. This was one of the "grand bargains" of Europe, in which countries like Germany and the Netherlands set the environmental policy for the whole union in return for funding the agricultural and regional policies. No longer. Unless the current recession is worse than feared, Ireland will become a net contributor to the European Union, and Ireland can and should demand a greater say in the decisions made in Brussels. The estimates of the social cost of carbon cited above suggest that actual European climate policy is roughly on the right track – but note that the rhetoric in Brussels calls for much more stringent action.

As argued above, Ireland has little to fear from climate change. Climate policy in Ireland can only be justified by the moral obligation not to harm others. At the same time, Ireland can contribute only very little to international climate policy. Our emissions are too small to register. It is unlikely that carbon-free electricity or transport will be invented or commercialised on Irish soil. That implies that we in Ireland should do our bit for climate policy. Not more, because that would hurt the competitiveness of our industry, and not less, because that would be immoral.

"Doing our bit for climate" should be done in as simple, as cheap, and as effective a way as possible. This implies a carbon tax, and a carbon tax only. For as yet unregulated emissions, a carbon tax can be introduced in the next budget. It would bring welcome revenue. A carbon tax should not come on top of existing climate policy. A carbon tax should replace it. This would bring welcome savings in the government budget.

At the European level, Ireland should argue for a uniform carbon tax in all Member States. The success of this argument may be furthered by the double shock effect of Ireland taking the lead on climate policy, and Ireland proposing a harmonised tax. Eventually, a carbon tax should replace emissions trade. To date, emissions trade has been about hidden subsidies to selected companies rather than about emission reduction. The volatility of the permit price creates

uncertainty and deters financiers from investing in research and development. A tax does not suffer that drawback.

Climate change is a real problem. The impact of climate change on Ireland is moderate. The effect of greenhouse gas emission reduction in Ireland on climate change is minor. Nonetheless, as a responsible nation, Ireland should make a constructive contribution to international climate policy. A carbon tax, and a carbon tax only, would be a simple, cheap and effective way to reduce emissions and demonstrate good will.

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SCHOOL LEAVERS: HOW ARE THEY FARING?

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Recent evidence from the School Leavers' Survey suggests that young people who enter the labour market after leaving school are likely to be particularly vulnerable in the current economic climate. Since the late 1970s the Economic and Social Research Institute has been carrying out research and publishing data on the employment and education outcomes of school leavers. A new report in this series* suggests that young people who leave school without a Leaving Certificate qualification tend to be more vulnerable to unemployment, and are therefore likely to be particularly vulnerable during the current recession.

ESRI researchers Delma Byrne, Selina McCoy and Dorothy Watson find that the level of educational qualification achieved is related to gender and parental socio-economic background. While the prevalence of early school leaving has reduced over the years and now remains relatively stable at 14 per cent for this cohort (representing almost 9,000 young people), males are more likely to leave school early than females, as are those from working class households and households with parental unemployment. Patterns over time suggest that males who leave school early have been increasingly more likely to cite the pull of the labour market as a reason for leaving school.

In 2006, just 5 per cent of young people who left school in the academic year 2004/05 were unemployed, a low rate which is not expected to be seen again for some time. However, the risk of unemployment is related to the level of education attained. The report shows that young people who leave school without gaining any qualifications have the highest level of unemployment and the lowest level of employment. The persistent vulnerability of this group of school leavers has been evident even in favourable economic conditions as measured by their position relative to those with a Leaving Certificate. In 2006, these young people were more than 5 times as likely to be unemployed as those with a Leaving Certificate.

The numbers entering apprenticeships after leaving school had peaked at close to 5,000 in 2006 (as shown by FÁS data); these were largely concentrated in the construction and electrical trades. Almost a quarter of young people with a Junior Certificate qualification had opted for the apprenticeship route, many

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of whom are male: the reliance of males with this level of education on the apprenticeship sector is likely to have consequences for the future. With the sharp decline in the building industry, recent entrants to apprenticeship are likely to be particularly vulnerable.

Young people who have completed the Leaving Certificate fare much better than other school leavers because they have a higher level of education and have more post school choices open to them. Among those with a Leaving Certificate, the employment route tends to be taken by those who achieve lower grades while the education route is taken by those achieving better results in the Leaving Certificate examination. However, even this group are not protected from labour market vulnerability. While female school leavers rely on the distribution sector for employment, males rely on the industry sector for employment. In 2006 over half of all male school leavers in full-time employment were found in the industry sector, and the majority of these (60 per cent) were working in the construction sector.

The report outlines that young adults continue to be the group with the highest risk of unemployment and their unemployment rate has increased further since the time of the survey (QNHS Q4 2008). Adequate preparation in terms of educational and vocational qualifications will be more important than ever in ensuring that they are equipped to take advantage of a shrinking pool of job opportunities.

*D. Byrne, S. McCoy and D. Watson, 2009. [*The School-leavers' Survey Report 2007*](#), Dublin: The Economic and Social Research Institute and the Department of Education and Science.

WHO IS PAYING FOR REGIONAL BALANCE IN IRELAND?

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During good times and bad times, there has been ongoing debate about the extent of regional disparities in income and appropriate policy responses. In a recently published paper Edgar Morgenroth analysed the extent to which resources are redistributed across regions in Ireland through taxes and public expenditure and how this has affected regional disparities. Morgenroth's analysis shows that the operation of the fiscal system reduces income disparities across counties. The gap between the counties with the highest and lowest incomes before taxes and subsidies is significantly reduced once subsidies and taxes are taken into account. The difference between the 'poorest' and 'richest' counties increased over the period 1995 to 2002, suggesting that there was income divergence during the 'Celtic Tiger' era.

Since taxes on personal income and personal subsidies are not the only fiscal transfers that take place the paper also considers a wider range of government expenditure and taxes including all taxes and all direct expenditure by the public service. While there are no officially published data on regional government accounts the data which are published, when combined with reasonable assumptions as to the distribution of expenditure items for which regional information is not published, allow a broad picture of regional government accounts to be constructed for the first time.

This data shows that real resource transfers per head of population (i.e., the per capita excess of expenditure over revenue), have increased over time. In other words, redistribution across regions has increased over time. These transfers tend to flow from richer to poorer areas – a large negative correlation between the implied transfer of resources and real per capita gross value added. Thus the Irish fiscal system acts to reduce regional disparities, even though there are no explicit equalisation rules. Expenditure is positively correlated with real per capita output (Gross Value Added), but tax revenue is even more strongly correlated with real per capita output, implying that the fiscal system operates to transfer resources from richer to poor regions.

Overall, Dublin and the South-West region are substantial net contributors. For example, in 2004 both Dublin and the South-West contributed just over €2,000 per person while in the same year the Midlands region received a

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transfer of just over €3,000 per person. In absolute terms the level of transfers is also substantial. In 2004 just over €3 billion were transferred from the 'net surplus regions' Dublin, South-West and Mid-West to the other regions. Overall the tax burden (including social contributions) averages at €11,000 per person in 2004 with a high for Dublin of almost €14,000 per person and a low of €8,500 per person in the Midlands.

While Dublin and the South-West regions have a higher per capita expenditure than other regions, they have an even larger per capita revenue. For example, over the period 1995 to 2004 Dublin accounted for 28.9 per cent of the population, 35 per cent of revenue and 31.4 per cent of expenditure. The Midlands, which accounted for just 5.7 per cent of the population and 4.6 per cent of revenue accounted for 5.5 per cent of public expenditure. Thus while being redistributive the fiscal system does not appear to unduly disadvantage the better off regions.

Given that the debate has been concentrating on expenditures and particularly investment it is particularly interesting to consider trends in real per capita public investment. In real terms the level of investment has increased substantially in all regions. While the Dublin region received a large share of total investment, it also accounts for a large share of the total population. In per capita terms, therefore, Dublin is not favoured when it comes to capital expenditure. Indeed no clear pattern of 'excess' per capita capital expenditure can be detected in the data.

The debate about regional expenditure is implicitly a debate about the trade off between equity and efficiency. In as much as the analysis can address this debate, the results suggest that the Irish fiscal system does provide a mechanism to achieve more equity, while at the same time preserving a higher level of expenditure in the wealth generating regions. The finding that the system provides a significant degree of regional equity is largely the result of the centralised nature of revenue collection in conjunction with the aim to provide similar levels of service across the full range of government activities in all regions. In order to achieve a similar level of equity with a less centralised system would require a more sophisticated system of fiscal equalisation payments across regions. Thus, while many have argued that the Irish system is too centralised this centrality turns out to be an asset in terms of achieving regional equity.

Whether the levels of transfers provide an optimal balance between equity and efficiency cannot be determined with the analysis provided here. However, since there is no clear pattern of 'excess' capital expenditure in the less developed regions, it appears that the bulk of the re-distribution does not tackle any structural deficiencies in those less developed regions, and thus will do little to generate sustained convergence in living standards.

*"Regional Dimension of Taxes and Public Expenditure in Ireland", *Regional Studies*, forthcoming, and currently available on the journal's website under the reference DOI: 10.1080/00343400802093839.

WHAT DO WE KNOW ABOUT TRAINING AT WORK?

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There has been renewed interest in recent years in education and training as instruments for economic progress, fuller employment and social integration. This coincides with a new emphasis on the need for 'life long learning', to respond to changes in the organisation and technology of production and service delivery and to counter the socially disruptive effects of increased labour market flexibility. In this context, the role of job-related training is of particular importance. Philip O'Connell and Jean-Marie Jungblut* review the available empirical research on the subject of workplace training and how it affects individual earnings and career development, as well as wider organisational performance.

In-career training is highly stratified:

- the employed receive more training than the unemployed, who in turn receive more training than those not economically active,
- those with higher skills, or educational attainment are more likely to participate in training, including employer-provided training,
- larger firms, and those that pay higher wages are also more likely to train their employees,
- part-time workers, those on temporary contracts and older workers are less likely to receive training.

These patterns of participation suggest that those with the greatest need for training tend to receive less of it, while those with higher education and skills are likely to receive more training.

The dominant theoretical framework informing most research on training has been the human capital approach. This assumes that individual workers undertake training, and employers invest in training, on the basis of their estimates of future returns (including employment prospects, wages and productivity gains). The human capital approach emphasises the distinction between "general" training – of use to both current and future employers – and "specific" training, linked closely to the current job and of use only to the current employer. In this approach it is expected that employers will not pay for general training, because they cannot recoup the cost – other employers would be free to "poach" trained employees and reap the benefits of enhanced

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productivity. If, as a result of this market failure, employees have to pay the full cost of general training – whether directly or through reduced wages – it is likely that there will be under-investment in training. However, empirical evidence tends not to support this hypothesis. The empirical literature has found that the theoretical distinction is difficult to operationalise; and that many employers pay for *both* general and specific training. Research findings from Germany, Ireland, Sweden, the UK and the US show that the vast majority of job-related training appears to be employer paid, at least partially.

What accounts for this? The human capital approach is based on the expectation that workers who receive general training are more mobile. But workers in organisations that invest in general training may tend to stay longer with the firm if they interpret the provision of general training as part of a long-term contract within which skills are likely to be upgraded. This may have particular relevance in the knowledge economy: “training firms” may be more attractive to employees and they may use training as a recruitment or retention strategy.

Most empirical work suggests that there are positive wage returns to training. However, when selection effects are controlled for the returns are frequently found to be small or even non-significant. There is some evidence that the benefits of training are shared more or less equally between employers in terms of productivity and employees in the form of wages. Comparative research on European countries finds that training, both on- and off-the-job, increases current earnings growth, although this earnings growth is likely to be temporary. A further finding is that the wage returns may be higher among those with low propensity to participate in training (such as those with low educational attainment). This could be due to selection effects, but may also be due to higher returns to training among those with poor qualifications who nevertheless work in the primary segment of the labour market or in ‘good’ firms, where the average stock of human capital is high.

While stratification in access to training participation may be universal, further research is needed on variations in access. Institutional characteristics of national labour markets may be important here. National wage setting arrangements that give rise to compressed wage structures may increase training, particularly general training. Where compressed wage structures coincide with strong employment protection legislation, giving rise to lower labour mobility, then the incidence of training may be higher but with lower returns to training. Such considerations may help to explain why earnings have become more dispersed in some countries than others (e.g. the US versus many European countries).

While there is a wealth of research on the labour market effects of initial education, research into the effects of training of employed workers is a developing field. Crucial questions remain to be addressed, particularly with regard to longer-term effects of training on employment security and career progression.

*Philip O’Connell and Jean-Marie Jungblut [“What do we know about training at work?”](#) in K.U. Mayer and H. Solga. (eds), *Skill Formation: Interdisciplinary and Cross-National Perspective*, Cambridge: Cambridge University Press.