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Ireland: Selected Issues

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INTERNATIONAL MONETARY FUND

IRELAND

Selected Issues[1]

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Approved by European Department

August 28, 2012

Contents Page

I. Household Consumption, Wealth, and Saving 3
A. Introduction 3
B. The Consumption-Balance Sheet Nexus 4
C. The Outlook for Household Saving and Consumption 6
D. Conclusion 9

References 10

II. Access to Credit, Debt Overhang, and Economic Recovery: The Irish Case 11
A. Introduction 11
B. Overall Credit Conditions 12
C. Lending Standards and Credit Conditions Disentangled 18
D. Options for dealing with reduced access to finance for SMEs 21
E. Conclusions 23

References 23

III. Medium-Term Fiscal Consolidation in Ireland: Growth-Friendly, Targeted, Sustainable 27
A. Introduction 27
B. Revenue and Expenditure Trends and the Consolidation Mix 28
C. High-Quality Options for Revenue Base-Broadening 35
D. Options for More Targeted and Efficient Expenditure 48

[1] All policy recommendations in this paper are staff views in the context of the 2012 Article IV consultation with Ireland. They are distinct from the policy discussions for Ireland's EU-IMF supported program.

IV. Averting Structural Unemployment in Ireland 56
A. Introduction.....56
B. Irish Labor Market: Before and After the Crisis.....57
C. Challenges to Reducing Unemployment.....59
D. Potential Risk Factors for Higher Structural Unemployment.....60
E. Further Reforms to Avert Structural Unemployment.....68

Bibliography 71

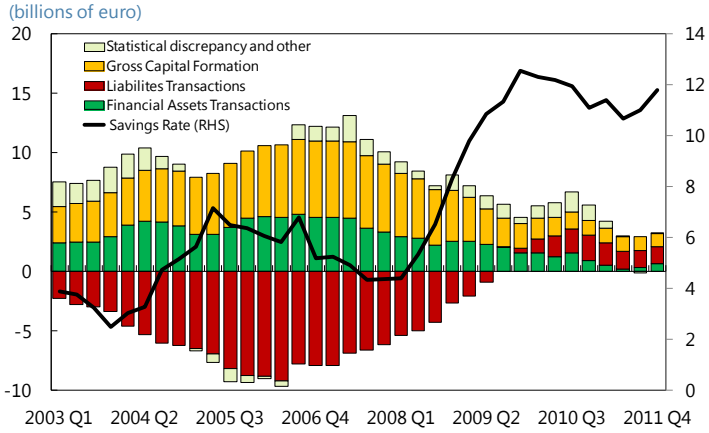
I. Household Consumption, Wealth, and Saving[1]

A. Introduction

1. **Household consumption is a key component of domestic demand which has yet to recover.** Household consumption constitutes about half of Ireland's GDP and about 65 percent of domestic demand. Real private consumption growth averaging about 7 percent in 2005–07 contributed to the boom in this period. However, from its peak in the fourth quarter of 2007, real private consumption fell 14.6 percent by the first quarter of 2012, making a substantial contribution to the 9.4 percent decline in GDP in that period. As of the first quarter of 2012, private consumption continues to decline at a pace of 2.2 percent year-on-year, which dampens the prospects for a broad-based recovery of domestic demand.

2. **Household consumption and investment patterns during the boom were enabled by accumulating high debt**. Figure 1 shows the increase in households' net borrowing ("liabilities transactions") during the boom which funded a large increase in household capital formation, mostly related to real estate such as newly built housing and home improvements. As credit conditions further eased in the mid-2000s, and as households' confidence was boosted by their rising net wealth, additional borrowing allowed households to reduce their saving rate and allocate a larger share of their disposable income towards consumption. As consequence, many households' balance sheets became riddled with debt.

Figure 1: A Credit-Fuelled Boom and Its Unwinding
(billions of euro)



Sources: CBI; and IMF staff calculations.

3. **Despite a rise in household saving in recent years, debt burdens remain high.** With the end of the property boom in 2007–08, lending slowed sharply. Figure 2 shows how slowing household lending coincided with sharp falls in household net wealth from the collapse in house prices. In response, households started to save a larger portion of their income. The resulting decline in consumption reinforced the fall in disposable incomes which started with the collapse of the construction sector and was later accelerated by fiscal consolidation among other factors. As a result of falling incomes, households achieved only modest reductions in debt relative to income by 2012 despite nominal debt reductions from higher savings.

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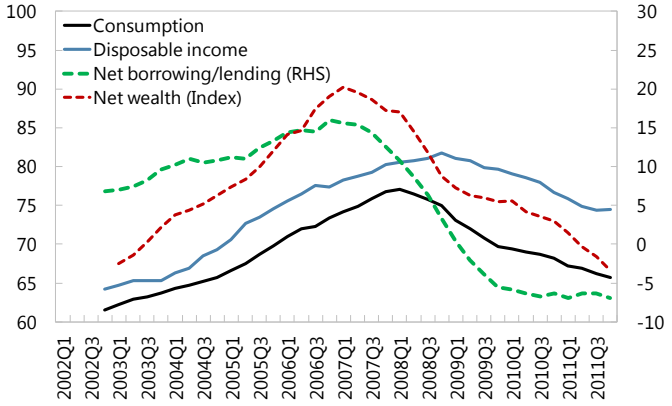
[1] This paper was prepared by Jochen Andritzky. The analysis benefitted greatly from comments and data provided by the Irish authorities. Vizhdan Boranova provided excellent research assistance.

4. **The sizable overhang of household debt is expected to be a drag on the recovery of consumption over the medium term.** This paper describes the nexus between household wealth, saving, and consumption and provides estimates for the medium-term path of household saving and consumption. Under current macroeconomic assumptions, the savings rate is expected to decline gradually from 14 percent in 2011 to 12 percent by 2017. During the same period, household debt would decline from about 210 percent to 185 percent of disposable income. Alternative scenarios show how an accelerated speed of deleveraging could in part become self-defeating as lower demand depresses growth and incomes, whereas slower deleveraging could support growth but requires additional new lending.

Figure 2: The Turn of the Credit Cycle
(Billions of 2002 euros)

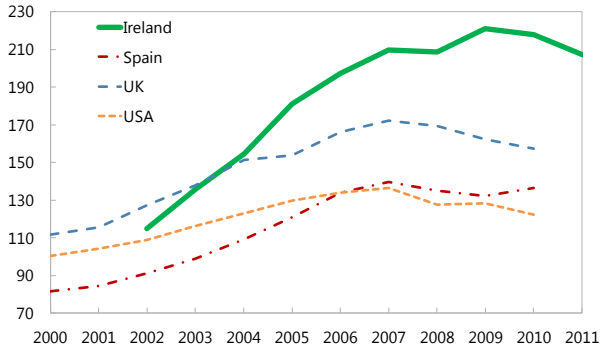


Sources: CBI; CSO; and IMF staff calculations.

B. The Consumption-Balance Sheet Nexus

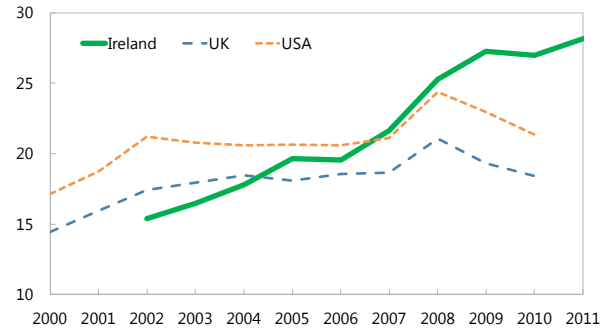
5. **The extent of households' indebtedness distinguishes Ireland from comparators.** During the last decade, households' debt-to-income and leverage (debt-to-assets) ratios deteriorated markedly: households rapidly accumulated debt during boom times whereas household incomes and asset values declined severely during the crisis. The amplitude of debt accumulation and, subsequently, of income and house price declines has been more pronounced than in comparator countries where strong house expansions were also followed by a correction (Figures 3 and 4). As debt overhangs are known to take time to work off, households' consumption-saving decisions may be affected in a more lasting manner.

Figure 3. Household Debt to Gross Disposable Income
(percent)



Sources: OECD; and IMF staff calculations.

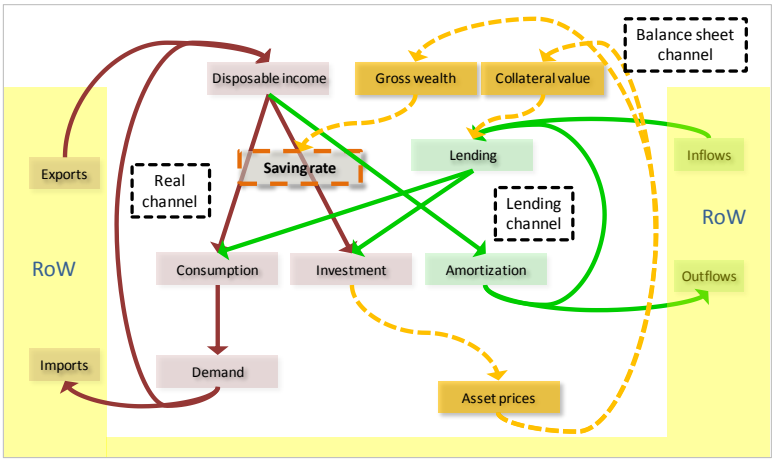
Figure 4. Household Leverage Ratio 1/
(percent)



Sources: OECD; and IMF staff calculations
1/Households' liabilities over households' financial and housing assets.

6. **The lending and balance sheet channels can create self-reinforcing cycles between borrowing and demand** (Figure 5). Financial intermediation lifts the intertemporal budget constraint of the real channel and allows households to borrow against future income for the purpose of consumption and investment ("lending channel"). Higher consumption and investment in turn nourish incomes and asset values, enhancing households' ability to service their debt. This flow-based framework is complemented by the "balance sheet channel" that takes into account asset prices and wealth.

Figure 5. Analytical Framework



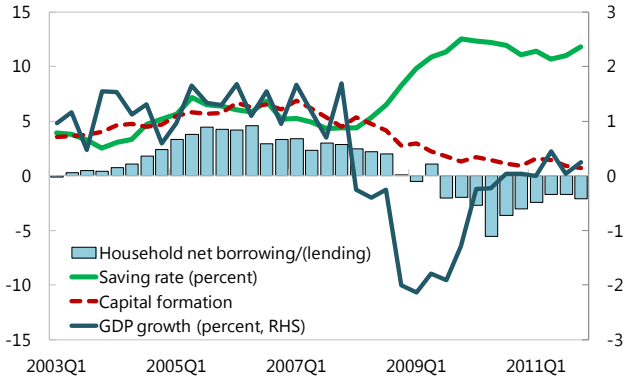
Source: IMF staff.

By removing financial constraints, the lending channel lifts asset prices which in turn eases access to lending through higher collateral values and a lower propensity to save if agents treat the gain in wealth as being permanent. However, these effects also work in reverse as a vicious circle, with declining asset values leading to a sharp fall in lending and demand, feeding back into falling incomes and asset prices. In analogy to the financial accelerator described by Bernanke and Gertler (1989), the balance sheet channel can lead to overborrowing and act procyclically.

7. **The procyclical dynamics of the lending and balance sheet channels can make household's deleveraging more costly and protracted:**

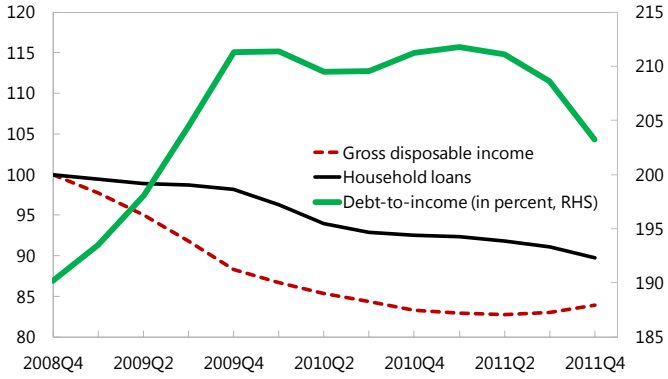
- Figures 6 and 7 exemplify the lending channel: In the crisis, growth collapsed and the savings rate jumped as banks stopped lending and households cut consumption and investment to free resources for repaying their loans (Figure 6). This switch in income

Figure 6: Household Borrowing, Saving, and Growth
(Billions of euros)



Sources: CBI; Haver Analytics; and IMF staff calculations.

Figure 7: Decline in Income Versus Reduction in Debt
(2008 Q4=100)

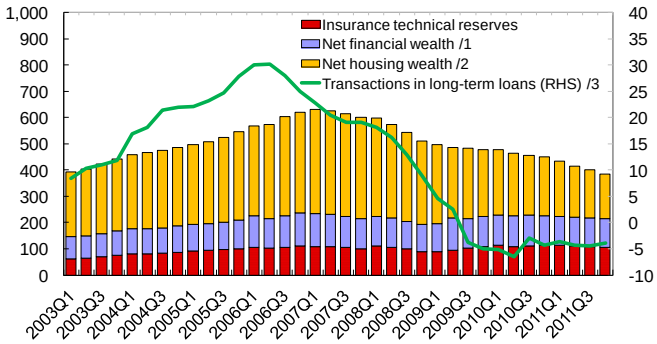


Sources: CBI, and IMF staff calculations.

allocation triggered a contraction of demand and incomes which initially outpaced the reduction in debt. Only once growth—driven by external demand—slowly recovered, did households' debt-to-income ratio start to decline (Figure 7).

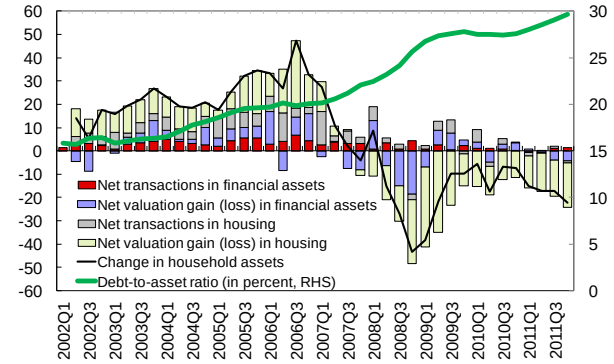
- Figures 8 and 9 illustrate the balance sheet channel: Mortgage lending boosted the value of housing assets which dominate households' balance sheets and led to a broad-based increase in perceived net wealth (Figure 8). Valuation gains from higher house prices masked the associated increase in mortgage indebtedness, so households' debt-to-asset ratio rose only slowly until the crisis brought a sharp correction in house prices (Figure 9).

Figure 8: Composition of Household Net Wealth
(Billions of 2002 euros)



Source: CBI.
1/ Excluding insurance technical reserves and mortgage debt.
2/ Housing assets minus mortgage debt. 3/ Four quarter rolling sum.

Figure 9: Changes to Household Assets and Leverage
(Billions of euros)

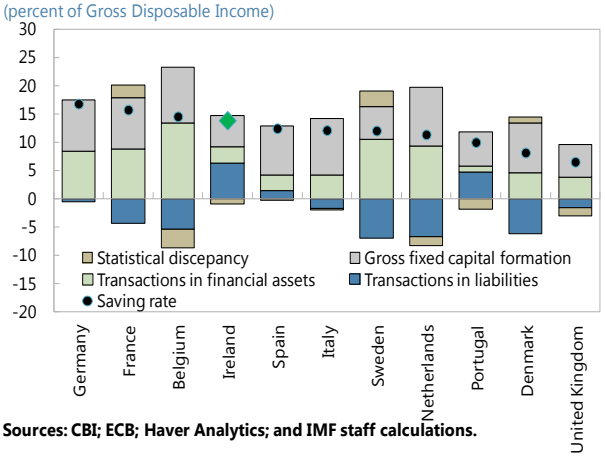


Source: CBI.

C. The Outlook for Household Saving and Consumption

8. **Irish households currently devote a large portion of their income towards debt repayment.** At 14 percent, Irelands' households feature one of the highest savings rates in Europe in 2011.[2] Figure 10 shows that liabilities transactions—mainly debt repayment given the lack of new lending—amount to about 6 percent of disposable income, the highest ratio among selected European countries, and constitute the principal use of savings.

Figure 10: Decomposition of Household Savings, 2011
(percent of Gross Disposable Income)



Sources: CBI; ECB; Haver Analytics; and IMF staff calculations.

[2] The saving rate used for forecasting is based on CSO data for household disposable income and savings and therefore differs from quarterly Institutional Sector Accounts (see ESRI 2012).

9. **Econometric evidence suggests that the savings rate will decline only gradually over time.** Table 1 presents results from a panel regression of determinants of the savings rate in nine countries over 1980–2010.[3] Regressions (1) and (2) use detrended levels of the explanatory variables to ensure stationarity, similar to IMF (2011). Regressions (3) and (4) use first differences of these variables.

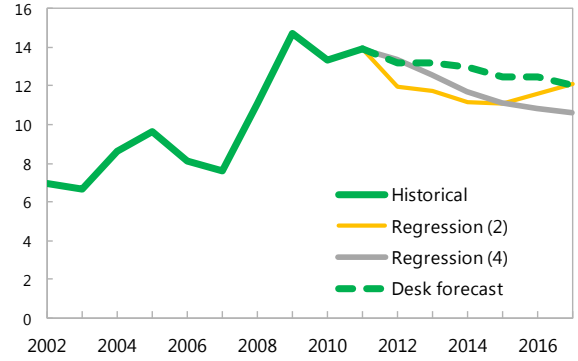
Table 1: Panel Regression of the Household Savings Rate (1980-2010)

	Detrended levels		Differences	
	(1)	(2)	(3)	(4)
Dependency rate	-0.10	-0.15	-0.01	-0.22
	[-1.26]	[-1.62]	[-0.06]	[-0.77]
Interest rate (change, lagged)	0.25 *	0.14	0.19 **	0.16 *
	[1.94]	[0.85]	[2.66]	[1.71]
Fiscal balance	-0.35 ***	-0.48 ***	-0.33 ***	-0.31 ***
	[-7.34]	[-6.63]	[-5.40]	[-4.69]
Unemployment	-0.02	-0.12	0.05	0.12
	[-0.23]	[-1.19]	[0.47]	[1.06]
Net housing wealth (change) 1/		-0.011 *		-0.009 **
		[-2.09]		[-2.25]
Financial liabilities (lagged)		-0.03 **		-0.02
		[-2.73]		[-1.11]
Constant	-0.05	0.01	-0.27	-0.12
Observations	230	192	221	183
Adjusted R-Squared	0.28	0.31	0.19	0.26

Sources: OECD, WEO, CBI, IMF staff estimates.
1/ Approximated as housing assets minus household liabilities.
Notes: Dependent variable is household savings rate. Sample includes Canada, France, Germany, Italy, Japan, Spain, United Kingdom for 1980-2010 where available. Robust t-statistics in brackets marked with * (significant at 10 percent level), ** (significant at 5 percent level) or *** (significant at 1 percent level). All variables demeaned and detrended. Fiscal balance for Ireland excludes bank support.

10. **Out-of-sample predictions based on regressions (2) and (4) show only a slow decline in savings.** These predictions are broadly consistent with staff's WEO forecast under which the savings rate will decline from 13.2 percent in 2012 to 12.0 percent in 2017 (Figure 11). Disaggregating the contributions to the forecast highlights the significance of Ricardian effects whereby households relax savings when the government cuts the fiscal deficit (and *vice versa*); this effect is consistently found in

Figure 11: Household Saving Rate Forecast
(percent)



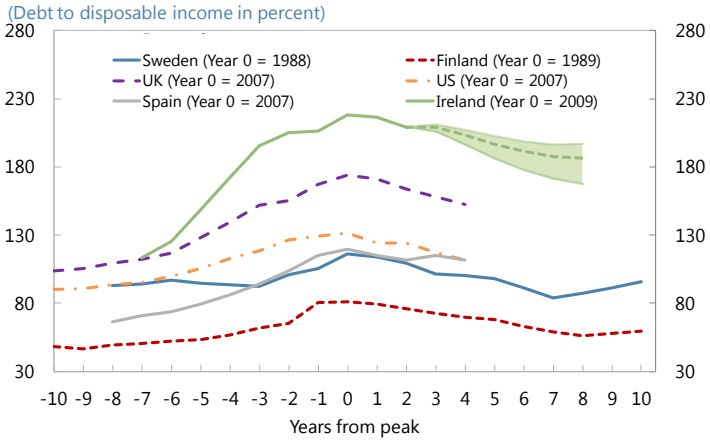
Source: IMF staff estimates.

[3] The panel is comprised of annual data for Canada, France, Germany, Ireland, Italy, Japan, Spain, the United States, and the United Kingdom.

the empirical literature.[4] Using the coefficient for the fiscal balance as proxy for this Ricardian offset, the ongoing fiscal consolidation in Ireland will contribute most to the estimated reduction in the household savings rate. The reduction in household liabilities or net wealth has a small yet significant contribution, likely a reflection of the common difficulty of estimating the balance sheet effect from empirical data.[5] The decline in unemployment and the increase in the dependency rate play minor roles.

11. **Under the current forecast, households would reduce debt gradually from about 210 percent of disposable income to 185 percent by 2017.** Building on the forecast of the savings rate, the debt path is calculated based on the IMF desk forecast for a muted recovery of disposable incomes at below GDP growth. Further, the debt path assumes that households use about half of their savings to retire debt, and new lending growth remains moderate, increasing from 1.6 percent of GDP in 2012 to 5.3 percent by 2017.[6] Reflecting the positive feedback loops described above, the resulting debt path slopes down gradually, being comparable to the pace of debt reduction observed in other mortgage-driven housing bubbles (Figure 12).

Figure 12: Household Debt Around the Cycle Peak
(Debt to disposable income in percent)



Sources: OECD; Haver Analytics; national statistics; and IMF staff calculations.

12. **Alternative scenarios for the savings rate hinge on availability of new lending to avoid that the growth feedback outweighs households' deleveraging efforts.** Based on a simple multiplier-based macroeconomic model, Figure 13 illustrates growth and debt paths under alternative scenarios for the savings rate. A higher savings rate, associated with a stronger desire of households to deleverage, would dampen growth and incomes, thus resulting in only a marginally accelerated reduction in households' debt-to-income ratio relative to the baseline scenario. On the opposite side, a 4 percentage point lower savings rate could lift growth temporarily by about 1 percent while the household debt-to-income decline is marginally slower. Such a scenario of slower deleveraging would require higher volumes of new lending for consumption purposes by about €2-3 billion per year. In addition, it is likely that the current outlook for house prices—which is based on a bottoming out of the real estate market during 2013—requires a higher level of mortgage lending than is currently observed.

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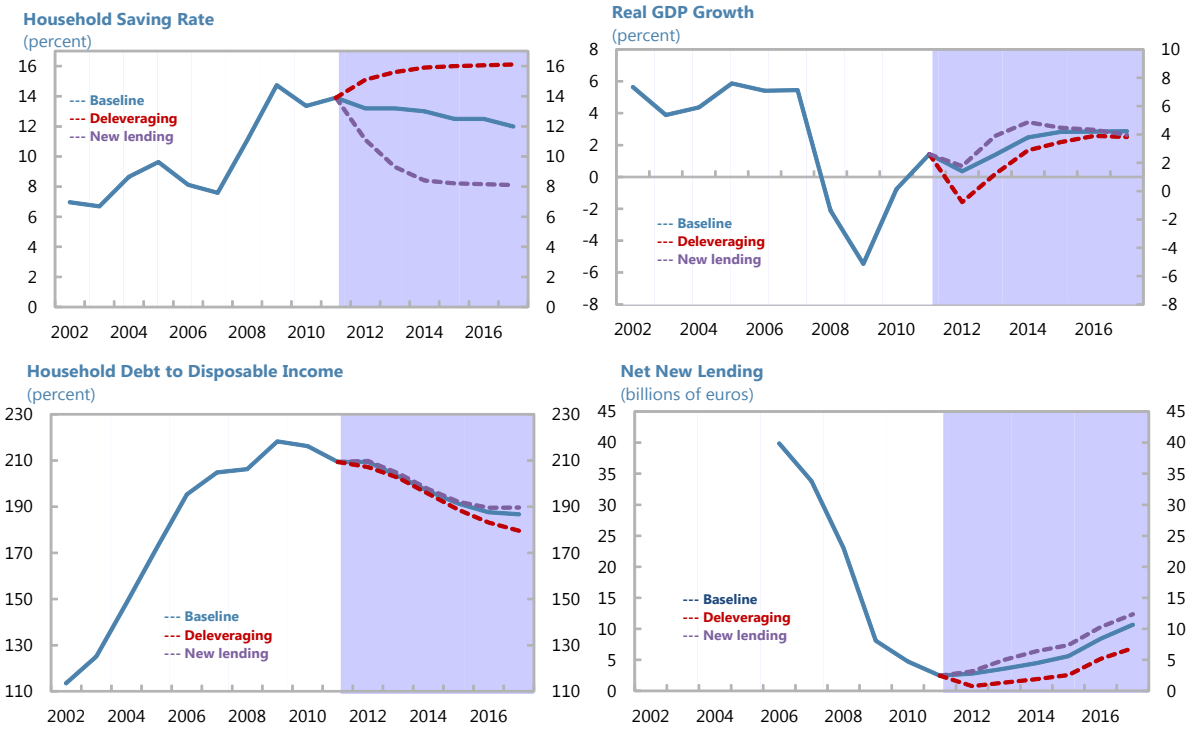
[4] For an overview of typical determinants used in other empirical studies, see Hüfner and Koske (2010).

[5] See Salotti (2010) and DeBonis and Silvestrini (2012) for studies focusing on the wealth effect.

[6] No reduction of debt from bankruptcy proceedings or loan modifications is assumed.

Figure 13. Growth and Debt Under Different Scenarios



Source: IMF staff projections.

D. Conclusion

13. **Irish households are undergoing a protracted recovery from a typical yet exceptionally large credit-driven boom-bust cycle.** During the expansion, households took on a substantial load of debt which, after incomes declined and asset prices corrected, turned out to be excessive. In response to overstretched balance sheets, households allocated a larger portion of their diminished income towards savings to rebuild their net worth, mainly by reducing debt. Thus, the credit boom in the Irish household sector resembles other credit-driven boom-bust cycles in which high leverage prompts a rise in saving rather than countercyclical dissaving at the turn of the cycle, resulting in a positive feedback loop that deepens the recession, accelerates the fall in asset prices, and weakens the recovery.

14. **As the debt overhang will take time to unwind, household consumption is expected to remain subdued in the medium term.** Empirical estimates suggest that household's preference for saving will taper off, in particular in response to a tighter fiscal stance and under the assumption of sufficient mortgage lending to normalize the real estate market. Informed by empirical estimates, the savings rate is forecasted to decline gradually from 14 percent currently to about 12 percent in 2017. Given the desk forecast for 0.2 percent of annual average real growth in disposable income during 2012–17, consumption is expected to grow at 0.7 percent per year in real terms on average. At the same time, the savings rate remains sufficiently high to sustain a steady decline in household debt burden over time.

References

Bernanke, Ben S., and Mark Gertler (1989). "Agency Costs, Net Worth, and Business Fluctuations," *American Economic Review*, vol. 79 (March), pp. 14–31.

DeBonis, Riccardo, and Andrea Silvestrini (2012). "The Effects of Financial and Real Wealth on Consumption: New Evidence from OECD Countries," *Applied Financial Economics*, vol. 22 (5), pp. 409–425.

Durkan, Joseph, and Niall O'Hanlon (2012). "The Savings Rate During Recession," ESRI Quarterly Economic Commentary (Research Notes), Summer 2012.

Hüfner, Felix, and Isabelle Koske (2010). "Explaining Household Savings Rates in G7 Countries," OECD Economics Department Working Papers No. 754.

IMF (2011). "What Drives the U.K.'s Household Savings Rate?" IMF Country Report No. 11/221.

Salotti, Simone (2010). "Global Imbalances and Household Savings: The Role of Wealth," *The Social Science Journal*, vol. 47 (January), pp. 21–44.

II. Access to Credit, Debt Overhang, and Economic Recovery: The Irish Case[1]

A. Introduction

1. **After a prolonged boom, particularly in property-related and financial sector activities, bank credit has been falling steadily, raising concerns of a credit crunch.**[2] A credit crunch is a reduction in the general availability of credit or a sudden tightening of the conditions required to obtain credit. There are several reasons why lenders might curtail lending. Supply shocks include (i) a capital shortfall, reducing lending capacity when raising capital is costly; (ii) an increase in collateral requirements, resulting from a decline in the value of the collateral used by the banks to secure the loans; and (iii) increased uncertainty about borrowers' creditworthiness, resulting in an increase in asymmetric information between borrower and lender. Demand shocks include an increase in aggregate uncertainty and a reduction in aggregate demand such as those arising from tighter monetary conditions or a reduction in asset prices and net wealth.

2. **This chapter will assess to what extent credit market frictions are holding back the economic recovery.** This will include an analysis of whether the decline in credit is primarily driven by supply or demand factors and an analysis of the significance of debt overhang. The emphasis of the analysis is on small-and medium-sized enterprises (SME) which play an important role in the Irish economy and tend to be financially constrained. Access to finance of households will also be analyzed, since they have much in common with SMEs: both are numerous—complicating debt restructuring—and both carry substantial real estate assets with funds borrowed from banks. Moreover, many new firms grow out of households, starting as sole traders with initial investments derived from home equity.

3. **The analysis concludes with an assessment of government policy to improve SME access to finance.** This will include options to increase the availability of bank financing, such as through credit guarantees and enhancements. The chapter proceeds as follows. Section B analyzes the overall credit conditions for firms and households. Section C assesses whether credit is primarily driven by supply or demand factors. Section D discusses several options to improve access to finance for SMEs. Section E concludes.

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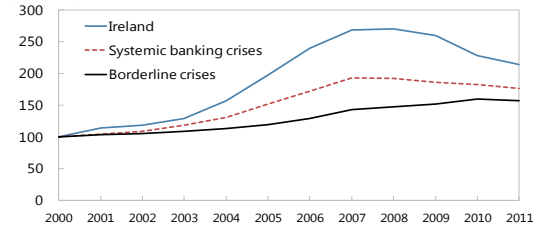
[1] Prepared by Luc Laeven (RES). The author gratefully acknowledges comments received from Craig Beaumont, Fergal McCann and Jochen Andritzky.

[2] The Irish authorities have done much analysis in this area, with several recent working papers by the Central Bank of Ireland suggesting that there is a credit crunch in Ireland, with supply factors playing an important role in holding back bank lending to SMEs. See, for example, Kennedy (2011) and Lawless and McCann (2011).

B. Overall Credit Conditions

4. **Credit has been falling steadily, following a prolonged credit boom.** Ireland's credit boom was large even compared to that in other recent banking crises. A relaxation in credit standards led to excessive risk taking by banks.[3] Credit to the private sector continues to contract at stable rates, with credit to households contracting the most.

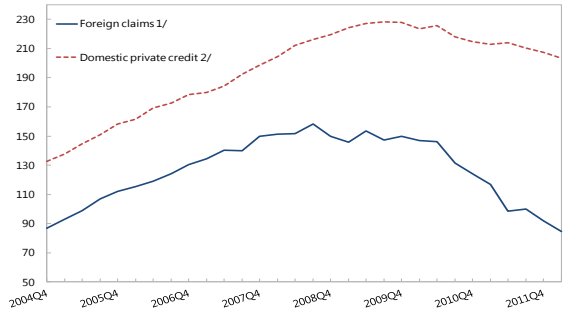
Real Private Credit, 2000-2011 1/
(2000=100)



Source: IMF's International Financial Statistics database.
1/ Real private credit is credit outstanding to the private sector adjusted for CPI inflation. Year 2000 values are set at 100. Systemic banking crises include ongoing systemic banking crises in Western Europe (Austria, Belgium, Germany, Greece, Iceland, Netherlands, Spain, and United Kingdom), with systemic banking crises as defined in Laeven and Valencia (2012). Borderline crisis cases, as defined as in Laeven and Valencia (2012), include France, Italy, Portugal, and Switzerland. Denmark and Luxembourg are excluded due to missing data. Country averages.

5. **Banks' cross-border exposures have contracted more rapidly than their domestic loan portfolios.** Cross-border lending by Irish credit institutions (primarily to the U.K.) has fallen from a peak of 150 percent of GDP to just above 80 percent of GDP. The decline in private credit from the domestic banking sector has been much slower than the deleveraging of banks' credit exposures abroad, indicating that the impact of the deleveraging process is disproportionally falling abroad, consistent with the design of the deleveraging plans of the intervened banks.

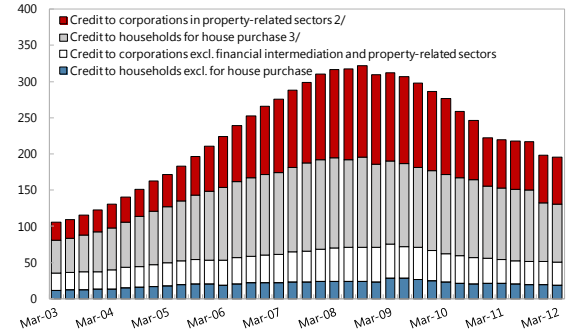
Foreign claims and private credit of Irish banks, 2004-2011
(Percent of GDP)



Sources: CBI and CSO.
1/ Foreign (non-resident) claims by domestic Irish banks on an ultimate risk basis by, where domestic Irish banks are defined as those banks guaranteed by the Irish Government under the Credit Institutions (Eligible Liabilities Guarantee) Scheme 2009.
2/ Domestic credit extended to the private sector.

6. **The credit squeeze has mostly affected property-related sectors and loans for house purchases.** Among businesses, loans to property-related sectors have been particularly hard hit, against a backdrop of falling house prices and overcapacity of newly constructed properties for commercial and residential real estate, although a significant part of this decline reflects the transfer of €74 billion in large distressed property development and commercial real estate

Loans Outstanding to Irish Residents by Sector 1/
(Billions of euros)



Source: Central Bank of Ireland.
1/ All resident credit institutions, excluding financial intermediation.
2/ Credit to Irish resident private-sector enterprises in property-related sectors, including construction, hotels and restaurants, and real estate, land and development activities.
3/ Credit to Irish resident private households for house purchase.

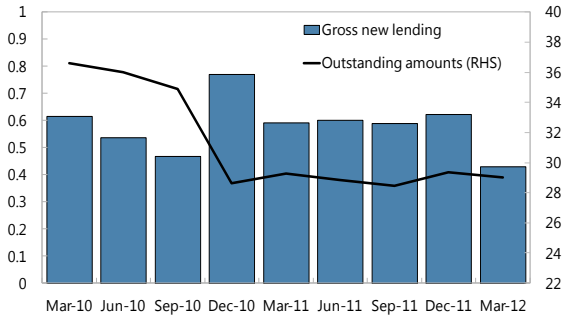
[3] For evidence of a link between deteriorating lending standards during the boom period and subsequent loan delinquencies in Ireland, see Lawless and McCann (2012). And for evidence of a similar pattern in the US subprime mortgage market, see Dell'Ariccia, Igan, and Laeven (2012).

assets from banks to the National Asset Management Agency during 2010. Credit to households for house purchases and credit to corporations in non-property sectors has also fallen, although to a smaller extent, and many have argued that this decline is evidence of a credit crunch driven by supply factors.[4]

Corporate sector

7. **SME credit is flat and new lending has slowed further.** New lending to SMEs is running at about half the amount prior to the crisis. While SMEs account for much of employment and economic activity,[5] their reliance on bank financing is relatively modest (excluding their significant real estate related investments) and has been curtailed from already low levels since the crisis.

Outstanding SME Credit 1/
(Billions of euros)

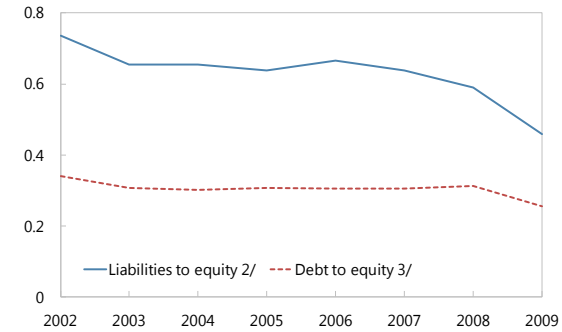


Source: Central Bank of Ireland.
1/ All resident credit institutions, excluding real estate and financial intermediation.

8. **With bank financing curtailed, firms increasingly resort to internal sources of finance.** Firms have been borrowing less from banks, against a backdrop of increased borrowing costs and reduced growth opportunities. Bank debt has been replaced mainly by internal equity (including retained earnings). Trade credit has been stable throughout crisis and debt securities play a minor role as most firms do not have access to market financing.

9. **As a result, financial leverage of firms has decreased.** Firm leverage has come down, restoring corporate balance sheets. According to national financial accounts data, the ratio of financial liabilities to equity reached a peak of 1.8 in March 2008, and then fell to 0.85 in December 2011. This pattern can also be seen in firm-level financial statements data which unlike national financial accounts are not biased by borrowing by multinationals and other large firms. Leverage for the median firm (which is a small firm) has fallen to 46 percent of equity, with the usage of bank debt showing a similar decline. The data also indicate that trade credit and other non-debt liabilities play an important role in the financing of SMEs, together with internal financing from retained earnings.

Financial leverage of non-financial companies 1/



Source: Amadeus database, Bureau Van Dijk.
1/ Median value across firms. Sample of 3,599 non-financial firms.
2/ Ratio of total liabilities (excl. equity) to total equity.
3/ Ratio of debt (bank loans and bonds) to total equity.

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[4] See, for example, Kennedy (2011), Lawless and McCann (2011), and Lawless et al. (2012).

[5] According to national statistics, SMEs account for 52 percent of economic activity, where small firms are those employing less than 50 employees and medium firms those with 50 to 250 employees. The SME sector also accounts for a large fraction of employment (with about 72 percent of private sector employees).

10. **Despite an overall decline in corporate debt, an increasing number of firms are facing difficulties covering interest payments on debt.** Interest coverage ratios have declined, with the interest coverage for the median firm having decreased from 6.9 in 2002 to 0.8 in 2009, and with an increasing number of firms not generating sufficient income to cover interest payments on outstanding debt. The interest coverage of construction and real estate firms has deteriorated more sharply than that of other firms. Moreover, the interest coverage is markedly lower for SMEs, with a median of 0.8 compared to 1.9 for large firms. The decline in firm profitability associated with depressed demand is playing an important role in the reduction in interest coverage ratio. This suggests that financing constraints are particularly important among SMEs and in property-related sectors.

Interest coverage of non-financial companies 1/

Source: Amadeus database, Bureau Van Dijk.
1/ Ratio of earnings before interest and taxes (EBIT) to interest expenses. Median value across firms. Sample of 3,599 non-financial firms.

11. **To gauge the relevance of financing constraints for SMEs, a standard dynamic investment model is estimated**. Following Bond and Meghir (1994), a dynamic investment model with financial factors and debt is estimated as

$$I/K_{it} = \alpha_i + \alpha_t + I/K_{it-1} + (I/K)^2_{it-1} + S/K_{it-1} + CF/K_{it-1} + (D/K)^2_{it-1} + \varepsilon_{it},$$

where *I/K* is the ratio of firm investment to fixed capital, *S* is net sales, *CF* is operating cash flow, *D* is total debt, *i* denotes firm *i*, and *t* denotes year *t*. The sample consists of manufacturing firms only covering the period 2002 to 2010.

12. **The investment regression is estimated using the Arellano-Bond (1991) one-step GMM estimator for models with lagged dependent variables and fixed effects.** All possible levels of the endogenous investment variable are used to form instruments for the difference equation and the first-difference of each exogenous variable is used to form instruments for the level equation. All regressions include firm and year-fixed effects.

13. **Regressions are estimated separately for small versus large firms, with differential effects for the crisis period (Table 1).** The first regression restricts the sample to unconstrained firms, defined as firms with total assets in a given year in the top seven deciles of the annual asset size distribution, while the remaining two regressions restrict the sample to constrained firms, defined as firms with total assets in a given year in the bottom three of the annual asset size distribution. The final regression also includes an interaction between the ratio of cash flow to fixed assets and a banking crisis dummy variable that takes a value of one for the years 2008 onwards and zero otherwise.

Table 1. Financial Constraints, Firm Size, and Banking Crisis, 2002–10 1/

Dependent variable: I/K_{it}	(1) Unconstrained firms	(2) Constrained firms	(3) Constrained and Crisis
I/K_{it-1}	0.228***	-0.187**	-0.187**
	(0.0577)	(0.0891)	(0.0893)
$(I/K)^2_{it-1}$	-0.102	0.0758	0.0773
	(0.0798)	(0.154)	(0.155)
S/K_{it-1}	-0.00049	-0.00271	-0.00278
	(0.00125)	(0.00182)	(0.00184)
CF/K_{it-1}	0.0261*	0.0510**	0.0498**
	(0.0141)	(0.0205)	(0.0212)
$(D/K)^2_{it-1}$	-0.0000515	0.000175	0.000183
	(0.000128)	(0.000174)	(0.000178)
$CF/K_{it-1} \times Crisis_{t-1}$			0.00579
			(0.0297)
Number of observations	903	235	235
Number of firms	293	99	99
Arellano-Bond test for zero autocorrelation in first-differenced errors (H0: no autocorrelation):			
--First-order (p-value)	0.00	0.00	0.00
--Second-order (p-value)	0.70	0.69	0.69
Sargan test of overidentifying restrictions (H0: overidentifying restrictions are valid):			
--Chi-squared (p-value)	0.23	0.10	0.10

Source: Author's' calculations based on firm-level data from Bureau Van Dijk's Amadeus database.

1/ Regressions estimated using the Arellano-Bond (1991) one-step GMM estimator for models with lagged dependent variables and fixed effects. Regression in column (1) restricts sample to unconstrained firms, defined as firms with total assets in a given year in the top seven deciles of the annual asset size distribution, while the regressions in columns (2) and (3) restrict sample to constrained firms, defined as firms with total assets in a given year in the bottom three of the annual asset size distribution. Regression in column (3) also includes an interaction between the ratio of cash flow to fixed assets and a banking crisis dummy variable that takes a value of one for the years 2008 onwards and zero otherwise. Regressions include year-fixed effects. Standard errors are reported between brackets. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

14. **Estimates based on this dynamic investment model show that small firms are particularly financially constrained but not more so during the crisis.** Estimates of the dynamic investment model with financial factors and debt suggests that financial factors such as cash flow play an important role in the investment decisions of especially small firms (Table 1). This suggests that small firms in Ireland are financially constrained. Differential estimates for the crisis period since 2008 indicate that these financing constraints for small firms have not become more severe during the crisis. These results suggest that the decline in investment by especially small firms during the crisis is primarily driven by demand factors.

15. **Small firms finance reduced investment predominantly with internal finance.** Firm level data also indicate that firm indebtedness came down since the crisis. At the same time, investment and operating cash flow also shrunk markedly, reflecting lower aggregate demand (Table 2).

Table 2. Firm investment, sales, cash flow, and debt: 2002-2010 1/ (median values across firms)

Year	I/K	S/K	CF/K	D/K
2002	0.066	4.657	0.173	1.435
2003	-0.013	4.459	0.180	1.364
2004	-0.043	4.604	0.236	1.450
2005	0.072	5.263	0.344	1.468
2006	0.109	6.126	0.347	1.655
2007	0.108	5.929	0.375	1.754
2008	0.091	5.601	0.243	1.542
2009	0.064	4.805	0.167	1.292

Source: Authors' calculations based on firm-level data from Bureau Van Dijk's Amadeus database.

1/ I/K is investment to fixed capital, S is net sales, CF is operating cash flow, and D is total debt. Median values across firms. Sample of 392 manufacturing firms.

16. **Survey data show that lack of demand for products, not access to finance, is the most pressing problem for SMEs.** Results from the Survey on the Access to Finance of small and medium-sized Enterprises (SAFE) show that the inability to find customers is the most pressing problem for SMEs. Access to finance follows as the second most pressing problem. Access to finance is particularly problematic for SMEs and comparable to other euro area economies and has deteriorated somewhat since the previous time the survey was conducted. Rejection rates on loan applications have somewhat improved since the previous survey and are only marginally worse than in the rest of the euro area, although other studies point to higher rejection rates when including loan overdraft applications and using different samples.[6] At the same time, a survey by Mazars (2012) finds that reduced or impaired collateral values have a negative impact on the ability for SMEs to obtain bank financing. At the same time, a survey by Mazars (2012) finds that reduced or impaired collateral values have a negative impact on the ability for SMEs to obtain bank financing. Overall, these survey results suggest that demand factors play an important role in the lack of credit for SMEs, although collateral constraints and balance sheet distress from property exposures may also be undermining the availability of credit.

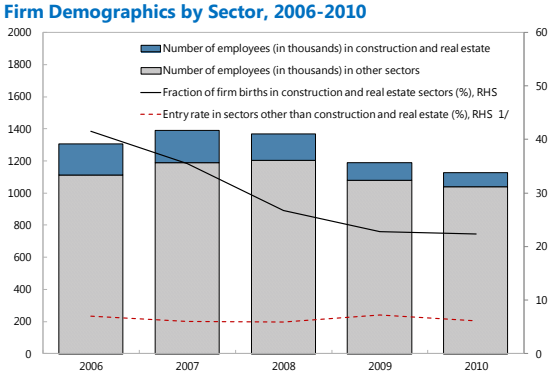
Table 3. Access to finance of SMEs, April 2011 to March 2012

				Most pressing problem (%)					Loan application in past 6 months (%)
Country	Firm type	Period	Number of firms	Finding customers	Competition	Access to finance	Production /labor costs	Skilled staff	Regulation	Applied but was rejected
Ireland	SMEs	Oct 2011 – Mar 2012	485	35.3	12.5	24.7	10.1	5.9	5.1	17.1
Ireland	Large	Oct 2011 – Mar 2012	15	34.0	33.6	2.8	12.2	2.8	12.2	0.0
Euro area	SMEs	Oct 2011 – Mar 2012	6969	26.9	12.5	17.3	13.8	13.7	7.4	13.2
Ireland	SMEs	Apr 2011 – Sep 2011	484	35.9	12.3	20.6	10.5	4.0	5.0	22.6

Source: ECB, SAFE survey.

17. **And firm creation outside property-related sectors remains robust.** National statistics on firm demographics indicate that there are increasingly fewer new firms. This is especially the case for small firms, firms that tend to be more financially constrained. Moreover, there have been an increasing number of firm deaths, especially among small firms. With depressed home prices it has become more difficult to finance a new firm using home equity, which has hampered job creation. However, while the firm entry rate has come down somewhat since 2009, it is relatively stable outside the construction and real estate sectors.

Firm Demographics by Sector, 2006-2010



Source: CSO.
1/ Number of firm births divided by total number of firms.

Household sector

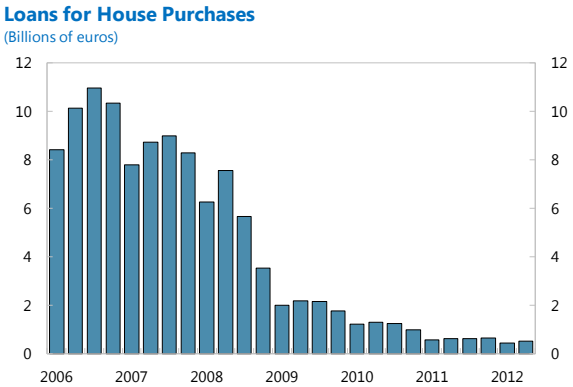
18. **As house prices have halved from their peak, housing affordability indicators have returned to their historical level.** House prices have halved from their 2007 peak and

[6] For example, Holton and McCann (2012) find that the Irish SME rejection rate is double the euro area average and second only to Greece. Their analysis considers bank loans and overdrafts as well as a wider range of credit constrained firms as rejected. Similarly, Mazars (2012) surveys a much larger sample of Irish firms and finds a rejection rate of 28 percent when considering bank loan and overdraft applications.

are now back at 2001 levels. Such steep declines in house prices are rare, but they have previously occurred following real estate busts even in advanced economies. [7] While affordability indicators indicate that house prices have reached historical levels, with house prices about ten times per capita disposable income, some overshooting of house price declines is normal following real estate boom-bust cycles.

19. **But while interest burdens have improved, the household debt overhang remains severe, with household debt high in international comparison.** Interest payments on household debt have fallen markedly relative to disposable income, mainly because of reduced ECB interest rates. Nevertheless, household debt remains high, also by international standards, at about 220 percent of disposable household income, having decreased only marginally from its peak.

20. **As a result, new lending for house purchases has halted.** Demand for mortgage loans has been curtailed due to a debt overhang—especially affecting first-time buyers and buy-to-let investors during the 2004–08 boom—and expectations of further house price declines. Supply of mortgage loans has also been limited by legacy problems and the high cost of funding at banks.



Source: Irish Banking Federation/PWC.

21. **The malaise in the property market is also negatively affecting some SMEs.** A large fraction of SMEs have been active in property-related sectors, e.g., commercial real estate such as retail space as well as buy-to-let residential property. Following the decline in commercial property and house prices, many of these SMEs are in financial distress. The viability of a large number of SMEs in Ireland is therefore dependent on a revival of the property market or on some workout of their property-related debt.

Banking sector

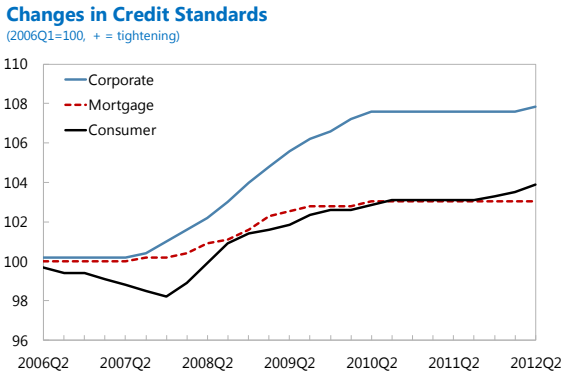
22. **On the supply side, bank lending has been curtailed due to legacy problems and high funding costs.** Bank asset quality has deteriorated with a growing number of mortgage loans and SME credits in arrears, increasing provisioning for bad loans. Moreover, around half of mortgages have been issued with rates that track the ECB benchmark rate, reducing net interest margins as monetary conditions loosened. Indeed, banks' cash flow from net interest revenues is currently insufficient to cover provisioning expenses. At the same time,

[7] For example, Norway experienced similar house price declines during its crisis in the early 1990s (Drees and Pazarbasioglu, 1998).

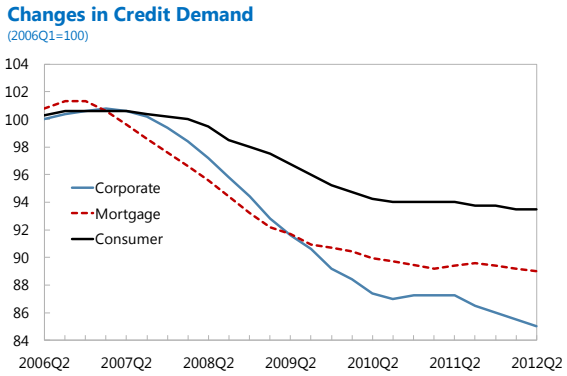
banks' funding costs remain high, with high deposit interest rates and fees on the Eligible Liabilities Guarantee (ELG) scheme, increasing the marginal cost to lend.

C. Lending Standards and Credit Conditions Disentangled

23. **Lending standards are stable but credit demand conditions remain weak, suggesting that the reduced lending activity is primarily demand driven.** Data from the ECB bank lending survey show that lending standards for corporate and households have stabilized, while credit demand especially for corporate continues to fall.[8] But, as lending standards and credit demand conditions are driven by common factors, such as economic conditions, it is difficult to infer a causal interpretation based on lending survey data (in the absence of exogenous shifts in the supply of credit).



Source: Central Bank of Ireland.



Source: Central Bank of Ireland.

24. **To disentangle whether changes in lending standards or credit demand conditions are driving loan growth, regression analysis of bank lending survey responses is used.**[9] To gauge the importance of supply-side constraints for credit growth, regressions of loan growth are estimated where demand is purged from supply factors, and vice versa. These regressions use ECB bank lending survey responses to changes in lending standards and credit demand conditions as proxies for changes in supply and demand factors, respectively. These regressions are estimated separately for lending to corporates and households. Purging demand from supply factors, and vice versa, allows for an estimate of upper and lower bounds of the effect of supply-side factors on credit growth. While this approach is subject to criticism, primarily because it assumes that the loan survey responses are accurate and exogenous, it offers some guidance on the relative importance of supply and demand factors.

25. **Regressions are first estimated using data on the bank lending survey for corporations.** The basic regression model is

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[8] It should be noted that the number of banks responding to the BLS in each quarter in Ireland is very small.

[9] This approach is similar to that in Valencia (2012).

$$\Delta L_t = \alpha_t + \Delta S_t + \Delta D_t + \varepsilon_t,$$

where the dependent variable is the growth rate of loans to non-financial corporations in a given quarter. ΔS denotes the change in the supply of credit to corporate, measured as the change in lending standards over the past three months on loans or credit lines to enterprises.[10] Higher numbers denote a relaxation in standards, i.e., an increase in supply. ΔD denotes the demand for credit from corporate, measured as the change in demand for loans or credit lines to enterprises over the past three months. Higher numbers denote an increase in demand.

26. **To purge demand factors from supply factors and obtain an *lower-bound* estimate of the effect of supply-side factors on credit growth,** the regression model is adjusted as

$$\Delta L_t = \alpha_t + \Delta \hat{S}_t + \Delta D_t + \varepsilon_t,$$

where $\hat{S}_t$ denotes the residual of a country-specific OLS regression of *S* on *D* for corporates.

27. **To purge supply factors from demand factors and obtain an *upper-bound* estimate of the effect of supply-side factors on credit growth,** the regression model is adjusted as

$$\Delta L_t = \alpha_t + \Delta S_t + \Delta \widehat{D}_t + \varepsilon_t,$$

where $\widehat{D}_t$ denotes the residual of a country-specific OLS regression of *D* on *S* for corporates.

28. **Regressions are estimated using OLS and include quarter fixed effects (Table 4).** The sample consists of quarterly loan growth and survey data from December 2002 to March 2012. Regressions in columns (1) to (2) and columns (5) to (6) pertain to results for Ireland and regressions in columns (3) and (4) to the euro area. The regression in column (3) gives an upper bound of the effect of supply on loan growth because it removes supply factors from demand and therefore attaches maximum weight to supply factors, while the regression in column (4) gives a lower bound on the effect of supply on loan growth because it removes demand factors from supply and therefore attaches maximum weight to demand factors.

29. **The economic effect of demand-side factors for lending to corporates is substantial.** Based on the estimates reported in column (6), a one standard deviation increase in Demand from corporates implies an increase in loan growth of non-financial companies of 2.2 percentage points. This is substantial given that it amounts to about one-third the standard deviation in loan growth of non-financial companies of 5.9 percent.

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[10] The survey responses on lending standards and credit demand conditions are effectively lagged one period in the regression analysis. For example, the results reported in the April 2012 bank lending survey relate to changes during the first quarter of 2012 and expectations of changes in the second quarter of 2012. This survey was conducted between 23 March and 5 April 2012.

Table 4. Supply and demand of loans to non-financial companies, Dec 2002 – Mar 2012

Dependent variable: Growth rate of loans to non-financial companies	(1) Ireland	(2) Ireland	(3) Euro area	(4) Euro area	(5) Ireland	(6) Ireland
VARIABLES						
Supply to corporates	0.0271		-0.000983		0.0265	
	(0.025)		(0.0107)		(0.0244)	
Demand from corporates		0.0326**		0.0381***		0.0345***
		(0.0121)		(0.0117)		(0.0115)
Demand from corporates--residual					0.0748***	
					(0.0214)	
Supply to corporates--residual						-0.0976**
						(0.0453)
Constant	-0.066	-0.0795**	0.015	-0.101***	-0.0713	-0.0891**
	(0.0636)	(0.0341)	(0.0308)	(0.0363)	(0.0637)	(0.0347)
Quarter fixed effects	Y	Y	Y	Y	Y	Y
Observations	37	37	37	37	37	37
R-squared	0.028	0.125	0.035	0.264	0.201	0.201

Source: CBI, ECB bank lending survey.

Notes: Dependent variable is the growth rate of loans to non-financial corporations in a given quarter. *Supply to corporates* is the change in lending standards over the past three months on loans or credit lines to enterprises. Higher numbers denote a relaxation in standards, i.e., an increase in supply. *Demand from corporates* is the change in demand for loans or credit lines to enterprises over the past three months . Higher numbers denote an increase in demand. *Supply to corporates--residual* is the residual of a country-specific OLS regression of *Supply to corporates* on *Demand from corporates* . *Demand from corporates--residual* is the residual of a country-specific OLS regression of *Demand from corporates* on *Supply to corporates* . Regressions are estimated using OLS and include quarter fixed effects. Sample consists of quarterly data over the period Dec 2002 to March 2012. Regressions in Columns (1)-(2) and (5)-(6) pertain to results for Ireland and regressions in Columns (3)-(4) to Euro area. Regression in column (3) gives an upper bound of the effect of supply on loan growth because it takes out supply factors from demand and attaches maximum weight to supply. Regression in column (4) gives a lower bound on the effect of supply on loan growth because it takes out demand factors from supply and attaches maximum weight to demand. Robust standard errors are reported in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

30. **Similar regressions are estimated using bank lending survey responses on lending to households (Table 5).** The dependent variable in these regressions is the growth rate of loans to households for house purchase in a given quarter. Supply to households is the change in lending standards over the past three months on loans to households for house purchase, with higher numbers denoting a relaxation in standards (an increase in supply). Demand from households is the change in demand for loans to households for house purchase over the past three months, with higher numbers denoting an increase in demand. Otherwise, the regressions are similar to those for corporations.

31. **The economic effects of supply and demand-side factors for lending to households are comparable.** Based on the regression estimates reported in column (5), a one standard deviation increase in Supply to households implies an increase in loan growth of 2.0 percentage points. Similarly, based on results in column (6), a one standard deviation increase in Demand from households implies an increase in household loan growth for house purchase of 2.1 percentage points. Both of these effects are substantial given the standard deviation of loan growth of household loans for home purchase of 5.4 percent.

Table 5. Supply and demand of household loans for house purchase, Dec 2002 – Mar 2012

Dependent variable: Growth rate of household loans for house purchase	(1) Ireland	(2) Ireland	(3) Euro area	(4) Euro area	(5) Ireland	(6) Ireland
VARIABLES						
Supply to households	0.0583***		0.0556***		0.0579***	
	(0.0174)		(0.0100)		(0.0184)	
Demand from households		0.0378***		0.0199***		0.0376***
		(0.0105)		(0.0037)		(0.0109)
Demand from households--residual					0.0258**	
					(0.0123)	
Supply to households--residual						0.0354
						(0.0209)
Constant	-0.178***	-0.111***	-0.147***	-0.0459***	-0.176**	-0.111***
	(0.0647)	(0.0376)	(0.0288)	(0.0119)	(0.0681)	(0.0388)
Quarter fixed effects	Y	Y	Y	Y	Y	Y
Observations	37	37	37	37	37	37
R-squared	0.223	0.237	0.57	0.448	0.273	0.273

Source: CBI, ECB bank lending survey.

Notes: Dependent variable is the growth rate of loans to households for house purchase in a given quarter. *Supply to households* is the change in lending standards over the past three months on loans to households for house purchase. Higher numbers denote a relaxation in standards, i.e., an increase in supply. *Demand from households* is the change in demand for loans to households for house purchase over the past three months . Higher numbers denote an increase in demand. *Supply to households--residual* is the residual of a country-specific OLS regression of *Supply to households* on *Demand from households* . *Demand from households--residual* is the residual of a country-specific OLS regression of *Demand from households* on *Supply to households* . Regressions are estimated using OLS and include quarter fixed effects. Sample consists of quarterly data over the period Dec 2002 to March 2012. Regressions in Columns (1)-(2) and (5)-(6) pertain to results for Ireland and regressions in Columns (3)-(4) to Euro area. Regression in column (3) gives an upper bound of the effect of supply on loan growth because it takes out supply factors from demand and attaches maximum weight to supply. Regression in column (4) gives a lower bound on the effect of supply on loan growth because it takes out demand factors from supply and attaches maximum weight to demand. Robust standard errors are reported in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

32. **Overall, these regressions suggest that supply factors play a more important role in lending to households than in lending to corporates.** Moreover, demand factors play a similar role in lending to households and lending to firms. Importantly, these results are for the corporate sector as a whole and may not prove a firm basis for inference of the relevance of supply factors for lending to SMEs.

D. Options for dealing with reduced access to finance for SMEs[11]

33. **Access to finance for SMEs is limited given several market failures that may require government intervention.** SME financing is curtailed given the increased uncertainty and information asymmetries about borrower creditworthiness as well as the tighter collateral constraints arising from the sharp decline in asset prices. In particular, for SMEs with outstanding mortgage financing, it is more difficult to secure new bank credits

[11] For more details on principles of corporate debt restructuring, including SMEs, see Laryea (2010), Hagan et al. (2003), Hoelscher and Quintyn (2003), and Claessens et al. (2003). Since SMEs share characteristics with the restructuring of household debt (both are small and numerous, complicating restructuring, and both rely heavily on property as collateral for loans), see also Laeven and Laryea (2009).

due to reduced or impaired collateral values of property-related assets. Given the possibility of a recovery of asset values, banks provide forbearance rather than loan workouts, but this limits the scope for making new loans.

34. **Credit guarantees or subsidies on SME loans can in principle stimulate SME financing.** Credit guarantees can help alleviate collateral constraints demanded by banks and loan subsidies can reduce the cost of borrowing. Until recently, Ireland was one of the few OECD countries without some form of loan guarantee scheme. Appendix Table 1 gives an overview of selected government-supported SME programs.

35. **However, the international experience with SME lending schemes is mixed.**[12] In reviewing a broad sample of credit guarantee schemes, Levitsky (1997) concludes that "there is no consensus that credit guarantee schemes are an effective or economical way of widening access to formal bank credits for SMEs". Moreover, the historical experience shows that credit guarantee schemes can only be effective when there are competent, financially sound banks, with adequate staff to effectively screen and monitor SME loans. Credit guarantees have a mixed track record in promoting credit growth in part because there is a risk of misallocation (overextension) to SMEs that do not need it or have alternative sources. A proper design of the scheme can limit this risk. In particular, the more effective schemes are (i) targeted to those sectors that are most several financially constrained and (ii) operated on a commercial basis. The recently announced Temporary Partial Credit Guarantee Scheme of Ireland embeds these design elements. It excludes property-related sectors where growth opportunities are limited; it targets term financing where collateral constraints are most binding; and it operates on commercial basis through on-lending by commercial banks.

36. **Government support for SMEs will need to be complemented with progress in improving the operational capacity of banks to work out loans.** The restructuring of SMEs on a case-by-case basis is resource intensive yet important to ensure that where a viable core business exists, that it has the possibility to invest and grow, and contribute to broader economic recovery. Considering the number of SMEs, it would not be appropriate to rely principally on court-based bankruptcy procedures. Rather, banks will need to build their capacity to design and implement work outs though out-of-court workout processes. Drawing on international expertise may well be needed to help major banks build capacity in this area.

37. **The government could also explore ways to facilitate the securitization of SME loans.** However, liquidity premia currently demanded by market participants even on senior tranches, plus the inability of the Irish government to offer substantial credit enhancements on such securitizations given the low sovereign credit rating, imply that, at least for the moment, the market for securitization of SME loans is limited.

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[12] See Bannock and Partners (1997) for a review of SME credit guarantee schemes around the world.

E. Conclusions

38. **The analysis presented indicates weak lending is mostly demand-driven, although supply factors play in role in mortgage lending and pockets of SME lending.** While analysis points to a tightening of lending standards and significant financing constraints at SMEs, the sharp decline in household and corporate lending appears primarily demand driven.

39. **A small-scale and well-targeted credit guarantee program can help SME financing.** This would relieve financing constraints for SMEs with profitable growth opportunities. But care is needed that guaranteed credit does not flow to SMEs that do not need it or that have alternative sources of finance.

40. **The restructuring of bad loans needs to be speeded up.** More intense efforts by banks to work out distressed loans are urgently needed. This will repair private sector balance sheets and reduce debt overhang, improve prospects for economic recovery and sound lending opportunities, and ultimately help restore the viability of banks.

References

Arellano, M. and S. Bond (1991), "Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations," *Review of Economic Studies*, vol. 58(2), pp. 277–97.

Bannock and Partners (1997), *Credit Guarantee Schemes for Small Business Lending: A Global Perspective*. London: Graham Bannock and Partners.

Bond, S. and C. Meghir (1994), "Dynamic Investment Models and the Firm's Financial Policy," *Review of Economic Studies*, vol. 61(2), pp. 197–222.

Claessens, S., S. Djankov, and A. Mody (2003), *Resolution of Financial Distress: An International Perspective on the Design of Bankruptcy Laws*, WBI Development Studies, World Bank.

Dell'Ariccia, G., D. Igan, and L. Laeven (2012), "Credit Booms and Lending Standards: Evidence from the Subprime Mortgage Market," *Journal of Money, Credit and Banking*, vol. 44(3), pp. 367–84.

Drees, B. and C. Pazarbasioglu (1998), "The Nordic Banking Crisis: Pitfalls in Financial Liberalization," IMF Occasional Paper No. 161, International Monetary Fund, April 20, 1998.

Hagan, S., E. Kalter, and R. Weeks-Brown (2003), "Corporate Debt Restructuring in the Wake of Economic Crisis," In: Managing Financial Crises: Recent Experience and Lessons for Latin America, IMF Occasional Paper No. 217, pp. 84–100.

Hoelscher, D. and M. Quintyn (2003), "Managing Systemic Banking Crises," IMF Occasional Paper No. 224, 2003.

Holton, S. and F. McCann, (2012), "SME Credit Supply and Demand: Comparisons Across Surveys and Countries," Central Bank of Ireland Economic Letters No. 8.

Kennedy, B. (2011), "Using the Bank Lending Survey to Understand the Recent Disruption to Financial Markets: An Overview," Central Bank of Ireland *Quarterly Bulletin* 03,

pp. 83–108, July 2011.

Laeven, L. and T. Laryea (2009), "Principles of Household Debt Restructuring", IMF Staff Position Note No. 09/15, June 26, 2009.

Laeven, L. and F. Valencia (2012), "Systemic Banking Crises Database: An Update", IMF Working Paper No. 12/163, International Monetary Fund.

Laryea, T. (2010), "Approaches to Corporate Debt Restructuring in the Wake of Financial Crises", IMF Staff Position Note No. 10/02, January 26, 2010.

Lawless, M. and F. McCann (2011), "Credit Access for Small and Medium Firms: Survey Evidence for Ireland," Research Technical Paper No. 11/RT/11, Central Bank of Ireland.

Lawless, M. and F. McCann (2012), "Determinants of Default: Evidence from a Sector-Level Panel of Irish SME Loans," CBI Research Technical Working Paper No. 3/RT/12, Central Bank of Ireland.

Lawless, M., F. McCann, and T. McIndoe Calder (2012), "SMEs in Ireland: Stylised Facts from the Real Economy and Credit Market," Mimeo, Central Bank of Ireland.

Levitsky, J. (1997), "Credit Guarantee Schemes: An International Review," *Small Enterprise Development*, vol. 8(2), pp. 4–17.

Mazars (2012), "SME Lending Demand Study," July 2012.

Valencia, F. (2012), "Credit Developments in the Euro Area: Demand vs. Supply," mimeo, International Monetary Fund.

Appendix Table. Selected government schemes to support SME lending

Country	Name of scheme	Start of scheme	Overview of scheme	Size of the scheme	Benefits of scheme	Access to scheme	Uptake of the scheme	Impact of scheme
Ireland	Temporary Partial Credit Guarantee Scheme	Aug 2012	The scheme provides a 75% state guarantee to banks against losses on qualifying loans to firms.	The scheme will facilitate up to €150 million of additional lending to eligible SMEs lending per annum.	Improved access to finance for SMEs. In return, recipient businesses pay an annual guarantee premium of 2% on the outstanding balance of the loan.	Loans to eligible firms from participating banks. Excluded from the scheme: (1) Agriculture, horticulture, fisheries, and property-related activities; (2) refinancing of existing debts; and (3) overdrafts. Loan decision by lender and on commercial basis.	Not applicable	Not applicable
EU	SME Guarantee Facility	Jan 2007	The scheme provides a guarantee of up to 50% on loans or other debt finance granted by EU financial intermediaries to SMEs with the aim to improve access to debt finance for SMEs. The scheme is administered by the European Investment Fund (EIF). (Under the same program, EIF also provides guarantees for securitized SME financing instruments in the form of AAA-rated credit enhancements in SME securitizations.)	Under the program, a total of € 550 million of guarantees is available to financial intermediaries.	Improved access to finance for SMEs.	Guarantees are granted to EU financial intermediaries for lending to SMEs. Final beneficiaries must be SMEs, i.e., enterprises which employ fewer than 250 employees and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million. Guarantees cover portfolios of mid- to long-term financing such as loans and/or lease transactions with a term of at least 18 months.	By June 2012, 201,561 loans had been provided to businesses under the CIP program, with guarantees totaling € 307 million.	Significant uptake, but program size relatively small.
Mexico	Punto Final program	Dec 1998	Debt relief program targeted at mortgage holders, agribusiness, and small and medium-sized enterprises. The program offered subsidies to borrowers to pay back their bank loans. For every three pesos of new loans extended by the banks, the government would assume an additional one peso of discount. The program thus combined loss sharing between government and banks with an incentive to restart lending.	Not applicable	The program offered large subsidies (up to 60 percent of the book value of the loan) to borrowers to pay back their bank loans. The discounts depended on the sector, the amount of the loan, and on whether the bank restarted lending to the sector.	Mortgage holders, agribusiness, and small and medium-sized enterprises	Significant.	The program was successful in terms of rapid debt relief but at very large cost to the taxpayer.

Country	Name of scheme	Start of scheme	Overview of scheme	Size of the scheme	Benefits of scheme	Access to scheme	Uptake of the scheme	Impact of scheme
U.K.	The National Loan Guarantee Scheme (NLGS)	March 2012	The scheme provides banks with guarantees to issue unsecured debt, enabling participating banks to borrow at cheaper rates and lend to smaller businesses at lower rates.	The scheme provides banks with up to £20 billion of guarantees to issue unsecured debt.	Helps businesses by reducing the cost of bank loans under the scheme by 1 percentage point.	Businesses with a turnover of not more than £250 million (increased on June 26, 2012 from an initial maximum turnover of £50 million) are eligible for the scheme and should apply for loans at participating banks.	By June 26, 2012, over 10,000 cheaper loans worth over £1.5bn had been offered to businesses.	Major uptake during initial months of the scheme.
U.S.	Term Asset-Backed Securities Loan Facility (TALF)	3	Funding facility intended to make credit available to consumers and businesses on more favorable terms by facilitating the issuance of asset-backed securities (ABS)—including those collateralized by small business loans—and by improving the market conditions for ABS more generally.	Initially, the program would lend up to $200 billion on a non-recourse basis to holders of certain AAA-rated ABS. Subsequently, this amount was raised to up to $1 trillion.	Credit extensions in the form of non-secured loans with a term of up to five years to holders of eligible asset-backed securities (ABS).	All U.S. persons that own eligible collateral may participate in the TALF. Eligible collateral initially included U.S. dollar-denominated ABS backed by student loans, auto loans, credit card loans, and loans guaranteed by the Small Business Administration (SBA), and with a credit rating in the highest investment-grade rating category from two or more approved rating agencies and do not have a credit rating below the highest investment-grade rating category from a major rating agency. Credit exposures underlying eligible ABS must be newly or recently originated exposures to U.S.-domiciled obligors. Subsequently, the list of eligible collateral for TALF loans was expanded. Haircuts are applied to eligible collateral. TALF loans awarded to borrowers each month based on a competitive, sealed bid auction process.	By the time the TALF program ended, June 30, 2010, a total of $71.1 billion of loans were made under TALF. Out of this total amount, $2.2 billion were loans collateralized by small business loans.	While TALF helped prevent a shutdown of the securitization market by improving its market and funding liquidity conditions, loans extended to small business under the program were relatively small.

Sources: U.S. Federal Reserve, U.K. Treasury, Ireland Department of Finance, EIF, and Laeven and Laryea (2009).

III. MEDIUM-TERM FISCAL CONSOLIDATION IN IRELAND: GROWTH-FRIENDLY, TARGETED, SUSTAINABLE[1]

A. Introduction

1. The Irish authorities have implemented a significant fiscal consolidation since the onset of the crisis: by end-2012, the structural primary deficit will have narrowed by 8 percentage points of GDP from its end-2008 peak of over 10 percent. While this has helped arrest the crisis-induced deterioration in public finances, significant further consolidation—5 percent of GDP, as per the authorities' Medium-Term Fiscal Statement—is needed over 2013–15 to achieve their 3 percent of GDP target in 2015, and set debt on a downward path. With major decisions regarding this consolidation expected in the coming months, it is useful to take a strategic view of the consolidation strategy adopted thus far, and consider issues guiding the choice of future consolidation measures, taking into account longer-term trends in Ireland's revenue and expenditures, and comparisons with other advanced economies.

2. Any future consolidation effort must rank high on the twin objectives of efficiency and equity. With domestic demand still fragile and unemployment at an elevated level, it will be important to avoid spending cuts or tax hikes with high multipliers or adverse employment or investment incentives, while favoring reforms that enable more cost effective delivery of key service priorities and a broadening of the revenue base. At the same time, the consolidation must be spread equitably across income groups, generations and family types, and protect the most vulnerable. Although Ireland's poverty indicators remain better than much of Europe, the crisis has worsened poverty indicators for under-65s and inequality is edging upward. In this context, measures could focus on better targeting the state's universal supports and subsidies (including on the tax side) and ensuring intergenerational equity, while also reining in demographics-related spending pressures.

3. Against this backdrop, this paper *analyzes* the evolution of Ireland's revenue and expenditure ratios over time and from a cross-country perspective, with a view to informing discussions around the planned consolidation mix (section B); *examines* the current structure of taxation in Ireland, covering income tax, property taxation and environmental taxation, to indentify scope for revenue base broadening (section C); and *evaluates* potential high quality savings in health, education and social protection spending, as well as in the public service pay and pensions bill (section D).

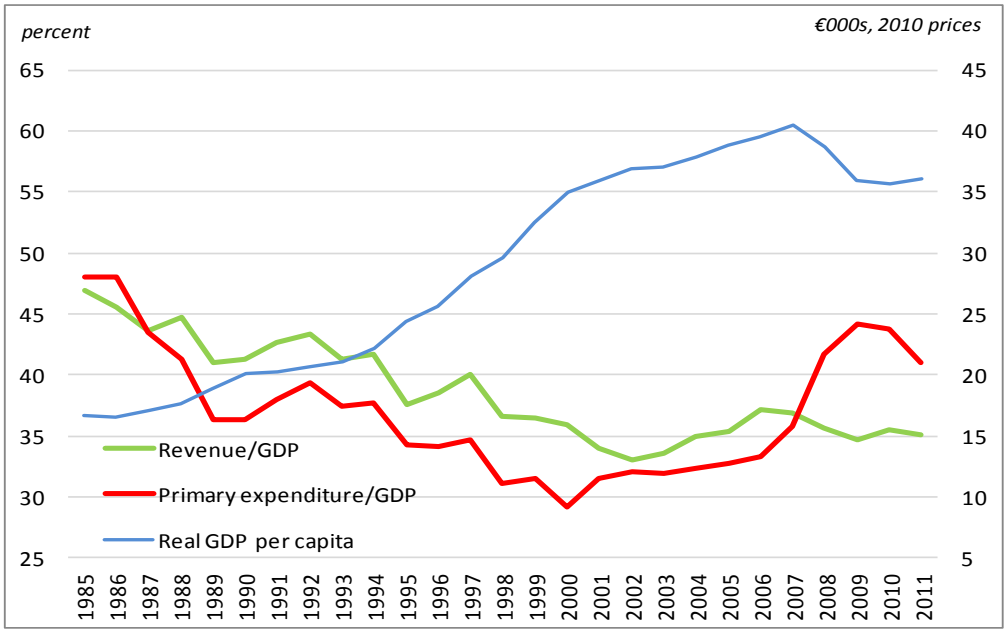
[1] This paper was prepared by S. M. Ali Abbas with substantial inputs from Ruud de Mooij, John Norregaard, Ian Parry, Baoping Shang and Mauricio Soto (all FAD). Asad Zaman and Ari Binder provided outstanding research assistance. The author is also grateful to staff in Ireland's Departments of Finance, Public Expenditure and Reform, Health and Education, and Irish Revenue, for providing data and for helpful suggestions.

B. Revenue and Expenditure Trends and the Consolidation Mix

Analysis of Trends in Revenue and Expenditures to Date

4. The structure of Irish public finances has undergone more than one significant transformation since the 1980s. As shown in Figure 1, in the 1980s Ireland was not a low-tax/low-spend economy. However, the sharp expenditure-led consolidation in late 1980s helped usher in a decade of break-neck export-led Celtic Tiger growth from the early 1990s, which saw the size of the public sector and revenues fall as a share of GDP through 2000.

Figure 1. Ireland's Revenue and Expenditures (percent of GDP)



Source: Eurostat and IMF staff calculations.

5. A turning point was reached around the turn of the millennium, when public finances of a much-richer Ireland were redirected toward expanding public services and the until-then lean welfare state. This "catch-up" spending happened well into the crisis, with welfare and pension rates rising by 3 percent as late as 2009, even though Ireland had entered a recession by early 2008. Figure 2 shows that social welfare rates doubled (more than tripled in the case of the universal child benefit) over 2000–09, and are 74 percent (130 percent in case of child benefit) higher than the level that would have obtained if they had grown at the rate of per capita nominal GDP. The exchequer pay bill, led by health and education, rose 118 percent, combining a 35 percent increase in personnel and 61 percent surge in pay, the latter outstripping cumulative per capita GDP growth by 16 percent.

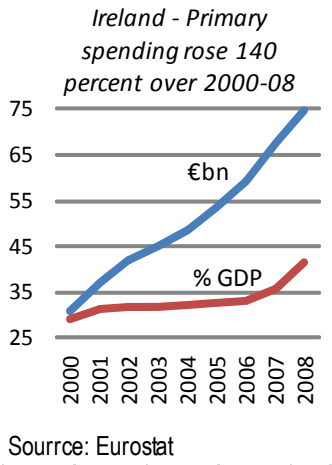
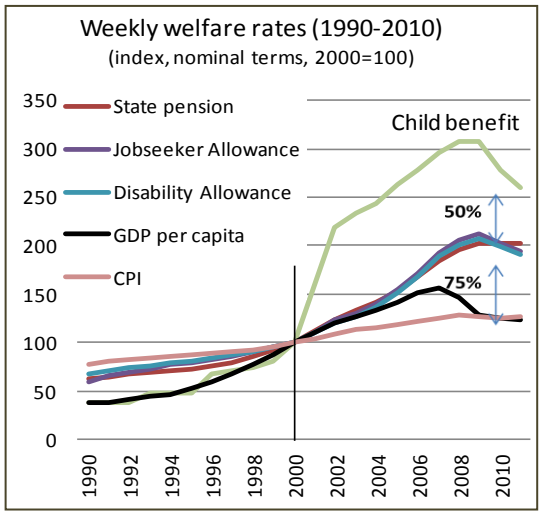


Figure 2. Sources of Expenditure Increase During the 2000s

Social Welfare Rates



Public Service Pay and Numbers

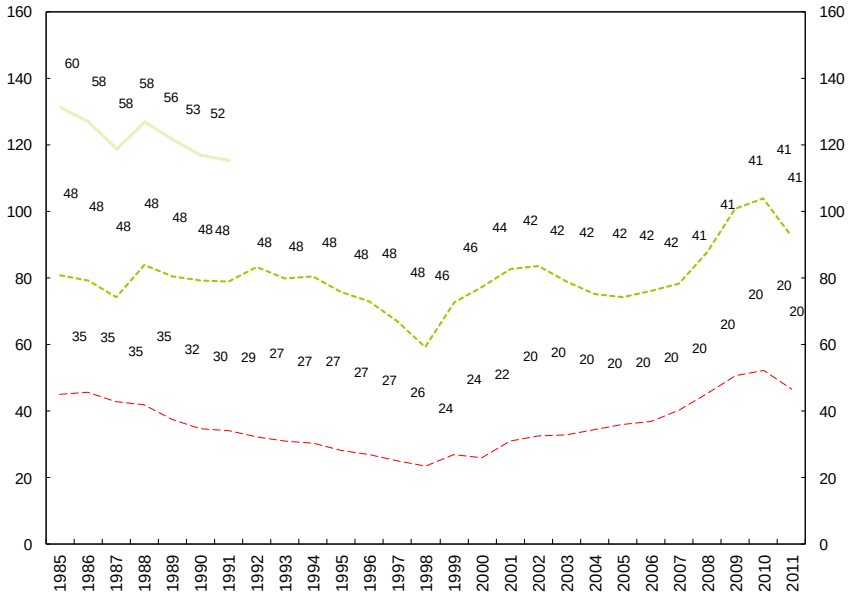
	2000	2008	Increase
Exchequer paybill (€bn)	7.9	17.2	118%
Personnel ex-LGs (000s)	211.0	284.9	35%
Average wage (€000s)	37.4	60.4	61%
GDP per capita (€000s)	27.9	40.5	45%

Source: Departments of Public Expenditure and Reform, and Social Protection.

6. The late 1990s/early 2000s were also a turning point for the income tax. As Figure 3 reveals, Ireland's 1980s configuration of a narrow income tax base with high marginal rates had been considerably reformed by the late 1990s. In the 2000s, policy focus shifted toward returning to the old-narrow tax bases, but unlike in the past, further cutting statutory rates. Thus, by 2009, the already high entry point for the income tax (at 25 percent of per capita GDP in 1998) had risen to over 50 percent of per capita GDP, while marginal rates had fallen to 20/41 percent, from 26/48 percent in 1998.

Figure 3. Income Tax Bands and Statutory Rates: 1985–2012

(bands in percent of per capita GDP; rates in percent)



Source: Department of Finance.

7. The very large deterioration in the underlying strength of the fiscal position implied by these spending increases and income tax cuts during the 2000s remained largely hidden under a flood of property-related revenues in the boom period of 2004–07. When the crisis erupted in 2008, boom revenues disappeared, output fell back sharply, and a structural primary deficit of over 10 percent of GDP emerged by end-2008, translating into underlying (i.e. excluding impact of direct banking support measures) general government deficits above 10 percent of GDP over 2009–10.

8. Figure 4 documents the dramatic rise of Ireland's expenditure-to-GNP ratio from one of the lowest in the OECD in 2000, to one of the highest by 2011, while the revenue ratio has remained broadly unchanged. End-2011 current primary spending was 47 percent of GNP, 17 percentage points higher than in 2000: social benefits rose by 11.5 percentage points and public compensation by about 5 percentage points.[2] Table 1 indicates that Ireland's expenditures resemble those of English-speaking economies, as a share of GDP, but those of small European economies as a share of GNP. In other words, Ireland is either a low-tax/medium-spend economy (when scaling to GDP), or a medium-tax/high-spend economy (when scaling to GNP).[3]

Table 1. Ireland's Expenditure and Revenue Ratios vis-à-vis Comparator Groups

percent of GDP, GNP; 2011	Primary current	*Compens-ation*	*Social benefits*	Capital	Interest	Total Expenditure	Revenue
Ireland							
2000	25.8	*7.9*	*8.8*	3.4	2.0	31.2	35.9
2011	37.7	*11.2*	*17.5*	3.3	3.3	44.3	35.1
2000, % of GNP	30.2	*9.3*	*10.3*	4.0	2.3	36.5	42.1
2011, % of GNP	47.2	*14.1*	*21.9*	4.2	4.1	55.5	44.0
English-Speaking	37.6	*10.6*	*14.6*	2.9	3.1	43.6	36.3
Small European	49.2	*13.7*	*21.3*	2.1	2.1	53.4	51.6
Large European	45.0	*10.6*	*24.1*	2.2	3.4	50.5	47.2
OECD average	39.7	*10.8*	*17.0*	2.8	2.7	45.3	41.9
OECD EU	42.2	*11.1*	*19.5*	2.8	2.6	47.6	44.4

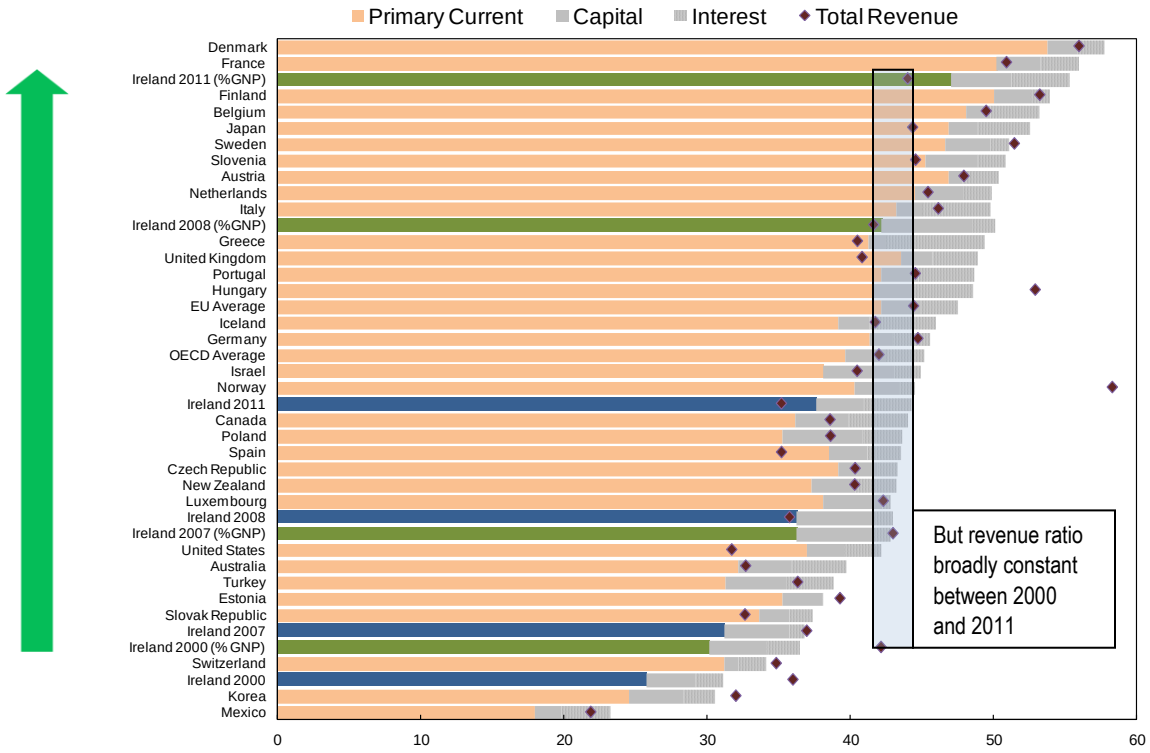
Source: OECD and IMF staff estimates.

Note: "English-Speaking economies" include U.K., U.S., Australia and New Zealand. "Small open European" economies include Austria, Belgium Denmark, Finland and Sweden (all these economies were sized between US$100–500 billion and had trade/GDP ratios above 80 percent over 2007–11); "Large European" economies include France, Germany and Italy (economies sized above US$2 trillion). OECD definitions for general government revenue and expenditure are used, which differ slightly from Eurostat definitions.

[2] The bulk of this increase in the primary current expenditure-to-GNP ratio occurred between 2007 and 2011, given the crisis-induced peak-to-trough collapse of 18 (24) percent in nominal GDP (GNP). However, absent a commensurate expected boom in output, the very high spending ratios today are largely structural.

[3] Given the unusually large and expanding wedge between GNP and GDP in Ireland, it is instructive to scale fiscal variables to both measures of economic activity. Ratios to GNP may, in fact, be more relevant, insofar as GNP is more closely linked to tax revenue.

Fnigure 4. Expenditure-to-GDP, GNP ratios - Ireland Vs OECD
(2011, percent of GDP, GNP)

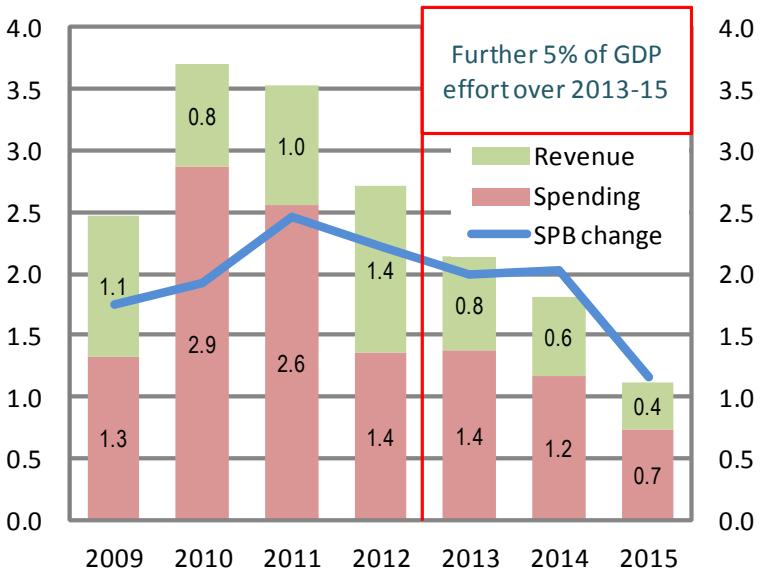


Source: OECD; and IMF staff estimates.

The Revenue-Expenditure Mix of Post-Crisis Consolidation

9. The crisis has prompted a sharp fiscal course correction in Ireland, with budgetary consolidation measures producing an 8 percent of GDP improvement in the structural primary balance over 2009–12. As Figure 5 shows, this large effort has been expenditure-led (two-thirds of total adjustment), combining a 14 percent cut in public wages; an 8 percent cut in welfare rates (except pensions); an almost 10 percent reduction in public service numbers from their 2008 peak; and savings in the non-pay current and capital budgets (17 and 63 percent, respectively, in nominal terms). Revenue contributions have included personal income tax (PIT) base broadening (10 percent reduction in income tax bands, introduction of universal social charge, elimination of Pay-Related Social Insurance (PRSI) reliefs and exemptions); higher taxes on capital and savings; and an increase in indirect taxes, most notably, the 2 point hike in the standard VAT rate to 23 percent in 2012. Progressive design and careful sequencing of this major consolidation, implemented during a deep economic slump, has helped preserve social cohesion, protect key public services and industrial peace, and maintain Ireland's relatively strong poverty indicators within Europe.

Figure 5. Mix of Consolidation Measures, 2009–15



Source: IMF staff estimates. SPB denotes structural primary balance ratio

10. With the overall deficit expected to still exceed 8 percent of GDP in 2012, the authorities are preparing for significant further consolidation over the medium term. The *Medium-Term Fiscal Statement* (November 2011) set out the parameters for a 5 percent of GDP consolidation over 2013-15 to deliver a deficit below 3 percent of GDP in 2015.[4] The plan envisages a continuation of the expenditure-led approach (maintaining the two-thirds share), which can be justified given Ireland's very high primary expenditure ratio in the OECD. Section D identifies significant scope for further expenditure savings, especially in health, education and social protection.

11. At the same time, it is important to recognize that the total expenditure effort envisaged is larger than that implied by the MTFS consolidation measures. As shown in the text table, and clear from Figure 6, the MTFS implies a reduction in primary expenditure-to-GDP ratio of 6.7 percentage points between 2012 and 2015, only half of which is to come from *MTFS*-announced measures; the remaining half is expected to arise from nominal freezes on welfare and pay rates.

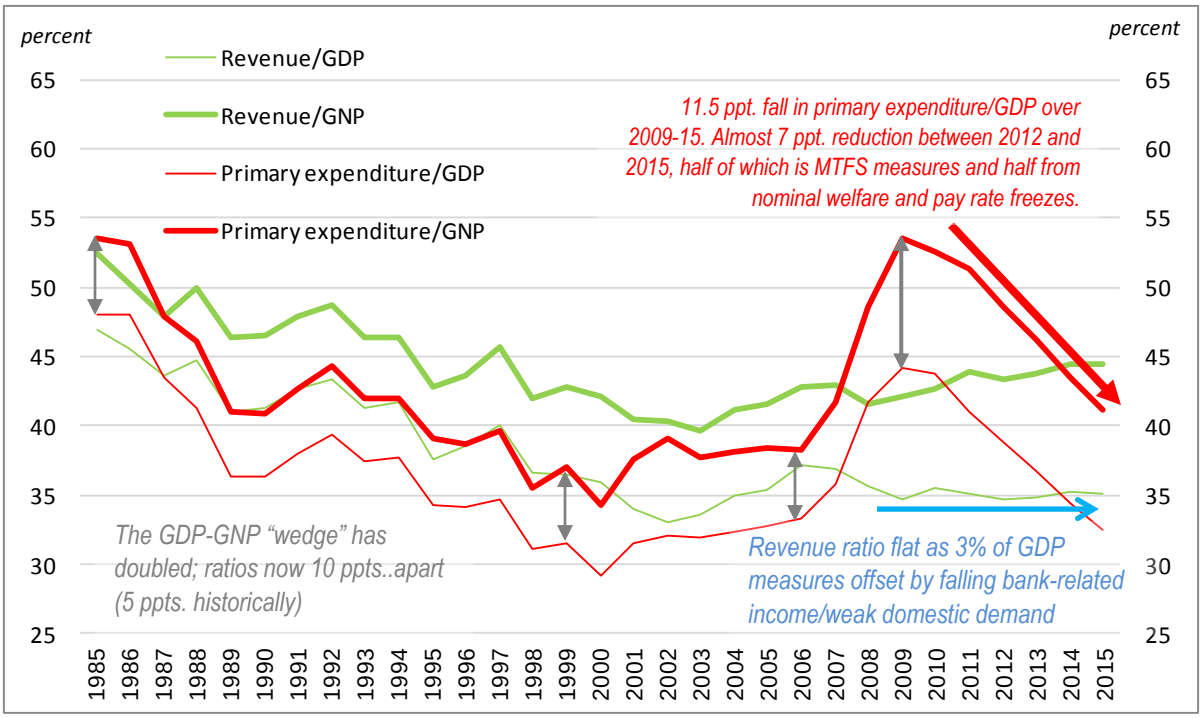
Ireland: General Government Finances, 2007–15
(percent of GDP, excl. bank support costs)

	2012	2013	2014	2015
Revenue	34.5	34.5	34.8	34.7
Expenditure	42.8	42.1	39.8	37.7
Primary	38.8	36.7	34.3	32.1
Current	36.1	34.2	32.0	29.9
Capital	2.7	2.5	2.3	2.2
Interest	4.0	5.4	5.5	5.5
Overall balance	-8.3	-7.5	-5.0	-3.0
Primary balance	-4.3	-2.1	0.5	2.5
Structural balance	-6.3	-5.5	-3.6	-2.3

Source: IMF staff projections, based on MTFS consolidation path.

[4] The authorities expect to update this statement in October 2012 in preparation for Budget 2013.

Figure 6. Projected Revenue and Expenditure Ratios Through 2015 1/



Source: Eurostat and IMF staff estimates.
1/ Figures are for general government.

12. Challenges to the achievement of this expenditure-led consolidation should not be understated. For example:

- A weaker than expected nominal growth recovery could mean smaller expenditure-ratio reductions from nominal freezes in rates.
- The demographic outlook will put significant upward pressure on pension, education and health spending over the medium to longer term. By 2020, Ireland's population of over-65 year olds will rise by about one-third, and there will be about 15 percent more primary school age children than in 2012.
- After several successive years of adjustment, few low-hanging fruit are left on the expenditure side.[5] Indeed, the recent over-runs in health appear to have structural roots and unwinding them sustainably may require more fundamental reforms.

13. The alternative to an expenditure-led consolidation, of having a higher tax level to support high spending, akin to Northern European economies, would present questions such as:

[5] Evidence from past European consolidations, especially the recent Latvian experience, suggests that expenditure reductions become progressively more difficult in later phases of consolidation, or when key services begin to be affected. For evidence on past European consolidations, see *Abbas et al (2011)*. For a summary view on the Latvian case, see *Blanchard (2012)*.

(i) would revenue-based consolidation be less durable?

Mauro (ed.) *et al* (2011) find, for European countries over 1991–2007, that revenue-led consolidation plans were generally not common, but, where backed by concrete measures, these were generally implemented, and durably so.

(ii) would it be more contractionary for demand?

The influential work of *Alesina and Ardagna (1998)* and *Alesina, Favero and Giavazzi (2012)* suggests "yes". In particular, the latter paper argues that revenue based-consolidations have been associated with long and severe recessions, while spending-led consolidations have been associated either with mild and short recessions or no recession at all. On the other hand, the large fiscal adjustment case studies covered in *Horton et al (2004)* and more recent work on fiscal multipliers (*IMF 2012*, see Appendix 1), find smaller growth costs of revenue-based consolidations in recessionary times because tax increases can induce lower private savings.

(iii) would high taxes/a larger public sector inevitably entail long-run growth costs and undermine Ireland's FDI/trade-centered model?

Barro (1990) theorizes that diminishing returns from productive spending, and increasing costs of distortionary taxation, place an upper bound on the optimal size of the state. However, empirical studies have struggled to find a robust causal link from government size or aggregate revenue ratios to long-term growth and much depends on the mix of government – i.e. the productivity of spending and how distortionary are the taxes financing it. For instance, the small open economies in Northern Europe (Finland, Denmark and Sweden) have maintained relatively strong growth and competitiveness indicators despite their fairly large public sectors. However, expanding revenue for a larger public sector by raising already-elevated marginal tax rates (as in Ireland) would likely have long-run costs. Substantially higher effective rates on individuals and corporate could also impact Ireland's attractiveness for high-skilled foreign professionals and foreign investors, clearly important considerations.

14. The foregoing suggests that no decisive conclusion on the appropriate revenue versus expenditure mix of fiscal consolidation can be reached. In that context, a pragmatic approach is to recognize that the chosen mix can be made more growth friendly by raising the productivity of spending and increasing reliance on less distortionary taxes. Given the still-fragile economy and high unemployment, it is vital that the choice of budget measures minimizes the drag on demand and job creation, while measures need to entail fair burden-sharing across income groups, generations and family-types, while effectively protecting the most vulnerable. This strategic approach, focusing on the quality (efficiency and equity) of measures, could involve base-broadening rather than rate hikes on the revenue side (section C), and better targeting of the state's social supports and subsidies on the expenditure side, while reforming key government services (section D).

C. High-Quality Options for Revenue Base-Broadening

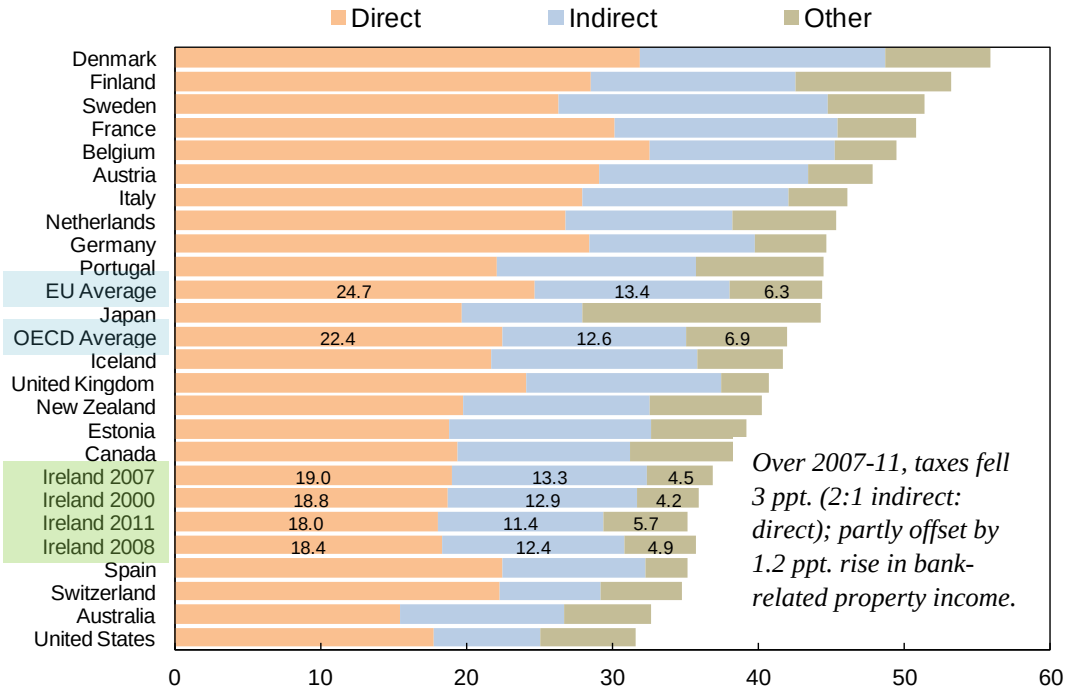
Relative to other OECD economies, Ireland has a combination of high personal and indirect tax rates and relatively narrow tax bases. Due to a very high entry point for income tax and employee PRSI, and despite elevated marginal rates for those around the average wage, Ireland's effective PIT rates are quite low for persons earning up to 167 percent of average wage. Similarly, due to several lower-tier rates, the relatively-high 23 percent standard VAT rate currently applies to just 50 percent of consumption. This, together with the absence of a property tax, provides considerable room to raise revenues without raising the already high marginal tax rates, and while also avoiding higher rates on lower income workers that would undermine work incentives. There is also scope to expand the well-designed carbon tax to all fuel types, and to redesign vehicle taxes in a way that can provide higher revenues, while preserving incentives for environmental conservation.

15. Ireland has maintained a relatively low tax-to-GDP ratio over time (Figure 7). Current taxes on income and wealth, including social insurance contributions (i.e. direct taxes) are quite low, at around 18 percent of GDP – in fact, the lowest among advanced European economies. Indirect taxes (at 11.4 percent of GDP in 2011) were slightly below the OECD average, although pre-crisis the collection was close to 13 percent of GDP. At the same time, as shown in Figure 6, revenue as a share of GNP (arguably a better measure of the tax base) has traditionally been higher—varying between 40–50 percent of GDP—and is expected to approach 45 percent of GDP by 2015. This suggests that low revenue-to-GDP ratios may not automatically imply significant revenue-raising capacity, going forward.

16. Table 2 sets out the shares of various taxes in total taxes (inclusive of social contributions), and reveals two interesting patterns. First, personal income taxes—at 47 percent of total taxes – are similar to the average share for English-Speaking economies. However, these economies compensate for their relatively low reliance on personal income taxes with higher shares of corporate income taxes and property taxes—about 23 percent; the figure for Ireland is less than 15 percent, with the shortfall primarily on account of property taxes. Instead, Ireland collects a relatively larger share from VAT, excises and non-fuel vehicle taxes.[6] The following sections take a closer look at three taxes (income tax, property tax and environmental taxes), where there is scope for base-broadening and efficiency-preserving revenue raising.

[6] Indeed, taxes on production and imports (i.e. indirect taxes) are comparable to EU levels (in percent of GDP), so that as a share of total taxes, the reliance on non-distributive taxes is quite high.

Figure 7. Ireland Vs. OECD – Level and Structure of Revenues



Source: OECD Revenue Statistics.

Table 2. Composition of General Government Revenues

Structure of Ireland's Taxes Relative to Comparators (percent of total taxes)

	PIT (excl. SSC)	SSC	*Employees*	*Employer*	*Self-employed*	PIT (incl. SSC)	CIT	Property	VAT & GST	Excises	Non-fuel motor taxes	Other
Ireland	27.0	20.3	*38.9*	*57.3*	*3.8*	47.2	9.2	5.6	22.9	10.7	2.3	2.1
Australia	37.4	0.0				37.4	18.7	9.6	14.3	7.6	2.1	10.3
New Zealand	37.5	0.0				37.5	12.4	6.9	30.2	2.9	0.0	10.1
United Kingdom	28.6	19.1	*39.5*	*57.5*	*3.1*	47.7	8.7	12.1	18.8	8.9	1.1	2.6
United States	32.1	26.2	*44.2*	*50.4*	*5.4*	58.2	10.9	12.9	8.1	4.1	0.7	5.0
English-Speaking	33.9	11.3	*41.8*	*53.9*	*4.3*	45.2	12.7	10.4	17.8	5.9	1.0	7.0
Austria	22.5	34.5	*40.7*	*46.8*	*12.5*	57.0	4.6	1.3	18.9	5.6	1.4	11.1
Belgium	28.1	32.5	*29.7*	*60.7*	*9.6*	60.6	6.2	6.9	16.5	4.9	1.1	3.8
Denmark	50.6	2.1	*94.9*	*5.1*	*0.0*	52.7	5.7	4.0	20.6	8.6	1.3	7.2
Finland	29.7	29.8	*20.8*	*70.8*	*8.4*	59.4	6.0	2.7	20.1	8.3	0.9	2.5
Sweden	28.0	25.0	*23.6*	*76.2*	*1.8*	53.0	7.6	2.4	21.6	6.1	1.1	8.4
Small European	31.8	24.8	*41.9*	*51.9*	*6.4*	56.6	6.0	3.5	19.5	6.7	1.1	6.6
France	16.9	38.8	*24.4*	*67.9*	*7.8*	55.7	4.9	8.5	16.9	5.5	0.4	8.1
Germany	24.4	39.1	*43.9*	*47.1*	*9.0*	63.5	4.2	2.3	20.1	7.1	0.9	1.9
Italy	27.2	31.5	*18.1*	*68.1*	*13.8*	58.8	6.5	4.7	14.5	4.9	0.9	9.7
Large European	22.9	36.5	*28.8*	*61.0*	*10.2*	59.3	5.2	5.2	17.2	5.8	0.7	6.6
OECD avg.	25.8	27.2	*34.8*	*58.5*	*10.8*	53.0	8.4	5.3	19.9	7.9	1.0	4.5

Source: OECD Revenue Statistics.

Personal income taxation[7]

17. Personal income taxes in Ireland comprise the income tax – which, in turn, is a combination of a core income tax (IT) and a universal social charge (USC) – and employee pay-related social insurance (PRSI).[8] The IT accounts for about two-thirds of total personal income taxes, with the rest split roughly evenly between the USC and PRSI. The PIT structure and associated average and marginal taxes for a single PAYE taxpayer is summarized in Table 3.[9]

Table 3. Ireland's Personal Income Tax Structure

Structure of Personal Income Taxes: Rates, Thresholds and Average and Marginal Tax Rates

Annual income (Euros)		Universal social charge		Core income tax		Employee PRSI		Total PIT (USC+IT+PRSI)		
		Rate	USC payable	Rate	IT payable	Rate	PRSI payable	Combined tax liability	Average tax rate	Marginal tax rate
10,035	USC exemption threshold							0.00	0.0%	20072%
10,036	2% USC on first 10,036	2%	200.72					200.72	2.0%	4%
10,037	4% USC on income above 10,036, till 16,016	4%	200.76					200.76	2.0%	4%
16,016		4%	439.92					439.92	2.7%	7%
16,017		7%	439.99					439.99	2.7%	7%
16,499		7%	473.73					473.73	2.9%	7%
16,500	Entry point for income tax	7%	473.80	20%				473.80	2.9%	27%
18,303		7%	600.01	20%	360.60			960.61	5.2%	46827%
18,304	PRSI exemption threshold	7%	600.08	20%	360.80	4%	468.00	1,428.88	7.8%	31%
21,708	0.67 * Average wage	7%	838.36	20%	1,041.60	4%	604.16	2,484.12	11.4%	31%
24,908	PRSI *allowance* exhausted	7%	1,062.36	20%	1,681.60	4%	732.16	3,476.12	14.0%	31%
32,400	Average wage	7%	1,586.80	20%	3,180.00	4%	1,031.84	5,798.64	17.9%	31%
32,800	Higher IT rate	7%	1,614.80	41%	3,260.00	4%	1,047.84	5,922.64	18.1%	52%
40,000	Illustrative	7%	2,118.80	41%	6,212.00	4%	1,335.84	9,666.64	24.2%	52%
54,108	1.67 * Average wage	7%	3,106.36	41%	11,996.28	4%	1,900.16	17,002.80	31.4%	52%
64,800	2 * Average wage	7%	3,854.80	41%	16,380.00	4%	2,327.84	22,562.64	34.8%	52%
97,200	3 * Average wage	7%	6,122.80	41%	29,664.00	4%	3,623.84	39,410.64	40.5%	52%

Source: Department of Finance

[7] Issues related to pension tax reliefs and PRSI base broadening to unearned income are discussed under "Other", toward the end of this section.

[8] The Irish welfare system does not differentiate significantly between social insurance and social assistance, or between contributory and non-contributory state pensions. Accordingly, PRSI contributions do not bear a strong link to welfare benefits, so that it is acceptable to combine (employee) PRSI with income tax and USC when looking at personal income taxation in Ireland.

[9] Note that Table 3 uses the term "exemption threshold" to connote the level of income that, if one earns below it, no tax is incurred. In this sense, both the USC and PRSI have exemption thresholds: i.e. those earning below €10,036 pay no USC, and those earning below €18,304 pay no employee PRSI. However, those earning above these levels pay the said tax on *all* income, including the income below the threshold, implying a jump in the effective tax schedule around the threshold. By contrast, the "entry point" for income tax refers to the amount of income on which there is no tax payable at all. Thus, a person earning €16,499 pays zero income tax, a person earning €16,500 pays 20 percent of €1 (= €16,500-16, 499) or €0.2 in income tax, while a person earning €30,000 pays 20 percent of €13,501 (= €30,000-16, 499) or €2,700 income tax (which is 9 percent of the gross income of €30,000).

18. As can be seen, Ireland has a fairly progressive personal income tax, with two characteristics that stand out and warrant further analysis:

(i) high marginal rates that kick in at fairly low income levels;

(ii) low average tax rates for most taxpayers, most notably for those earning between 67 and 167 percent of average wage.

High marginal rates

19. The first anomalous feature of the PIT system is the relatively low income level at which the top marginal rate kicks in. The higher income tax rate of 41 percent (and the corresponding top marginal rate of 52 percent, including the 4 percent USC and 7 percent employee PRSI) applies at €32,800, which is just above the average wage of €32,400. In this, Ireland is closer to the smaller European economies than the English-Speaking or Large European countries.

20. At end-2011, the level of the top marginal rate (52 percent) was high relative to the average for OECD and English-Speaking economies, but comparable to levels in the smaller European economies and the U.K., although in the latter, the rate will be reduced to 45 percent in 2013. Apart from generating efficiency concerns, the high top marginal rate in Ireland relative to the U.K. could also be problematic in terms of maintaining Ireland's attractiveness as a location for high-earning professionals. On the other hand, it has to be noted that (i) location decisions are more a function of average, not marginal rates, which are not so out-of-line in Ireland for high-earners; (ii) the U.K. top rate will continue to kick in at a higher income level than in Ireland; and (iii) the distortionary effects of high top marginal rates are believed to be relatively small for high income-earners (*Coady et al, 2012*).

2011 levels	Top marginal PIT rate (%)	Income threshold for higher rate (multiple of average wage)
Ireland	**52**	**1.0**
Australia	46	2.6
New Zealand	33	1.4
United Kingdom	52	4.4
United States	43	8.3
English-Speaking	**44**	**4.2**
Austria	44	2.1
Belgium	59	1.0
Denmark	56	1.1
Finland	56	1.8
Sweden	57	1.5
Small European	**54**	**1.5**
France	51	2.7
Germany	47	5.9
Italy	51	2.9
Large European	**50**	**3.8**
OECD	**46**	**3.2**

Source: OECD.

Low average (or effective) rates

21. A comparison of average PIT rates over time below shows that Ireland's current effective rates are in line with 2000 levels and that the sharp reduction in bands and credits through 2008 has since been clawed back. However, relative to most English-Speaking economies, and certainly the OECD average, the effective rates for an average-wage or

below-average-wage single PAYE earner (especially if they are married with children) are quite low.[10] Low average PIT rates have the advantage of reducing disincentives to take up work but, as noted by *OECD (2011)* and discussed in section III, *benefits*, not taxes, are the main drivers of such disincentives in Ireland.

Effective rates of personal income taxation (including employee SSC, in percent)									
		Ireland			US	UK	Australia	NZ	OECD
		2000	2008	2012	2011				
67% *AW	PAYE single earner	11.2	5.9	11.4	19.6	21.7	15.9	12.9	20.7
100% *AW	PAYE single earner	20.3	13.9	17.9	22.8	25.1	22.2	15.9	24.8
167% *AW	PAYE single earner	32.1	25.8	31.4	28.6	30.4	28.1	22.0	30.3
100% *AW	Married PAYE one-earner with two children	10.1	5.6	10.3	10.4	23.5	21.1	15.9	19.2

Source: Ireland Department of Finance and OECD (Taxing Wages, Comparative Tables, 2011).

Note: Average annual wage (AW) in Ireland in 2012 = Euro 32,400.

22. Average PIT rates are low in Ireland for a number of reasons:

(i) The entry point for the core income tax regime is unusually high. The income level at which the IT rate of 20 percent kicks in for a regular single PAYE earner is €16,500.[11] All income below this level is exempt from the income tax, irrespective of how high the total earnings of the PAYE earner are. The entry point threshold corresponds to 51 percent of the average annual wage (€32,400) which, by far, is the highest in the OECD: the next closest ratio is 27.6 percent (for Italy), while the average for both OECD and English-Speaking economies is 9 percent.[12]

(ii) The employee PRSI rate (at 4 percent) is modest and has an even higher exemption threshold (€18,304). Moreover, it comes with a generous initial "allowance", i.e. deduction from income of the first €6,604 for the purposes of calculating the employee PRSI liability. Thus, the PRSI tax liability for someone earning €18,304 is 4% *(18304-6604) = €468, an average (or effective) tax rate of 2.6 percent.

[10] The effective tax rates for self-employed individuals and couples are much higher, as they are not entitled to the PAYE tax credit. However, these taxpayers are entitled to deduct business expenses from income in their tax returns, so the actual tax take for the government would not be much higher.

[11] The entry point for the income tax (€16,500) for a PAYE earner is determined by the combination of the basic tax credit of €1,650 and the PAYE credit (similar to an earned-income tax credit) of €1,650. For earnings below €16,500, the annual tax liability would be less than €3,300 given the (lower) 20 percent income tax rate, which would be covered by the sum of the personal and PAYE tax credits (each €1,650).

[12] Note that €16,500 is only slightly lower than the minimum wage of €17,542: €8.65/hour*39 hours a week*52 weeks a year.

(iii) The universal social charge (USC) applies to a broad base, taxing the entire income of any taxpayer earning above €10,036, but the USC tax rates (2, 4 and 7 percent) are quite low, so that the effective USC tax rate on incomes up to €16,500 (the income tax entry point) is just 2.9 percent. Moreover, special lower USC rates apply to medical card holders. Not only is this unusual (a health entitlement determining an income tax rate), the entitlement—at least in the case of the over-70s—is not subject to an effective means test, raising questions of fairness.

23. In addition to the standard regimes, there are a number of *special* tax reliefs that push up the entry point for income tax even higher for certain groups. For example, in addition to the two standard tax credits (the individual and PAYE tax credits), there are allowances (provided via credits or exemptions) for single parents, people who care for their children at home, people older than 65, rental expenses for older taxpayers, widows, handicapped and blind people. Similarly, lower USC rates apply to medical card holders, even when incomes are above those for non-medical card holders.[13]

24. Although intended to serve re-distributional purposes, such special reliefs are a poor instrument to achieve this result in a system where (i) tax credits are non-refundable (as they are in Ireland), i.e. they cannot result in a payment to the taxpayer in the case of tax liability being assessed as nil; and (ii) the sum of the two basic tax credits is so high: a low-income earner is already exempt from income tax, so that these special credits accrue mainly to middle or higher earners. Some of these special credits (and exemptions) have been scaled back in recent years, but scope for further tightening exists.

25. A reform strategy could seek to raise average PIT rates for taxpayers earning above 67 percent of average wage (or €21,708); increase the income level at which the top marginal rate kicks in; ensure better targeting of *special* income tax reliefs (including for USC); and smoothen out kinks in the tax schedule. The following is one way to achieve this:

a) Phase out the annual PAYE tax credit of €1650 between the minimum wage (€17,508) and the average wage (€32,400). This will increase the average and marginal income tax rates for persons earning between the minimum and average wage; raise the average tax for those earning above the average wage; and improve the targeting of special income tax reliefs.

b) The savings from (a) – which could be substantial – may be partly used to lower the income tax rate in the first bracket, or split it into two (e.g. 15 and 25 percent) so as to

[13] This is possible in the case of the over-70s who still have near-universal entitlement to the medical card. Separately, it is quite unusual for a health entitlement to determine the PIT tax rate applicable to a person.

ensure that tax burdens do not rise for those earning below 67 percent of the average wage.

c) The income ceiling at which the top marginal rate kicks in could be increased somewhat to partly compensate those earning around the average wage, taking due regard of the scope that exists to ensure more equitable tax treatment of married couples vs. individual payers.

d) In addition, the PRSI could be better aligned with the income tax by (i) reducing the PRSI exemption threshold which, at €18,304 is 11 percent above the income tax entry point of €16,500; and (ii) phasing out the universal entitlement to an allowance on first €6,604 of income between the minimum wage and average wage, similar to what is proposed for the PAYE tax credit.

e) Finally, the interaction of the USC, income tax and PRSI could be reviewed to iron out large kinks in the average tax schedule at the USC and PRSI exemption thresholds.

Property taxation

26. Ireland currently maintains four types of property tax (the first is a transactions-based tax and the following three are recurrent):[14]

- 2% stamp duty on non-residential transactions (with minimal exemptions) since 2012; and 1% (2%) stamp duty on residential transactions up to €1 million (on the balance above €1 million) since 2011.[15] The combined collection from these stamp duties in 2010, i.e. before these lower rates were introduced, amounted to about €0.2 billion in 2010.

- Commercial rates, which are collected by local governments, are based on the annual rental value of commercial premises (multiplied by a rate that is set by each local authority). The combined collection from these is around €2½ billion.

- A non-principal private residence (NPPR) charge of €200 per NPPR, which yields a modest €65 million a year, although this is because the rate is low, not because of weak compliance. This charge was introduced in 2009.

[14] Like most other OECD economies, Ireland does not have a net wealth tax.

[15] These rates have been brought down significantly from the 7-8 percent prevailing before the crisis.

- A €100 household charge on principal private residence, introduced in Budget 2012, and initially expected to yield €160 million per year. Low compliance has meant the collection may fall short this year.[16]

27. The recent EC report on *Taxation Trends in the European Union* appears to suggest that, relative to Europe, Ireland has high taxes on property. However, comparisons with the OECD sample in Table 4, which includes English-Speaking economies with a tax structure more similar to Ireland's (i.e. with low direct taxes), show a low level of property taxation in Ireland, especially for recurrent taxes on immovable property. For instance, in 2010, Ireland's property tax take was 1.6 percent of GDP, compared with 1.8 percent of GDP for the OECD, and 3 percent of GDP for the four English-Speaking economies; the share of recurrent property taxation in total property taxes was 56.6 percent, well below the 83.3 percent in these economies.[17]

Table 4. The Level and Structure of Property Taxation—Ireland vs. OECD

	Total (% of GDP)	Total (% of tax revenue)	*share in property taxes:*	Recurrent (immovable)	Recurrent (net wealth)	Estate, inheritance & gift	Financial & capital transactions	Other
Ireland	1.6	5.6		56.6	0	9.9	33.5	0
Australia	2.5	9.6		58.5	0	0	41.5	0
New Zealand	2.2	6.9		98.0	0	0	1.9	0
United Kingdom	4.2	12.1		80.8	0	4.3	14.9	0
United States	3.2	12.9		95.8	0	4.2	0	0
English-Speaking	3.0	10.4		83.3	0	2.1	14.6	0
Austria	0.5	1.3		43.4	0	2.2	53.6	0.6
Belgium	3.0	6.9		41.3	2.2	21.7	33.0	1.8
Denmark	1.9	4.0		71.7	0	11.2	17.1	0
Finland	1.2	2.7		56.0	0	18.6	25.5	0
Sweden	2.4	2.4		72.3	0	0	27.7	0
Small European	1.8	3.5		57.0	0.4	10.7	31.4	0.5
France	3.6	8.5		67.5	6.3	10.9	15.3	0
Germany	0.8	2.3		53.9	0	21.0	25.2	0
Italy	2.0	4.7		29.4	0	1.5	54.7	14.4
Large European	2.2	5.2		50.3	2.1	11.1	31.7	4.8
OECD	1.8	5.3		59.2	7.0	7.2	23.7	2.9

Source: OECD Revenue Statistics

[16] Ireland had a recurrent property tax on principal residence of 1.5 percent till 1997, when it was abolished. This tax was levied on the excess of the market value of all relevant residential properties of a person over a market value exemption limit and was payable provided the income of the household exceeded an income exemption limit.

[17] The 2010 data suggests a high share of transactions taxes in Ireland (mainly stamp duties), but these have been brought down since then.

28. There are several arguments in favor of higher recurrent property taxation on immovable property (see Norregaard, forthcoming).[18] First, they are a relatively stable source of revenue, which is important in small open economies with volatile tax bases such as Ireland. Second, they can promote efficient land use by imposing a "tax cost" on land ownership or use that to some degree may be independent from the actual use of the land (particularly if market price valuation is applied). Third, they can neutralize other distortions, such as more favorable income tax treatment of owner-occupied housing – e.g., due to mortgage interest reliefs – although this may not be as relevant in Ireland, as these reliefs are being phased out, and will be eliminated by 2017. Fourth, and perhaps most important, is the general acceptance of recurrent property taxes on immovable property as the least distortionary form of taxation in terms of reducing long-run GDP per capita, followed by taxes on consumption (and transactions), personal income and corporate income (*OECD 2010*).

29. The property tax was found to be regressive in its incidence by the earliest studies on the topic.[19] However, more recent analysis finds the incidence of a property tax to be primarily on land and capital which, because they are owned predominantly by higher-earning individuals, implies progressivity. This view sees a property tax as a user charge for local public services (or their capitalized value, if market values are used), and thus as fair. Another aspect of fairness relates to the apportionment of property taxes between central or local governments. Because property values, in part, reflect services supplied by local governments, it is reasonable that they be allocated primarily to finance local activities.

30. The Irish authorities plan to introduce in 2013 a value-based property tax on principal private residences. Key design and implementation issues are:

- **Rate level**: There would be little point in introducing the tax at a level below 0.2 percent. Given the importance of this reform for the future stability of public finances, and its relative growth-friendliness, consideration could be given to setting a rate comparable to levels in English-Speaking economies; for example, the average rate across the various states in the United States is 1.38 percent.[20] A tax rate around 0.5 percent could yield annual revenue of €1 billion.

- **Rate setting**: The power to set the rate could lie with the central government, or local government, or could be a mix of the two (perhaps central government setting a base rate, with local governments allowed to add a small top-up). That said, the property tax base should be clearly defined in *central* legislation, without any local discretion.

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[18] "Taxing Immovable Property: Revenue Potential and Implementation Challenges", IMF Staff Discussion Note.

[19] These studies saw a property tax as a combination of a tax on mobile capital and a tax on immobile land (the former got shifted to renters, consumers, and labor, while the latter borne by landowners).

[20] Based on U.S. property tax rates, as reported in State-by-State Property-Tax Rates.

- **Exemptions and waivers**: These should be kept to a minimum, although some allowance (perhaps in the form of a deferral, rather than outright waiver) for distressed mortgages could make sense.

- **Register**: It would be critical to assemble a unified register of properties with details on who owns which property so that the liable taxpayers can be linked with Revenue's database on tax numbers.

- **Collection**: The local government's challenges with the household charge, which had a lower-than-expected compliance rate, tilts the case in favor of central collection. In that case, the pros and cons of a PAYE-based deduction approach would need careful consideration due to the perceived impact on labor incentives, and administration cost and complexities for businesses.[21]

- **Apportionment of proceeds**: Although details on revenue apportionment between the center and local governments are ultimately a matter for government, it would seem fair that a significant portion of the revenue intended for local governments go directly to the respective locality, while a sufficient amount be retained for equalization purposes (i.e. to be distributed to less-less-well-off local administrations).

- **Property valuation**: As there is no up-to-date cadastre of property values in Ireland, and in an illiquid market many properties would be difficult to value in any case, the authorities may have to rely on a self-assessment regime initially. Although this is not a common approach, it has been implemented with some success in Latin America (Bogota City). Once the system is up and running, computer-assisted mass appraisal (CAMA) systems could be used for property revaluations.

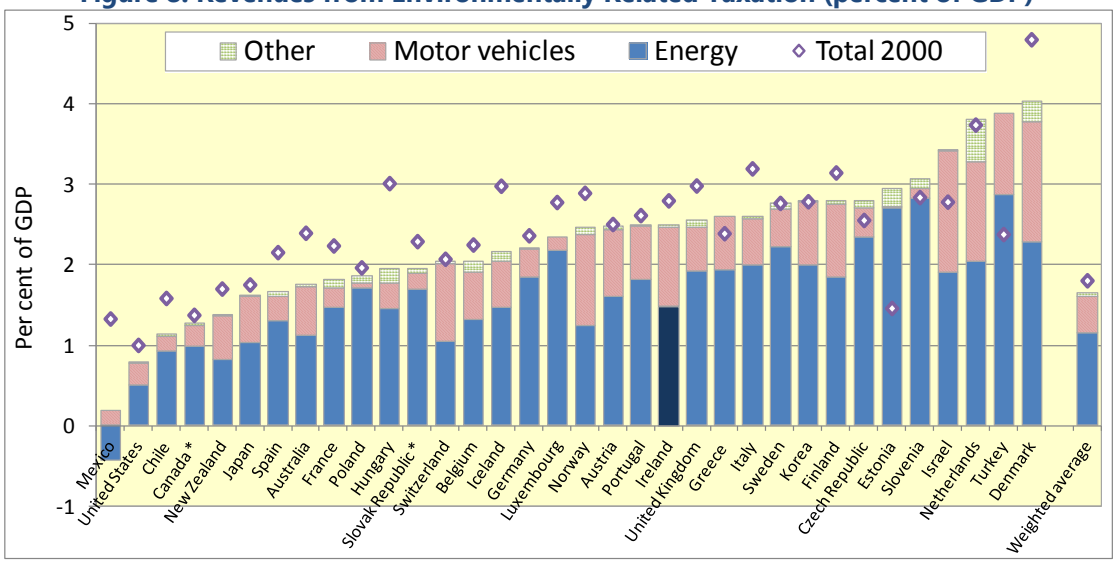
Environmental taxation

31. Ireland's environmental taxation comprises two types of *energy taxes*: excise taxes on motor fuels and a carbon tax that operates as a top-up on motor fuel excises, and applies separately to non-transport fuels used in industry and natural gas used in homes; and two types of *vehicle taxes* (increasing in CO_2 emissions/km): one-off registration charges and annual motor taxes. In 2010, revenues from these taxes amounted to about 2½ percent of GDP in Ireland (down from 2.8 percent in 2000), compared with a weighted average of 1.7 percent for OECD countries as a whole. As a share of total tax revenues, environmental taxes were about 9 percent in Ireland, compared with a weighted average of 5½ percent of revenue for the OECD economies (Figures 8 and 9).

[21] Persons on pensions/welfare would presumably require such deduction to be implemented by the Department of Social Protection, which could undermine somewhat the perceived benefits of collection by a single central agency.

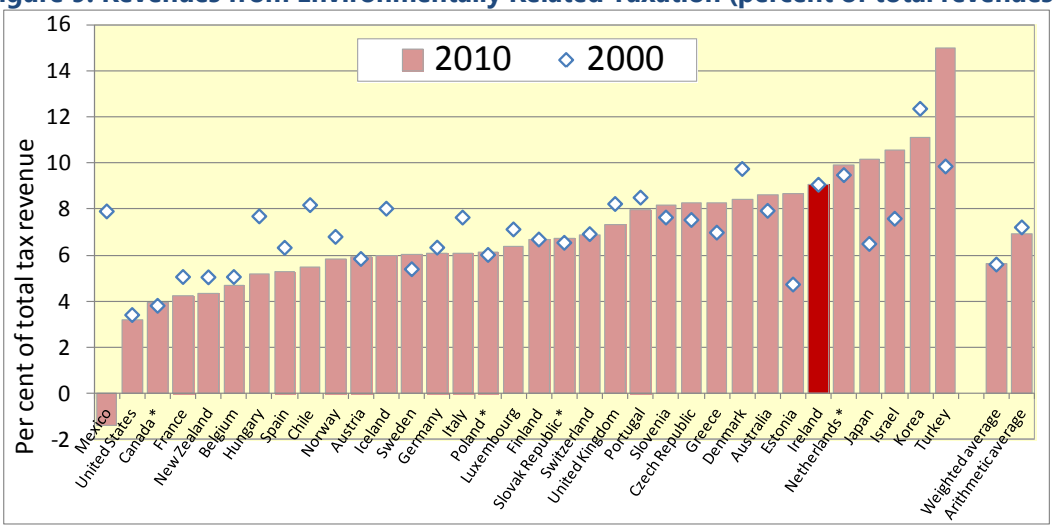
32. In Ireland, energy (fuel) taxation accounted for about 60 percent of 2010 environmental tax revenues, while vehicle taxes for the remaining 40 percent. The still relatively small collections from the carbon tax (introduced in 2011 and raised in 2012) are not reflected in these figures. Most other OCED countries raise disproportionately more revenue from fuel taxes, and some (like Denmark, Estonia and Netherlands) raise a significant amount from excise taxes on electricity.

Figure 8. Revenues from Environmentally Related Taxation (percent of GDP)



Source: OECD.

Figure 9. Revenues from Environmentally Related Taxation (percent of total revenues)



Source: OECD

33. The main recommendations in relation to these three environmental taxes are:

- *Domestic carbon tax:* the level of the domestic carbon tax for emissions outside of the EU cap-and-trade system seems reasonable, but the current price for ETS emissions is

only about a third of this level. A possible reform (to equalize emissions prices across the economy) would be to bring ETS emissions under the carbon tax, and provide refunds to covered sources for ETS allowance purchases.

- *Vehicle taxes:* in the short term, a possibility for promoting stable revenue from vehicle taxes while at the same time more effectively exploiting technological possibilities for reducing emissions would be to implement a uniform ad valorem tax on vehicle sales combined with a 'feebate'. The latter provides rebates for vehicles with relatively low emissions intensity and imposes fees on vehicles with relatively high emissions intensity.
- *Fuel taxes:* there appears to be some modest scope to raise the level of passenger fuel taxes from the perspective of addressing adverse side effects of vehicle use including congestion, pollution, and road accidents. However, a more effective way to reduce congestion over the longer term would be to partly transition away from fuel taxes to a system of mileage-based tolls for busy roads with toll rates progressively rising and falling during the course of the rush hour.

Other taxation

34. Finally, we discuss some stand-alone tax issues that are likely to be important ingredients in any overall tax reform program: private pensions, PRSI base broadening, and VAT base broadening.

(i) Taxation of private pensions

About half of taxpayers maintain private pensions in Ireland. The tax treatment of private pensions is EET: tax-exempt at the contributions and accumulation, but taxed at distribution. However, because contributions can be deducted for tax purposes at the "higher" rate of income tax (41 percent), but capital gains and pension income would, in many cases, be taxed at 20 percent (e.g. if retirement income for a pensioner couple is below €36,000 p.a.), the current system subsidizes the contribution and accumulation stages beyond the incentives inherent in an EET system. These subsidies are poorly targeted, with richer taxpayers (who contribute more toward private pensions) receiving a substantial share of the subsidies. There is debate on the best approach to reduce or better target these subsidies:

Approach 1: Move to standard-rating of pension contributions deduction. The November 2010 *National Recovery Plan* had envisaged a gradual reduction, over 2012–14, in the rate of tax deductibility of private pension contributions from 41 percent to 20 percent. This would have preserved the EET regime for those expecting annual pension incomes (for a couple) below €36,000, but would have introduced some upfront taxation for those expecting larger pensions. The number of pensioners impacted could be large (as many as

650,000) so that the consequences of a large behavioral response that drives down long-term savings, could be quite negative.

Approach 2: Cap the cumulative amount of tax-relief-benefitting contributions. It has been suggested that instead of Approach 1, a cap on cumulative contributions of €1.5 million be set, "equivalent" to an annual pension payout in retirement of about €60,000. About 30,000 high-income pensioners would likely be affected in this case.

Overall, it is not clear why a combination of the two suggested approaches is not possible. First, the rate of tax relief could be consolidated for everyone at around 30 percent. This would have a relatively small effect on incentives to save for higher income taxpayers (subject to 41 percent tax rate), but could significantly raise the incentive to build retirement savings for those on lower incomes (subject to 20 percent tax rate). At the same time, a cap on cumulative relief-benefiting contributions seems fair. Whether €1.5 million cap is appropriate or is too generous, would have to be determined. It would be administratively easier, nonetheless, to apply the cap to new contributions, rather than retroactively.

(ii) PRSI Base Broadening

At 4 percent, Ireland's employee PRSI rate is low compared with the mean average marginal employee social security contributions rate for OECD economies of about 8 percent in 2009. Relative to English-Speaking economies, the Irish rate is more comparable: the average of the marginal rates in the United Kingdom and United States was about 5 percent (Australia and New Zealand do not charge social security contributions). Given the large and widening deficit in the social insurance fund, however, the level of employee PRSI collections may have to be raised over the medium-to-long term (unless the state pensions are cut greatly). Given the already-high top marginal tax rate and the low threshold at which it kicks in, PRSI rate increases may be counterproductive and base-broadening should be the preferred course. Some of this broadening has already been done through the removal of the *employer* PRSI exemption on private pension contributions.

On the *employee* PRSI side, Budget 2012 signaled the possibility of extending PRSI to unearned income (i.e. rental, dividend or interest income), which would be a progressive base broadening measure. One concern is that the move would render the PRSI more like a tax, inducing adverse labor market incentive effects, and less like a hypothecated charge linked to some public or social benefit provision. However, as *FAD (2012)* notes, this issue is less pertinent in countries where the contributions-benefits link is tenuous. Ireland appears to one of these countries, as (i) entitlement to the full contributory pension (€230/week) is relatively easy to obtain (notwithstanding the more recent tightening of eligibility requirements); and (ii) even those not entitled to contributory pensions can get a non-contributory pension that is only marginally lower (€219/week). Overall, therefore, the broadening of the PRSI base to

include un-earned income would not be expected to have significant adverse labor market effects given the *de facto* tax status of the PRSI.

(iii) VAT Base Broadening

Although Ireland's collections from VAT are on the high side, and its 23 percent tax rate at the 75th percentile level in advanced economies, scope may exist for base-broadening. This is because the 23 percent standard rate applies to only about half of consumption. Ireland presently has three lower-tier rates (13.5 percent, 9 percent and 0 percent), in addition to two agriculture-related rates around 5 percent. The 9 percent rate was introduced in May 2011 as part of the government's Jobs Initiative aimed at the services sector, including tourism, and it is scheduled to expire at the end of 2013. That would be a good opportunity to review the appropriateness of all lower-tier rates including the "zero" rate, which covers essential items like food, medicines and children's clothing etc., as it is not efficient to give untargeted subsidies to everyone (rich and poor alike) through the VAT system.

D. Options for More Targeted and Efficient Expenditure

Ireland provides several expensive universal supports and subsidies, which are difficult to justify under present budgetary circumstances. Better targeting of spending, including the child benefit, medical cards, the household benefits package, subsidies on college fees, and non-means tested state pensions can generate significant immediate savings and contain demographics-related pressures over the longer-term, while effectively protecting the poor. While recognizing the benefits of the Croke Park Agreement, continued monitoring of the adequacy of savings in the net pay and pensions bill, and of service provision, is required, given the relatively high level of the public sector paybill. Longer-run reforms in health and education to ensure more cost-effective delivery of clearly-identified service priorities would be an essential compliment to ensure durability of savings over the medium-term.

35. Given recent staff analyses of social welfare spending and public pay and pensions (Box 3 and Box 5, respectively, in the IMF staff reports for the 5th and 6th EFF Reviews for Ireland), this section will briefly look at the following: (i) a discussion of service outcomes vs. 2010 expenditure levels in health, education and social protection; (ii) a brief overview of the expenditure effort thus far and planned; and (iii) an analysis of where targeting can generate significant immediate savings, while containing demographics-related pressures; and (iv) identification of longer-term reform priorities, leveraging the discussion in (i).

(i) Public Expenditure versus Outcomes

36. An analysis of Ireland's expenditure on health and education (which account for more than half of total government expenditure) reveals a mixed picture regarding effectiveness (Tables 5 and 6). Spending on health grew rapidly between 2000 and 2010 to second highest in the OECD, and is now outsized relative to outcomes, which are mostly near the OECD

average. Education spending (as a share of GDP), which was well below the OECD average in 2000, is now also slightly above it, while conclusions on outcomes are similar. Of the almost 5 percentage point of GDP increase over 2000–10 in health and education spending combined, four-fifths occurred in compensation to employees in these sectors. These trends suggest significant scope for efficiency savings, especially in health.[22]

Table 5. Public Expenditure on Health and Education *(2011, percent of GDP)*

Rank	Country	2000 Health	Rank	Country	2010 Health	Rank	Country	2000 Education	Rank	Country	2010 Education
	Poland	--	1	United States	8.89		Poland	--	1	Iceland	8.35
	Switzerland	--	**2**	**Ireland**	**8.54**		Switzerland	--	2	Denmark	8.07
	Turkey	--	3	Denmark	8.47		Turkey	--	3	Israel	7.16
1	Austria	8.36	4	Netherlands	8.35	1	Israel	7.50	4	Sweden	6.97
2	Iceland	8.01	5	United Kingdom	8.21	2	Iceland	7.50	5	United Kingdom	6.95
3	France	7.05	6	Austria	8.15	3	Denmark	7.36	6	Estonia	6.83
4	Norway	6.89	7	France	8.00	4	Canada	7.31	7	Slovenia	6.64
5	Czech Republic	6.74	8	Belgium	7.90	5	Sweden	6.75	8	Finland	6.53
6	Germany	6.63	9	Iceland	7.89	6	Estonia	6.66	9	Portugal	6.46
7	Denmark	6.59	10	Finland	7.86	7	Portugal	6.38	10	United States	6.46
8	Slovenia	6.42	11	Czech Republic	7.84	8	Slovenia	6.21	11	Belgium	6.27
9	Belgium	6.30	12	Italy	7.59	9	France	5.91	12	Switzerland	6.01
10	Portugal	6.21	13	Norway	7.49	10	Finland	5.90	13	France	6.00
11	United States	6.13	14	Greece	7.39	11	United States	5.89	**14**	**Ireland**	**5.97**
12	Sweden	6.08	15	Germany	7.20	12	Norway	5.66	15	Norway	5.92
13	Italy	5.98	16	Sweden	7.08	13	Belgium	5.63	16	Netherlands	5.89
14	Canada	5.92	17	Portugal	7.00	14	Austria	5.55	17	Austria	5.70
15	Finland	5.74	18	Slovenia	6.91	15	Hungary	5.23	18	Poland	5.65
16	United Kingdom	5.67	19	Japan	6.90	16	Netherlands	5.01	19	Hungary	5.58
17	Israel	5.58	20	Spain	6.53	17	United Kingdom	5.00	20	Luxembourg	5.11
18	**Ireland**	**5.52**	21	Slovak Republic	6.40	18	Italy	4.55	21	Spain	4.90
19	Spain	5.23	22	Israel	5.50	19	Spain	4.37	22	Czech Republic	4.83
20	Slovak Republic	5.22	23	Estonia	5.31	20	Luxembourg	4.32	23	Slovak Republic	4.48
21	Hungary	4.96	24	Hungary	5.14	**21**	**Ireland**	**4.32**	24	Italy	4.46
22	Netherlands	4.94	25	Poland	5.00	22	Czech Republic	4.28	25	Germany	4.29
23	Estonia	4.27	26	Luxembourg	4.92	23	Germany	4.06	26	Greece	3.73
24	Luxembourg	4.10	27	Switzerland	2.07	24	Korea	3.89	27	Japan	3.58
25	Korea	2.22	28	Turkey	1.31	25	Slovak Republic	3.60	28	Turkey	3.36
	Average	5.87		Average	6.78		Average	5.55		Average	5.79

Source: OECD.

Table 6. Selected Outcomes in Health and Education: Ranks in the OECD

Ireland's health outcomes, OECD rank, 2009

Outcome 1/	Ireland's rank 2/
Life expectancy at birth (years gained 1960-2009)	22 (19)
Potential years of life lost, males (females)	20 (17)
All cancers mortality rates	22
Infant mortality rates (decline, 1970-2009)	11 (18)
Percentage of adults reporting to be in good health	6
Prevalence estimates of diabetes, adults aged 20-79 (2010)	8
Incidence estimates of Type 1 diabetes, children aged 0-14 (2010)	21
Obesity rates, 2009 (2000)	15 (10)
AIDS incidence and estimated HIV prevalence	23
Life expectancy at age 65, females (males)	21 (21)

1/ Rankings are organized such that a higher ranking (closer to 1) means a better outcome; hence a *lower* mortality rate and a *higher* life expectancy
2/ out of 34 OECD countries

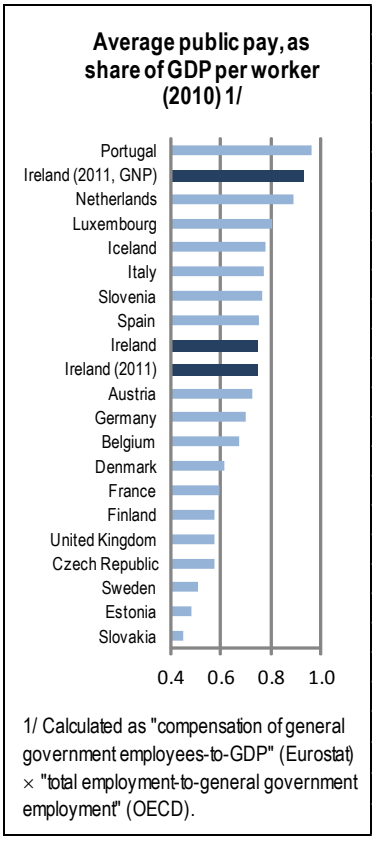
Source: www.oecd.org/health/healthpoliciesanddata/49105858.pdf

Ireland's education outcomes, OECD rank, 2009

Outcome	Ireland's rank 1/
Upper secondary graduation rates	7
Entry rates into tertiary-type A education	20
First-time tertiary-type A graduation rates, 2009 (1995)	8 (5)
Tertiary graduates in science-related fields among 25-34 year olds in employment, men (women)	8 (12)
Percentage of tertiary degrees awarded to women	15
Difference in reading performance between students from different socio-economic backgrounds	18
Reading performance, 15 year old students	13
Percentage of students who read for enjoyment, 2009 (2000)	21 (19) (/26)
Percentage of 25-64 year-olds in employment with tertiary education attainment (upper secondary)	25 (28)
Relative earnings for 25-64 year-olds with tertiary attainment (below upper secondary attainment)	10 (6)

1/ out of 34 OECD countries except where otherwise indicated
Source: www.oecd.org/education/highereducationandadulttearning/48631582.pdf

37. While the benefits of the Croke Park agreement for industrial peace and efficiency-enhancing public sector reforms have to be recognized, Ireland's public sector paybill still remains high. Ireland's compensation of public employees (as a share of GDP) is only slightly above the 11 percent average European average level, but as a share of GNP, it is 3 percentage points higher.[23] This of course, reflects the impact of the 35 percent increase in personnel numbers and the 61 percent surge in average pay rates over 2000–08, which have only partly been unwound: numbers have fallen by 9 percent, and pay rates by 14 percent (with some of the savings offset by rising public service pensioner numbers). Although cross-country comparisons of public wage premia are complicated by definitional issues, the simple metric of average public pay/GNP per worker appears quite elevated for Ireland relative to advanced European standards.[24] This is consistent with findings in recent OECD surveys on health and education, which document above average pay levels in education (esp. secondary school teachers), and health (nurses and consultants), which together account for three-fourths of the public service.



38. With regard to social benefits, as noted in Table 1 previously, the rise in spending was even more pronounced, at almost 9 percentage points of GDP (7 percentage points, in structural terms) over 2000–11.[25] As shown in Figure 10, the high level of benefits provides strong income protection to those on welfare (third highest level of protection in the OECD). This protection is most visible for those who lost employment during the crisis, but also to pensioners, whose poverty rates declined significantly over this period due to unchanged nominal pension rates and even rising real pension benefits since 2008.[26]

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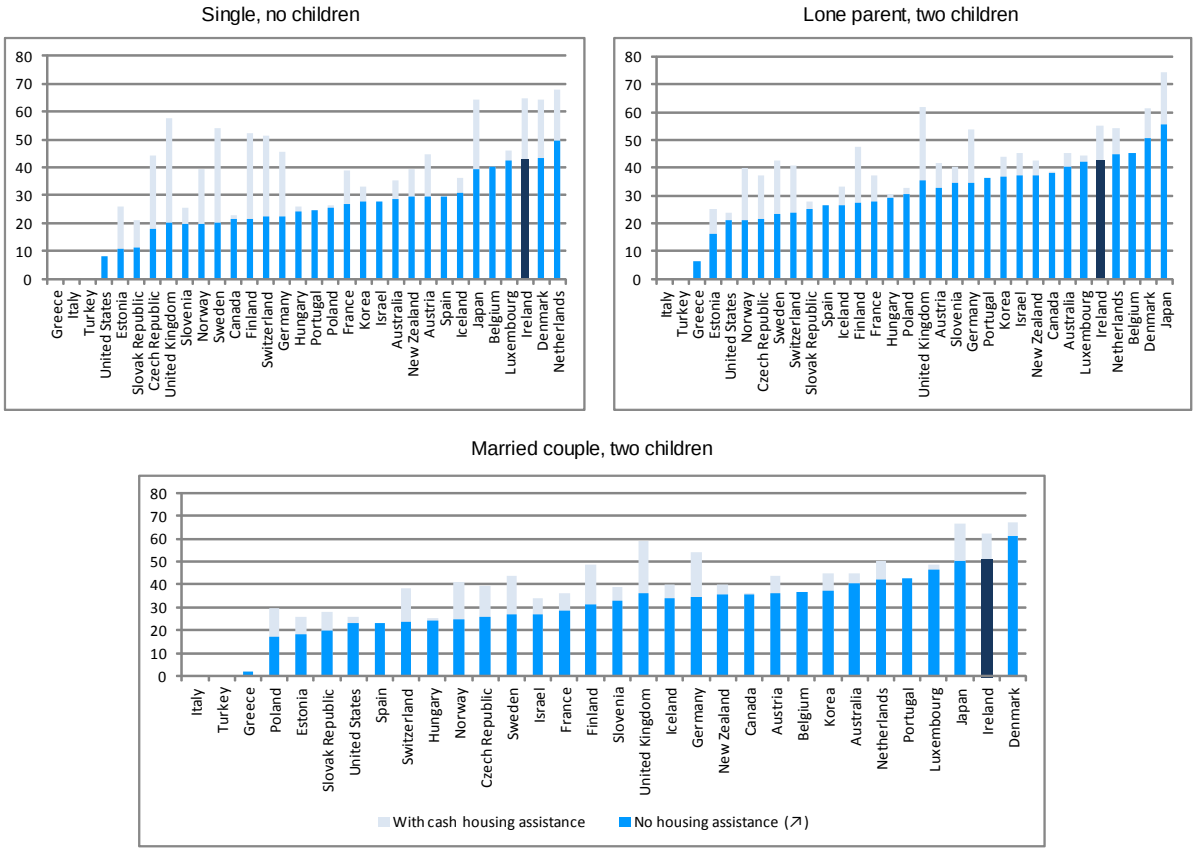
[23] See comparisons in a recent staff analysis of savings in the public wage bill (Box 5 in *Ireland – Sixth Review Under the Extended Arrangement – IMF Staff Report*).

[24] A forthcoming study by the Central Statistics Office is expected to shed some light on the question of a public wage premium in Ireland.

[25] For a recent staff analysis of social welfare spending, see Box 3 in *Ireland – Fifth Review under the Extended Arrangement – IMF Staff Report*.

[26] Box 2 in the accompanying Article IV staff report shows that in 2010, Ireland had the second lowest relative at-risk of poverty gap in Europe, after Finland, while consistent poverty, at 6.2 percent, remains below 2006 levels.

Figure 10. Net income level of person on social benefits in % of median household income (2010)



Source: OECD Tax-Benefit Model (update 3/31/12).

(ii) Overview of Expenditure Effort Thus Far and Planned

39. The Irish authorities adopted a range of expenditure measures since the crisis, totaling about 8 percent of GDP. These can be grouped into four broad categories: capital (25 percent of total effort), pay (25 percent), social welfare (17 percent), and other non-pay current spending (33 percent).[27] The chronology of measures was as follows:

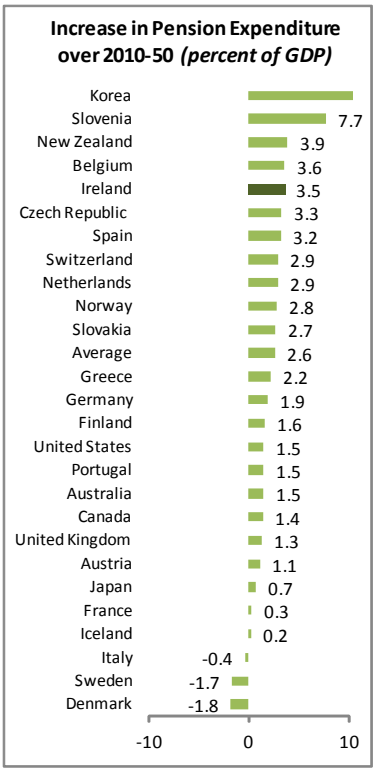
- Late 2008/early 2009: "low-hanging" cuts in capital and program spending; hiring freeze
- 2009–10: progressive wage cuts (14 percent); voluntary numbers reductions (ongoing)
- 2010–11: welfare cuts of 8 percent (2010–11), esp. for families, but protecting elderly; 4 percent cut in public service pensions (2011);

[27] These shares are based on announced measures (relative to the baseline of no policy change), but adjusted by staff for baseline realism.

- 2012: Further capital cuts; higher user fees; some service reductions; many welfare measures, including changes to eligibility criteria (impact on many small groups); focus on non-core pay savings (overtime, sick pay, allowances)

40. For the period 2013–15, a further 3 percent of GDP in current expenditure measures (out of a total of 5 percent of GDP consolidation effort) is envisaged and most remains to be specified. Achieving this consolidation could be difficult for several reasons:

- There are significant demographics-related spending pressures in education, health and pensions: the number of school-going children will be (15 percent) higher between end-2012 and 2020, and the number of over-65s one-third higher over the same period. In particular, the projected increase (3.5 percent of GDP) in Ireland's pension expenditure between 2010 and 2050 is the fourth highest in the OECD (*IMF, 2011*).[28]



Source: IMF (2011)

- If the economic recovery were weaker-than-envisaged (and/or unemployment higher-than-expected), the implicit saving—in terms of reduction in expenditure-to-GDP ratio—from nominal wage and welfare freezes would be smaller. Indeed, welfare payments and the net public pay and pension bill have, thus far, fallen little as a share of GNP.

- Some pockets of implementation shortfalls have begun to emerge, revealing structural roots which will take deep reforms to address (such as health system reforms).

- Risks to services: as public service numbers are reduced and low-hanging fruit plucked, the difficulty of avoiding an adverse impact on public services and revenue collection capacity increases.

(iii) Scope for Immediate Savings from Better Targeting

41. Against this challenging backdrop, the authorities must design a medium-term expenditure strategy that is durable, distributes the adjustment burden fairly across income groups (with the most vulnerable being effectively protected), generations (old vs. young),

[28] The EC's *2012 Ageing Report* estimates the increase in gross pension expenditure between 2010 and 2060 at 4.1 percent of GDP, the 8th highest increase in Europe (despite the rise in the retirement age to 68 by 2028). Moreover, the benefit ratio (average pension to average wage) is expected to rise, making Ireland an outlier in Europe (along with the U.K.).

and household types (single vs. families), including due consideration of pre-crisis spending increases and relative adjustments since then. Table 6 lists key spending items where targeting can deliver substantial, durable and progressive savings. Among these are three universal supports and subsidies (child benefit, household benefits package and subsidy on student fees) which amount to 2½ percent of GDP. Although medical cards are means-tested for everyone, almost 95 percent of persons over 70 years old qualify, given a significantly more generous means test for this group. Overall, staff estimates that realistic percentage reductions in these spending areas can yield permanent annual savings of about around 2 percent of GDP. Critically, these savings will contribute directly to containing the impact of demographics-related changes to the spending profile. Table 8 details further the rationale for better targeting of spending in these areas.

Table 7. Selected Expenditure Items Offering Scope for Targeting/Savings

	2011 outlay	
	€bn	% GDP
Public pay	14.4	9.0
Public service pensions	2.5	1.6
Contributory pensions	3.6	2.3
Household benefits package	0.5	0.3
Medical cards	1.6	1.0
Child benefit	2.1	1.3
Subsidy on college fees	1.2	0.8
Total	25.9	16.2

Source: Revised Estimates Volume (2012), and IMF staff estimates.

(iv) Need for Longer-term Reforms

42. In parallel to achieving near-term targeted savings, reforms of key public services are needed to underpin savings in the medium term. As noted earlier, despite spending substantially more than the OECD average on health, Ireland's performance indicators are only at/or marginally above OECD average, with similar results in education while spending is modestly above OECD average. Hence, there is need for deeper reforms in these areas to identify service priorities and deliver them more efficiently, including by fully utilizing the flexibility provided by the Croke Park agreement. For example, new working models to minimize premium and overtime payments, and a substantially greater use of primary vs. hospital care and generic vs. branded drugs, can significantly reduce the public cost of healthcare while preserving outcomes.[29] To better focus health spending on programs and outcomes, it will be important to extend performance budgeting to the sector, and implement

[29] Generic drugs account for only one-fifth of all prescriptions, which compares poorly to four-fifth in neighboring United Kingdom.

governance reforms that enable cost priorities set at the center to be reflected in decisions at the local and hospital level.[30]

43. Similarly, a new funding model for higher education, that (i) better takes into account emerging skills priorities/shortages, with some linkage of college fees to cost/earnings potential of courses (and supported by affordable loans and grants for poor students), and (ii) strikes the appropriate balance between degree and vocational education (where the latter's share is just 10 percent, one-third the OECD average), can deliver broad access to high-quality education that underpins Ireland's competitiveness without additional public investment. While savings from these health and education reforms can take time to realize, they are important to help ensure the consolidation can be sustained by enabling the growing needs for these services to be met at manageable cost.

Table 8. Rationale for Targeting Reforms in Selected Expenditure Items

	2011 outlay € billion (% of GDP)	*Rationale*
Public pay	*14.4 (9.0)*	*The net paybill/GNP ratio at end-2011 was still above 2008 levels. Average public pay/GNP per worker is one of the highest among advanced European economies, which is suggestive of a public wage premium over private pay (OECD surveys document high salaries in Ireland's public health and education sectors, which account for three-fourth of public employment and compensation). It may be possible to achieve paybill reductions within the framework of the Croke Park Agrement through allowances, sick pay and reduction in premium/over-time payments. However, if significant progress within the CPA framework proves elusive, pay rate adjustments may be necessary.*
Public service pensions	*2.5 (1.6)*	*The 4 percent average levy on public pensions in 2011 appears to have generated relatively small savings in the public pension bill. With a 53 percent increase in pensioner numbers between 2008 and 2011, including partly due to early retirements and redundancies, the net public service pension bill has risen by 49 percent since 2008, offsetting one-third of the savings in the net pay bill. Moreover, the single public pension scheme reforms currently in train will apply only to new entrants and will not help contain the rising public service pension burden for almost 30 years. The need to rein in this burden (given population ageing) as well as equity considerations (the average public service pension is roughly double the state pension) warrant a review of the scope for further savings in the pension bill, and the appropriateness of the extent of grandfathering allowed under the single pension scheme reforms.*

[30] The recent HSE Governance Bill should be helpful in this context.

Contributory state pensions	*3.6 (2.3)*	*The rate for contributory pensions (paid to about 80 percent of state pensioners) is 5% above the rate for non-contributory pensions. These rates could be equalized as the link between PRSI contributions and pension entitlements appears weak; and contributory pensioners more likely have occupational pensions.*
Household benefits package	*0.5 (0.3)*	*These universal in-kind benefits (excluding fuel allowance) comprise free TV license, telephone, electricity and travel for the elderly. Although the current outlay is small, the cost of these schemes is rising rapidly due to ageing. If abolished, a means-tested offset could be provided via the means-tested pension. There would still be considerable net savings, as only one-fifth of pensioners receive means-tested pensions.*
Medical cards	*1.6 (1.0)*	*The means test for persons over-70 is more generous than that for the under-70s, such that coverage is near universal, with 95 percent of the over-70s population having medical cards. A standard means-test for all beneficiaries could be considered. This will help contain the rising cost of medical cards in respect of the over-70s who account for one-fifth of medical cards, but likely a much larger share of the scheme's cost. In addition, more graduated medical card coverage (like GP-only medical card) and co-pay options to lower costs (including by incentivizing greater generic drug usage) should also be considered.*
Child benefit	*2.1 (1.3)*	*This universal payment has been cut 15 percent over last 3 years. An equitable way of further reducing the still-substantial budgetary impact would be to treat it as taxable income. Alternatively, the universal component of the payment could be reduced, with offsetting increases in qualified child allowances and family income supplement which are means-tested.*
Universal subsidy on college fees	*1.2 (0.8)*	*The annual cost of subsidizing college fees for160,000 students in 2010 (numbers could double by 2030) was about €1.2bn (based on average estimated cost of €10,000 per student, and a student contribution of €2,250). The student contribution is 10-32 percent of actual course cost, representing a substantial untargeted subsidy. Total (public and private) expenditure per college student is €9,800 in Ireland as opposed to €7,700 in the OECD, but the private share is relatively low (14 percent in Ireland as opposed to 33 percent in the OECD) despite degree-holders earning a 15 percentage point higher wage premium than the OECD average. Reintroducing fees that vary by course—as existed till 1995—would generate substantial progressive savings which could be deployed to supporting low income students.*
	25.9 (16.2)	

Sources: Factual information underpinning staff analysis was provided by the Departments of Public Expenditure and Reform, Health and Education. Other sources consulted include: OECD Health at a Glance (2011) and OECD Education at a Glance (2011).

IV. Averting Structural Unemployment in Ireland [1]

A. Introduction

1. **The economic crisis that engulfed Ireland since 2008 brought about a rapid reversal of labor market gains made since the mid-1990s**. As real GDP fell 8 percent between 2007 and 2010, almost 15 percent of jobs were lost, half of which from the construction sector. The rate of unemployment tripled from pre-crisis levels to almost 15 percent in 2012, and even higher among certain population cohorts. Participation rates dropped and migration patterns reversed, with outflows of non-Irish citizens at first, and then increasingly net emigration of Irish citizens.

2. **Faced with soaring unemployment, the Irish authorities have initiated a range of measures and labor market reforms:**

- **Labor cost and demand:** to promote job creation, the May 2011 Jobs Initiative halved the pay-related social insurance (PRSI) rate of 8½ percent on jobs paying up to €356 per week (5.5 percent above the minimum wage) to reduce labor costs, and, to stimulate labor demand, gave a 4½ percentage point VAT rate reduction on items subject to the lower VAT rate of 13½ percent, which are mostly labor-intensive services.[2] The Action Plan for Jobs released in February 2012 specified a set of measures to support job creation, including support for indigenous start-ups and fast-growing mid-size firms, further enhancing SME credit and R&D incentives, and pursuing targeted growth opportunities in the green economy and the ICT sector.

- **Activation and training policies**: the Pathways to Work initiative of February 2012 is a comprehensive reform agenda for the support provided to unemployed persons in regaining employment, to bring it in line with international best practice.

- **Sectoral wage setting**: The Industrial Relations (Amendment) Act passed in July 2012 reforms the special wage setting framework applied in certain sectors, with the aim of increasing the responsiveness of labor costs to economic conditions, to increase employers' willingness to hire and facilitate the cross-sectoral adjustment.

3. **Nonetheless, unemployment may remain high for a number of years, risking an increase in structural unemployment.** Already over 60 percent of the unemployed have been without work for over a year, and Ireland's recovery would be constrained if

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[1] Prepared by Emilia Jurzyk. The author would like to thank Craig Beaumont and Ali Abbas for many helpful comments and suggestions. Vizhdan Boranova provided outstanding research assistance. The author is also grateful to the Irish authorities for providing data and for many useful discussions.

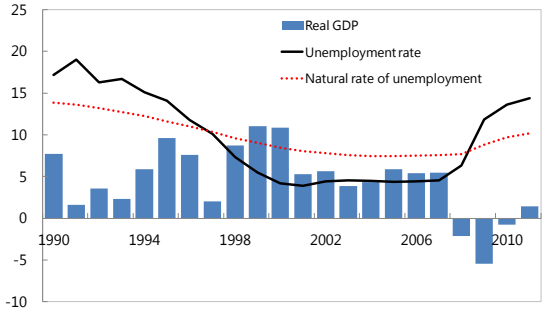
[2] The items are mostly services, and include catering, restaurants, hotels, cinemas, theatres, museums, art galleries, fairgrounds, amusement parks, sporting activities, printed matter and hairdressing.

unemployment were to become more structural. Accordingly, this paper aims to identify further reform avenues to facilitate job rich and sustainable growth into the medium term. Section B sets the stage with a background on the labor market developments in Ireland in the last decade. The broad challenges to reducing unemployment are discussed in section C and section D aims to identify the main issues that may raise the risk of structural unemployment. Policy options are discussed in section E.

B. Irish Labor Market: Before and After the Crisis

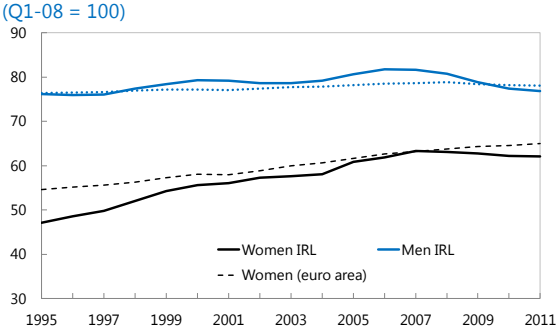
4. **Ireland's rapid economic growth from the mid-1990s translated into a major improvement in labor market conditions.** Employment grew 65 percent from 1995 to 2007 while Ireland's population rose only 19 percent. Jobs became available not only for the officially unemployed but also for new labor market entrants, with participation rates rising, especially for women, where a 16 percentage point increase brought participation to the euro zone average by 2007. Ireland also attracted migrants, providing an estimated 450,000 (or 35 percent of 1996 population) net boost to the population and, in part, to the labor force. By 2000, the unemployment rate fell below 5 percent from almost 19 percent a decade earlier.

Real GDP growth and unemployment rate
(percent)



Sources: Eurostat; OECD; and IMF staff calculations

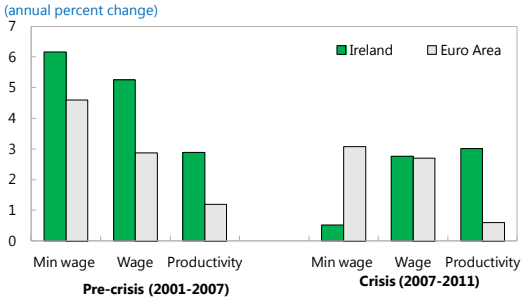
Participation rates (percent)
(Q1-08 = 100)



1/ Data on partcipation rates for Ireland for 2005 interpolated due to missing data point in the Eurostat data.

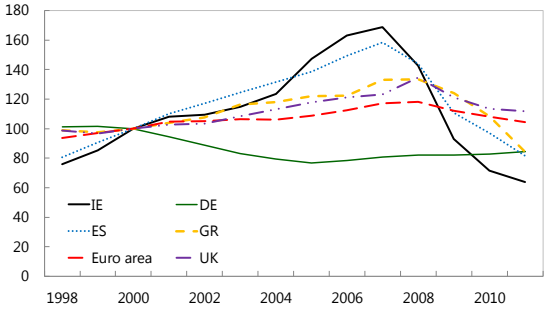
5. **However, this improvement in headline indicators masked growing structural imbalances.** The credit-led property boom drove rapid employment growth in the non-tradable sectors (mostly construction) to a greater extent than in other European countries. The number of working hours per employee fell around 12 percent between 1990 and 2007, exceeding the declines observed in other European countries. Despite the expanded labor force, labor shortages started to manifest, leading to a 45(15) percent increase in nominal (real) wages between 2000 and 2007. Minimum wages rose, to the second-highest level in the euro zone. As remuneration rose faster than productivity, Ireland's competitive position started to erode, limiting export growth, at least by domestic companies.

Real monthly minimum wage, real hourly wage, and real labor productivity
(annual percent change)



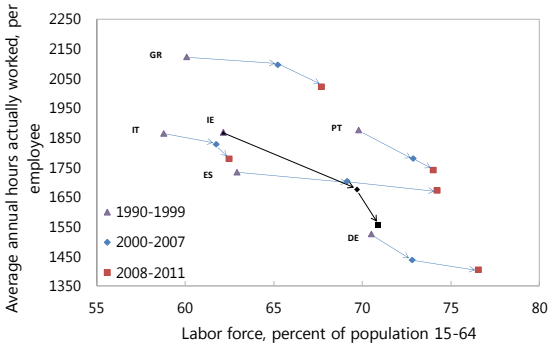
Sources: Eurostat; OECD; and IMF staff calculations.

Employment in construction
(2000 = 100)



Sources: Eurostat; and IMF staff calculations.

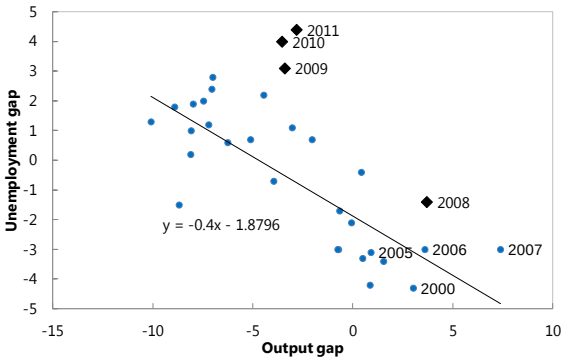
Labor Force vs. Annual Hours Worked



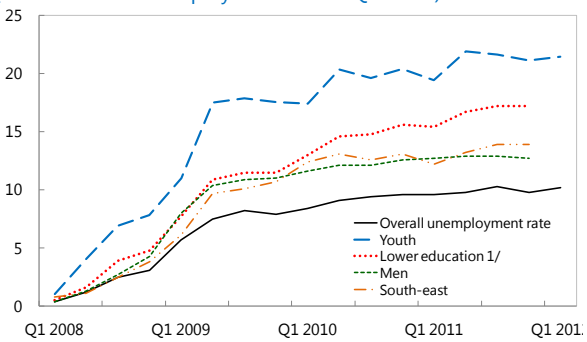
Sources: Lusinyan and Bonato (2010); OECD; and IMF staff calculations;

6. **The collapse of the property bubble in 2008, and the severe recession associated with the resulting banking crisis, impacted heavily on labor market outcomes.** Almost 15 percent of jobs were lost between 2007 and 2011, with the construction sector shedding around 60 percent of employees, followed by industry, retail trade, and the tourism and food industry. The greater increase in the unemployment gap than the output gap illustrates the labor intensity of the sectors in which job losses were most prevalent. Unemployment surged to around 14¾ percent in the first quarter of 2012, and rose even more among young persons (to 30 percent), workers with lower education, men, and in certain regions. Involuntary part-time employment increased, and migration patterns reversed, with Irish citizens emigrating in search of jobs. Long-term unemployment has risen sharply, raising the risk of permanent skill losses among jobseekers and hence a decline in potential output in future.

Output gap versus unemployment gap
(percent)

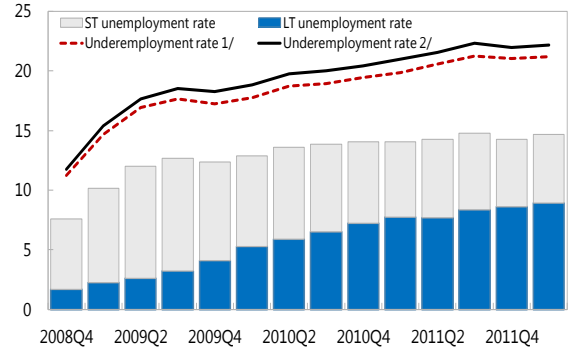


Increases in unemployment rates per cohort
(relative to the unemployment rate in Q4-2007)



1/ Includes pre-primary, primary and lower secondary education (levels 0-2)
Sources: Eurostat; and IMF staff calculations

Unemployment and Underemployment Rates
(Percent, NSA)



Source: Central Statistics Office Ireland.
1/ Workers employed part-time who are willing and able to work full-time.
2/ Workers employed part-time who are willing and able to work full-time and people marginally attached to the labor force.

C. Challenges to Reducing Unemployment

7. **The economics literature indentifies a range of potential difficulties in creating a job-rich growth.** Post-crisis recoveries are often jobless, and there are several factors that contribute to this phenomenon:

- Due to **structural changes** that take place in the economy during the recession (e.g. collapse of certain sectors) job losses are often permanent, and once the recovery takes hold, workers are not rehired to their previous posts. Since creation of new work places in different firms and industries takes time, job creation lags the recovery in output (Groshen and Potter, 2003).

- **Job polarization.** Jobs that are being created in the last decade are increasingly either relatively high-skilled and highly paid, or low-skilled and low-paid. At the same time, the middle of the job distribution is hollowing out due to a disappearance of the "routine" jobs–those that are easily partitioned into a set of tasks, eventually to be substituted by technology, or moved offshore to take advantage of lower wages (see Autor *et al.* (2003) for evidence from the U.S., Goos and Manning (2007) for the U.K., Goos *et al.* (2009) for a pan-European study, and Acemoglu and Autor (2011) for a theoretical framework and U.S. evidence). Most of these jobs disappear during recessions and do not return thereafter, contributing to the phenomenon of "jobless recoveries" (Jaimovich and Siu, 2012).

- **Firm-level restructuring**. Organizational changes that take place during the recession result in elimination of unneeded labor, especially among small firms that cannot afford to hoard workers. In addition, small firms are also more likely to close during recessions (Kolsenikova and Liu, 2011). Once the recovery takes hold, small firms may take longer to rehire; also the creation of new enterprises takes more time. In Ireland, firms employing less than 250 workers lost around 17 percent of their personnel, while employment in large firms shrank by 10 percent.

8. **In Ireland's case, a number of these factors could limit the scale of medium-term recovery in employment, risking a more extended period of high unemployment**. Ireland's high unemployment rate clearly reflects the sharp drop in domestic demand and economic activity, and an economic recovery is needed reduce unemployment. However, considering the depth of the banking crisis, still high private sector debt burdens, and ongoing fiscal consolidation, domestic demand recovery is expected to be a protracted process. Moreover, while some recovery can be expected even in the sectors hit the hardest by the crisis, such as construction, they are unlikely to rebound to former activity levels. [3]

[3] At the height of the boom, construction sector employed almost 13 percent of workers. During the crisis, this share shrank by more than half. If the share of construction in total employment increased to the EU average of 8 percent, and employment grew by 10 percent in the next medium-term, around 55,000 new construction jobs

(continued…)

Although the tradable sector has greater potential to expand, Ireland's current exports are predominantly capital intensive, even in sectors that tend to be domestically owned such as food processing. With the share of long-term unemployment already high, a more extended period of high overall unemployment would risk unemployment becoming structural.

D. Potential Risk Factors for Higher Structural Unemployment

The aim of this section is to identify key labor market challenges that could constrain the supply of labor once the recovery has started. To facilitate the analysis, these are classified into three broad groups: skill matching of labor, cost of labor, and labor participation.

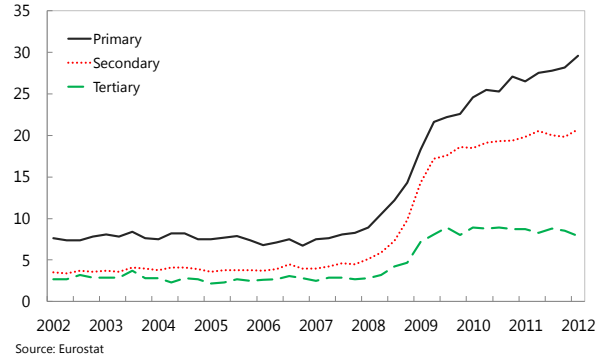
Skill Matching

9. **As the crisis unfolded, unemployment rates for workers with low levels of education soared.** By Q1-2012, unemployment rates among men with primary education spiked to almost 30 percent, and reached 20 percent for women. Unemployment rates for men with secondary education were lower, but still reached 20 percent (around 14 percent for women). Unemployment rates among persons with tertiary education rose but still remained in single-digit territory. This outcome was a direct result of the nature of the crisis, which hit especially hard construction and other labor intensive sectors like industry, retail trade and hospitality, affecting many relatively less qualified, and predominantly male workers.

	Men		Women	
	Share in unemployment	Share in labor force	Share in unemployment	Share in labor force
Primary or below	12.8	7.0	5.9	4.0
Lower secondary	23.7	15.2	15.5	8.5
Higher secondary	27.8	24.9	28.5	24.4
Post leaving cert	17.2	14.3	17.8	12.7
Third level non-honours degree	6.7	12.2	14.2	17.9
Third level honours degree or above	9.0	24.1	15.7	30.4
Other	2.7	2.2	2.3	2.1

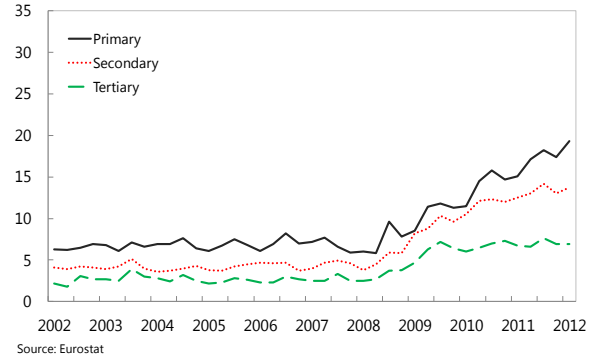
Shares as of Q1-2012
Source: CSO; and IMF staff calculations.

Unemployment rates among men per educational attainment (percent)



Source: Eurostat

Unemployment rates among women per educational attainment (percent)



Source: Eurostat

would be created. With 100,000 fewer jobs in construction, many former construction workers would need to find employment in other sectors. While some have already found new jobs or have emigrated, many may need retraining, such as those who left secondary school early for lucrative work in construction.

10. **The Irish authorities have responded by initiating reforms of the system of engagement with the unemployed including training**:

- The job search assistance and monitoring programs existing under the National Employment and Action Plan were not delivering the required results (Grubb *et al.*, 2009; McGuinness, 2011a; Pina, 2011). In response, the Pathways to Work (PtW) initiative was adopted in February 2012. It sets out a strategy to improve activation and training policies for the unemployed by: (i) intensifying engagement between jobseekers and employment services, (ii) better aligning the provision of training with labor market needs, (iii) establishing effective enforcement mechanisms to ensure that jobseekers comply with activation and training requirements; and (iv) strengthening links with employers to ensure a higher share of vacancies is filled from the Live Register of the unemployed.

- The Irish Education and Training Authority (FÁS) (responsible for course provision) was transferred to the Department of Social Protection (DSP) with the aim of creating a unified National Employment and Entitlement Service that will be responsible for both activation and training provision. Furthermore, SOLAS, a new authority responsible for further education and training, is set to replace FÁS. SOLAS will initially retain the training function of FÁS, but with time course provision will be transferred to the 16 new Local Education and Training Boards that will replace the existing 33 Vocational Education Committees. At that time, SOLAS will transform into a body responsible for oversight and funding only (similar to the Higher Education Authority).

11. **Spending on labor market programs has also increased, though passive support grew much more than spending on active policies.** Since 2007, the budget on labor market-related programs has more than doubled. However:

- ***Spending on training and job creation has declined per unemployed person***. Most of the increase was directed to welfare benefits owing to the rapid rise in the number of persons registered as unemployed. Expenditures on training and job creation programs have risen less than the unemployment rate, so the share of such spending fell from 34 percent to 20 percent, and level of spending per unemployed person halved.

Spending on labor market programs

	2007		2010	
	% of GDP	percent of total	% of GDP	percent of total
Training	0.27	16.4	0.41	11.0
Average per jobseeker (eur th.)	**4.28**		**2.20**	
Job creation 1/	0.30	18.3	0.32	8.7
Jobless benefits	0.99	60.6	2.93	78.9
Early retirement	0.08	4.7	0.05	1.3
Total	1.64	100.0	3.72	100.0
Memorandum item:				
Unemployment rate		4.6		13.6

1/ Includes measures to incentivise unemployed to take up jobs, direct job creation, supported employment and rehabilitation

Sources: Eurostat; and IMF staff calculations

- ***Spending on Active Labor Market Policies (ALMPs) has been heavily tilted towards job creation schemes (Pina, 2011).*** The Community Employment scheme, which provided

part-time employment in local communities to around 24,000 unemployed persons in 2011, consumed over half of the resources of FÁS.[4] At the same time, participation in the program does not improve employability of the participants, and they often exit to long-term unemployment (Forfás, 2010; McGuinness *et al.*, 2011a). Similar results have been found for the Job Initiative (Forfás, 2010), though this scheme is now closed to the new participants. As noted by Pina (2011), despite problems identified in the CE and JI, the authorities expanded the CE during the crisis, as well as introduced a new scheme, Community Work Placement Initiative, which aims to provide 5,000 part-time jobs for long-term unemployed receiving only the unemployment benefit, with a 12 month participation limit.

12. **The overall supply of training and education is substantial**. Under the Pathways to Work initiative, in 2012 over 450,000 training and further education places will become available in Ireland, although further education and third level places are regular study places open to all students, so the number of places available to the unemployed is significantly lower. In addition, around 25,000 places are available under the Back to Education initiative, and around 5,000 places in the JobBridge internship scheme.

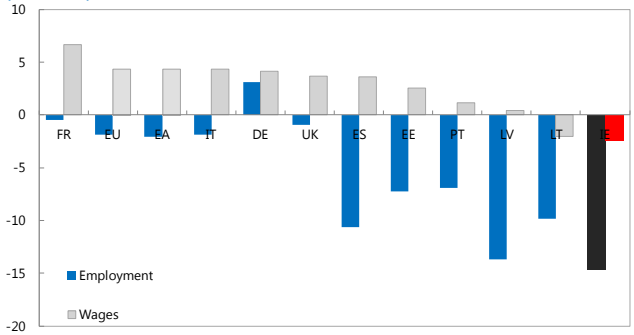
Training and Education Places in 2012

FÁS/SOLAS places	75,000
Training Education Support Grant	12,000
Skillnets	8,000
Labour Market Education and Training Fund	6,500
Further education places	180,000
Third level places	170,000
Springboard	5,900
Total	**457,400**

Source: Pathways to Work

13. **However, it is challenging to identify and expand courses that are delivering best results, as regular evaluation of course outcomes is not yet in place**. As noted by McGuinness *et al.* (2011a), completion of the training programs provided by FÁS does in general increase employment prospects of the jobseekers. However, not all courses are created equal: job-search skills and medium- and high-level skills training brought the best results while vocational training and low-level skills courses were less effective (McGuinness *et al.* (2011c)). Timely and sound evaluation of courses will also be crucial for designing effective up-skilling programs for jobseekers with low educational attainment, who may need a prolonged return to education rather than short-term training.

Change in Labor Costs and Employment 1/
(Percent)



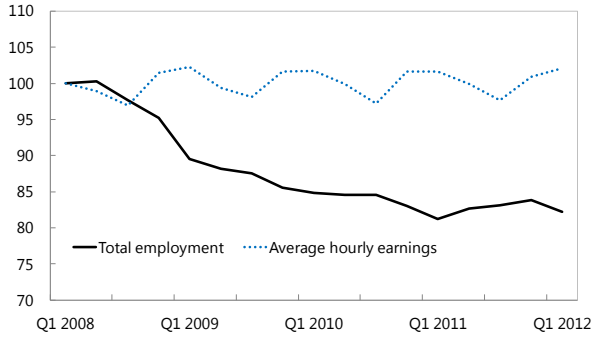
1/ Change in employment calculated from peak in 2007 to 2011, change in labor cost from peak in 2009 to 2011.
Source: Eurostat

[4] In 2012, Community Employment was transferred to the Department of Social Protection.

Cost of Labor

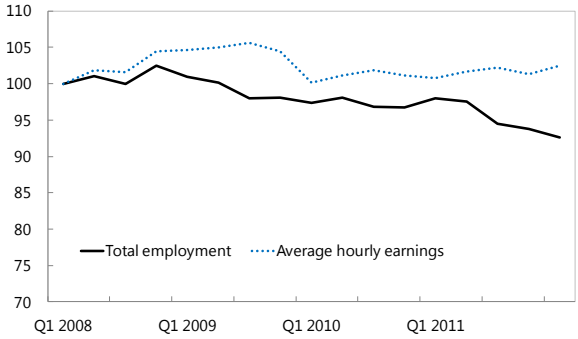
14. **Nominal wages in Ireland adjusted downward during the crisis, but the decline was small in nominal terms especially given the scale of the total employment loss.** From the peak in Q1-2009, average nominal hourly labor costs in Ireland have declined by only 2¼ percent, although the decline relative to the euro area was greater, at 6¾ percent (see Box 1 for discussion of nominal wage flexibility in Europe). Irish firms instead cut employment, with the almost 15 percent job losses being the second highest fall in Europe, exceeded only by Latvia. Employment cuts of 18 percent in the private sector since Q2-2008 exceeded the 8¼ percent reduction in the public sector. However, the public sector cut wages to a larger extent; between 2009 and 2011, the average hourly wage declined 3¼ percent compared to a 0.9 percent fall in the private sector. [5]

Private sector
(Q1-08 = 100)



Source: CSO

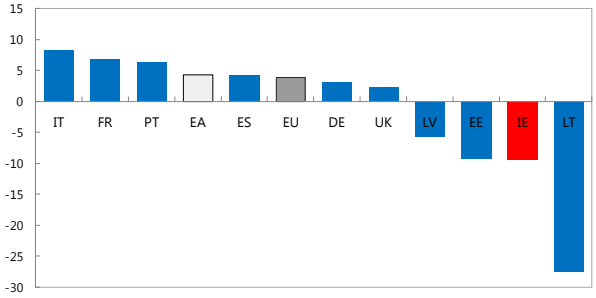
Public sector
(Q1-08 = 100)



Source: CSO

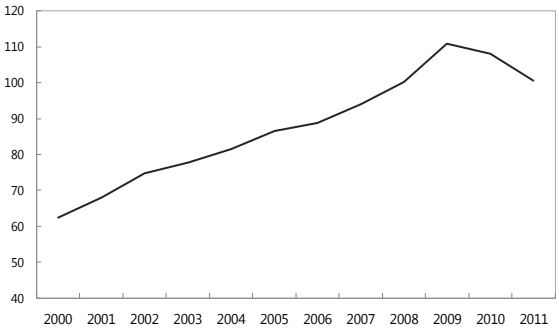
Even in construction—the sector most affected by the crisis—average labor costs have fallen by only 9 percent so far, to 2008 levels, despite facing one of the highest employment declines in Europe.[6]

Change in Labor Costs in Construction 1/
(Percent)



1/ Change in total labor costs between 2009 and 2011 except for LV (2009-10), EE and LT (2008-10)
Source: Eurostat

Labor Costs in Construction
(2008 = 100)



Source: Eurostat

[5] Calculations based on the Quarterly Earnings Hours and Employment Costs Survey.

[6] The Labor Court ratified a 7.5 percent cut in minimum wages in the construction sector in January 2011.

Box 1. Nominal wage flexibility in Europe

Downward nominal wage adjustment is a difficult task to accomplish. A recent pan-European survey (WDN, 2010) and Babecky *et al.* (2010) found that when faced with the need to cut labor expenses, European firms are very reluctant to cut base wages, even for new employees, and reduce other components of compensation (bonuses, non-pay benefits) and employment instead. Similar conclusions are drawn by Bergin *et al.* (2012) for Ireland. They find that a significant proportion of wage changes, especially in sectors where male employment is predominant, cannot be explained by the characteristics of either the labor market or the workers, and is likely an outcome of firms' reluctance to cut remuneration in order to preserve productivity. Wage stickiness can also be attributed to the salary adjustment cycle: in Ireland, around 72 percent of firms operate on an annual wage cycle and 13 percent change wages even less frequently. By comparison, in the euro area, the ratios are 60 percent and 27 percent, respectively (Druant *et al*., (2009).

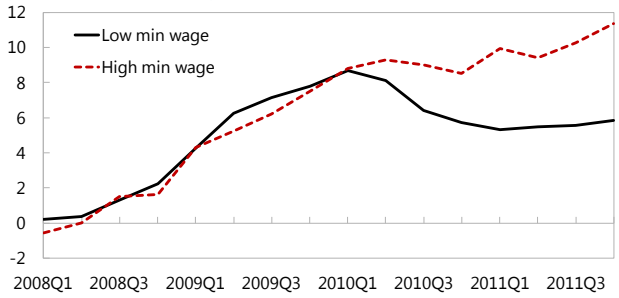
Structure of the labor market is directly related to the degree of nominal wage flexibility. In particular, labor market institutions and degree of deregulation matter for flexibility of wage setting decisions. Dickens *et al.* (2006) found that high degree of unionization and existence of collective bargaining agreements (represented in Ireland by special wage setting framework of EROs/REAs in some sectors) has been associated with less frequent wage adjustments. Conversely, wages tend to be more flexible in countries where firm-level bargaining agreements prevail (Druant *et al.* (2009)). Stricter employment protection legislation has also been associated with less flexible wages (Clar *et al.* (2007)).

15. **Sectoral wage agreements for some low-wage sectors in Ireland likely contributed to the behavior of wages observed during the crisis**. Principally for sectors where the difficulty of organizing workers historically limited collective bargaining, there are two types of sectoral agreements, Employment Regulation Orders (EROs) and Registered Employment Agreements (REAs), which together cover about 23 percent of employment. Employment Regulation Orders (EROs), prepared by Joint Labor Committees (a government-appointed chairman and representatives of workers and firms) apply mostly to low-skill sectors such as retail, catering, and accommodation and set minimum wages for the sector (at about 10 percent above the National Minimum Wage (NMW) on average), together with a range of minimum wages for different skill and experience categories, as well as other employment conditions, such as overtime or Sunday rates. Registered Employment Agreements are collective agreements registered with the Labor Court, which then became legally binding on the individual firm, or—in case of industry-wide agreements (mainly in construction and electrical contracting)—for all employees and workers in the sector. In July 2011, the High Court deemed sections of the legislation related to EROs unconstitutional.

16. **Reforms of EROs/REAs have recently been enacted, which in time are expected to improve the responsiveness of wage setting to economic conditions.** The authorities commissioned a report on the EROs/REAs, which was completed in April 2011 (the Duffy-Walsh report). Based on its recommendations, as well as to address the High Court ruling, the authorities introduced an Industrial Relations (Amendment) Bill to the Oireachtas that was passed into law in July 2012. The bill allows for a reduction in the number of EROs and the number of minimum wages set in each ERO, and excludes conditions of employment covered in other legislation such as the Sunday pay rate. In addition, it also promotes a greater focus on economic conditions and competitiveness during the wage setting process.

17. **Limited wage adjustment can also be linked with policies regulating the minimum wage.** Given that the minimum wage constitutes a floor for remuneration, firms are prohibited from setting wages below the minimum wage even during crisis periods. A majority of academic studies point to a negative relationship between the level of minimum wage and employment (Neumark and Wascher (2006)).[7] The effects can be particularly strong for low-skilled workers and for youth as high minimum wages decrease the flexibility of wage setting decisions at the lower end of the distribution, increasing job losses and preventing job creation in response to shocks. During the recent crisis, increases in youth unemployment were significantly higher in countries with high minimum wages than in countries where minimum wage was below the median (Ahrend *et al.* (2011)). While a minimum wage can be seen as a social protection tool that protects the most vulnerable groups, it can reduce employment if set on a too high a level (OECD, 2012). Although lowering a high minimum wage could increase income inequality, the effect should be at least partially alleviated over time through higher total employment (Koske *et al.* 2012).

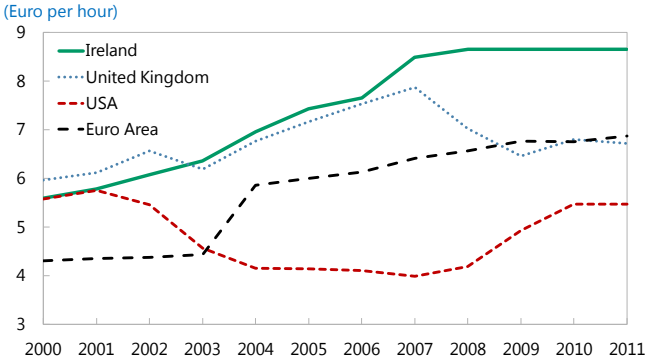
Youth unemployment rates in EU countries with high and low minimum wage 1/
(percent difference with respect to Q4-2007)



Sources: Ahrend et al. (2011), OECD, and IMF staff calculations.
1/Countries with minimum wage rates below those of the median country (the sample includes countries with no statutory minimum wage) are classified as low/no minimum wage countries (Austria, Czech Republic, Denmark, Estonia, Finland, Germany, Italy, Sweden). Correspondingly, countries with minimum wage rates above the median are classified as high minimum wage countries (Belgium, France, Greece, Hungary, Ireland, Luxembourg, Netherlands, Poland, Portugal, Slovak Republic, Slovenia, Spain, and United Kingdom).

18. **Ireland's minimum wage has becoming relatively high during the crisis.** Up until 2006, Ireland's minimum wage was broadly aligned with that in the U.K. However, the minimum was raised by €1 in 2007 to €8.65 per hour. Nominal increases in the U.K. increase were smaller, and in euro terms there was a significant decline owing to sterling depreciation. By 2011, Ireland's mimum wage exceeded the U.K. by 30 percent, with a similar premium over the euro area.[8] Even though the minimum wage direclty affects only a limited share of workers, it sets the floor for the EROs and REAs, which have a much broader takeup, at almost one-quarter of total employment.

Minimum Wage 1/
(Euro per hour)



1/ The EA minimum wage is calculated as an average of the minimum wages in Belgium, Estonia, France, Greece, Ireland, Luxembourgh, the Netherlands, Portugal, Slovakia, Slovenia, and Spain.
Sources: OECD; IMF WEO; and IMF staff calculations.

[7] Doucouliagos *et al.* (2009) note that these results may stem from a publication bias as papers presenting results that showed a negative relationship were more likely to be published.

[8] A decision to lower the minimum wage back to €7.65 per hour in late 2010 was reversed effective July 2011.

19. **Aiming to reduce labor costs, the authorities have temporarily lowered employer's social security contributions for low wage workers.** Under the 2011 Jobs Initiative, the Pay-Related Social Insurance for weekly wages up to €356 (5.5 percent above the minimum wage) has been lowered from 8.5 percent to 4.25 percent until end-2013. The regular rate continues to apply to weekly wages above €356. Together with lowering the VAT rate on tourism-related services (like hotels and restaurants) from 13.5 percent to 9 percent, the lower PRSI rate aims to increase employment in low-skilled sectors.

Participation Rates

20. **A decline in labor participation rates during the crisis will need to be unwound to maximize employment recovery.** Since the peak in Q3-2007, the participation rate fell by almost 5 percentage points, to below the euro area average. Withdrawal from the labor market was highest among young people and men—likely related to the collapse of the construction sector—and can be linked to a return to education. Female participation also declined below the euro area average, though the fall has been smaller.

Participation rates by age group and gender

	Q3-2007	Q1-2012	Change
15-19	33.4	14.8	-18.6
20-24	79.2	61.9	-17.3
25-34	85.7	83.1	-2.6
35-44	80.8	81.0	0.2
45-54	78.1	76.9	-1.2
55-59	62.7	65.0	2.3
60-65	46.5	43.0	-3.5
Average	64.6	59.8	-4.8
Male	74.3	67.5	-6.8
Female	55.0	52.4	-2.6

Source: CSO

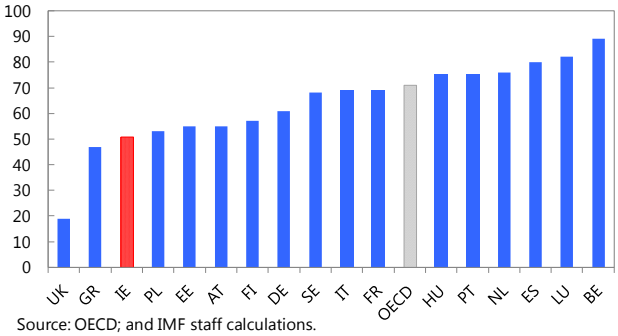
21. **Although much of the decline in participation reflects reduced job opportunities, the structure of the welfare system may reinforce this impact.** Unemployment benefits with a long duration (Elmeskov and Pichelmann, 1993), more generous unemployment benefits for older workers (Tatsiramos, 2010), or sickness, disability or early retirement schemes (Nickell and Van Ours, 2000; Autor and Duggan, 2003) can all decrease the size of the labor force. A high tax wedge for certain population cohorts (e.g. employees that are low-skilled or families with children) can also result in unemployment traps. Lack of affordable child care can reduce female participation rates (OECD, 2012).

22. **In contrast to most countries in Europe, unemployment benefits in Ireland do not vary with duration of the unemployment spell.** Upon becoming unemployed, a person that has made enough social security contributions is entitled to the Jobseeker's Benefit (JB) paid for 6 to 12 months. Reduced, or graduated rates, are payable where the average weekly earnings are under a certain threshold. Upon exhaustion of the JB, they are entitled to the means-tested Jobseeker's Allowance (JA). Total benefits are increased if the person has a child or an adult dependent, or if they qualify for the rent supplement, mortgage interest supplement or a medical card.

23. **This structure can create work disincentives for a minority of job seekers.** Replacement rates for most of the newly unemployed on the Live Register fall below the OECD average, as around three-quarters of job seekers do not receive additional benefits.

However, with time, the replacement rates rise substantially for those entitled to additional benefits. For instance, replacement rates in a one-earner married couple that receives child, adult dependent, and housing assistance benefits amount to 90 percent after 5 years of unemployment, far above the OECD average. Although at present less than 5 percent of the unemployed receive all benefits, this ratio may rise given rising unemployment durations.

Average replacement rate for the newly unemployed single person without children; no additional benefits
(at 67percent of average wage; percent)



Source: OECD; and IMF staff calculations.

Average of net replacement rates over 60 months of unemployment, 2010
For four family types and two earnings levels, in percent[1]

	Family does not qualify for cash housing assistance or social assistance "top ups"[2]					Family qualifies for cash housing assistance and social assistance "top ups"[3]				
	No children		2 children		Overall average	No children		2 children		Overall average
	Single person	One-earner married couple	Lone parent	One-earner married couple		Single person	One-earner married couple	Lone parent	One-earner married couple	
Ireland	45	71	65	74	64	67	93	81	90	83
Ireland rank (/32)	3	1	4	1	2	2	1	2	1	1
Ireland 2001	28	42	51	53	44	51	68	61	75	64
Ireland rank (/32)	15	10	12	9	12	13	12	17	11	14
Average	**18**	**25**	**34**	**36**	**28**	**36**	**49**	**60**	**65**	**52**
OECD average	**23**	**26**	**38**	**35**	**30**	**43**	**53**	**59**	**63**	**55**

Source: OECD

24. **The structure of welfare payments and the tax system results in inactivity and poverty traps for some cohorts of the unemployed.** For instance, low-wage workers with dependants face an average effective tax rate of over 100 percent upon return to employment, taking into account the withdrawal of the benefit. Since a significant share of currently unemployed are low skilled, their potential return to employment is most likely to occur at a low wage, so they may have an incentive to remain out of the labor force. Second, some cohorts, e.g., lone parents, when returning to full-time employment face marginal tax rates over 100 percent. Given that women constitute a majority of single parents, they may be less likely to return to full employment given the reduction in income and high costs of child care in Ireland.

average and marginal effective tax rates (including impact of benefits withdrawal), in percent	**Inactivity trap** (AETR for one-earner couple with 2 children on social assistance; returning to work at 50% and 33% of average wage)	**Poverty trap** (METR for lone parent with 2 children: increasing work from 1/3 or 2/3 to a full-time job)
Ireland	101 (50% of AW) 121 (33% of AW)	121 109
Rank in 32 OECD economies	1 (50% of AW) 1 (33% of AW)	1 (1/3) 1 (2/3)

Source: OECD Tax-Benefit Model.

25. **The linkage between welfare entitlements and exits from the unemployment can be seen in the Live Register data.** Unemployed persons without dependents who do not receive housing supplement have exit rates that are 17 percent higher than average. However, the exit rates drop to around the average when two children are present in the household. Exit rates decline further if a dependent adult is present, and if the family qualifies for housing assistance, falling to 70 percent below the average exit rate for some households.

Live Register				
	Exit rates with respect to the average /1			
	No QC	2 QC	Total	Total on LR
No HS, no QA	1.17	1.01	1.15	74.1
No HS, QA	0.77	0.68	0.67	13.2
With HS, no QA	0.52	0.62	0.54	8.5
With HS, QA	0.43	0.33	0.32	4.2

Source: Department of Social Protection
1/QC stands for a qualified dependent child, QA for qualified dependent adult, HS for housing supplement (rent or mortgage interest/local authority)

E. Further Reforms to Avert Structural Unemployment

To maximize the medium-term employment generation from economic recovery, further steps could be taken. *Possible measures to further deepen the labor market reforms undertaken since the beginning of the crisis are discussed in the same three groups as the previous section.*

Activation and training policies

26. **Further steps in reforming activation policies could be considered.** The Pathways to Work initiative is an important reform that aims to bring Irelands' activation policies in line with international best practice. Nonetheless:

- ***Even more active engagement with the unemployed from the start and its intensification once the length of the unemployment spell progresses could be beneficial***. At present, due to staffing constraints, the new activation policies are only applied to new entrants into the unemployment, and not to job seekers currently on Live Register. In addition, under Pathways to Work, the newly unemployed that are not ranked as having a high probability of falling into long-term unemployment do not benefit from group or one-to-one interview until 3 or 12 months into the unemployment spell. Bringing forward interviews for all jobseekers would complement the result of the scoring model and help recognize those who have been misclassified as being of low risk of becoming long-term unemployed and allow earlier measures to be taken, e.g., appropriate training ((Kelly *et al.*, 2012)).

- ***Job search activities should be monitored regularly and lack of compliance (either in job search or in undertaking or completing training) should trigger automatic reduction of benefits***. The principle of mutual obligation, where receipt of unemployment benefits is conditional on active job search and participation in training, should be made clear to job seekers from the beginning ((McGuinness *et al.*, 2011a)). Although the number of sanctions is increasing (around 500 people had their jobseekers' payments reduced in the first six months of 2012 compared with 372 for the whole 2011), at 0.16 percent of all recipients they remain very low by international standards and the non-compliant are eligible to reapply for full benefits after two months.

27. **Reallocating resources to labor activation is critical.** The 2009 OECD report on activation polices in Ireland (Grubb *et al.*, 2009) noted that the number of staff in employment offices, relative to the number of wage earners in the economy, was half that in other advanced economies. Although recently DSP staffing has been augmented due to a transfer of Employment Service from FÁS and Community Welfare Officers from Health Service Executive ((Kelly *et al.*, 2012)), the number of job seekers per case worker is still above international best practice. Furthermore, it is necessary to ensure that case workers are adequately prepared for the task giving job search and training advice.

28. **Engaging private firms to supply activation services for the unemployed could help.** Private welfare-to-work programs are in place in some advanced economies, including Australia, the Netherlands, Germany, the U.K. and the U.S. Under such schemes, unemployed (usually long-term) are referred to private firms for job activation and training, and the providers are remunerated based on a success in placing the jobseeker into work (see Kuddo, 2012 and Finn, 2008, for an overview, Bredgaard and Larsen (2008) for discussion on the Dutch system, and Tergeist and Grubb (2006) for Australia)). Advantages of private provision of activation services include cost savings as well greater innovation and flexibility applied to putting the unemployed back to work. However, careful contract design is a priority in order to facilitate assessment of the quality of provided services and to avoid adverse outcomes, i.e. when all efforts are focused on most promising clients ("creaming") while a bare minimum of services is provided to the rest ("parking"). A clear line of recourse for the clients is also needed to facilitate reporting of bad quality service provision. It is also important that success is not evaluated solely on the placement into employment, but also on the duration of employment after the placement takes place (Finn, 2008).

29. **Expansion of programs to bridge education gaps should be considered given the high share of low-skilled among unemployed and their relatively young age.** To that end, the number of places in programs like Youthreach (education and training for early school leavers), Springboard (program focusing on tertiary education) or Back to Education (opportunity to return to secondary or tertiary education) could be expanded. Consideration could also be given to shortening the unemployment period after which jobseekers are eligible to participate in the programs (currently jobseekers are eligible for the Back to Education allowance after being unemployed for three months (for secondary courses) or nine months (for tertiary courses)).

30. **Close alignment of courses with labor market needs will be key.** At present, training programs are selected based on the National Skills Database and the input of the Expert Group on Future Skill Needs, with the aim to provide courses that have the highest probability of employment in short- to medium-term. However, a system of regular monitoring of training outcomes, both immediately after completion of training and in the medium-term is urgently needed to identify training that results in the highest rates of exit to employment. To this end, creation of SOLAS and the Local Education and Training Boards should be considered a priority. To ensure broader provision of courses, a voucher system could be considered,

allowing the unemployed participate in training outside of the system of courses contracted by FÁS/DSP, provided that course provider fulfills clearly-specified requirements.

Cost of Labor

31. **Reducing the cost of labor, especially for low-skilled workers could boost employment creation.** One step to achieve this would be to retain the lower PRSI rate beyond 2013 if the planned evaluation of this measure finds it to be effective. Although this is not a targeted measure so it implies a higher deadweight cost (lower PRSI is applied to all wages fall below the threshold, hence also to high wage earners), it is easier to administer and monitor compared to other schemes (Immervoll and Pearson, 2009; Pina, 2011).

32. **A reduction in the minimum wage could also be considered in view of the scale of the employment growth needed.** As mentioned, Ireland's minimum wage is currently one of the highest in the EU. Lowering the minimum wage closer to U.K. and euro area average levels could enhance profitability and competitiveness of labor-intensive firms—including in sectors covered by EROs and REAs—facilitating a more job rich recovery over time. At the same time, the need to preserve an adequate premium over jobseeker benefits and allowances implies a limit on the extent of such a reduction in minimum wage (at present, jobseekers payments are at about 62 percent of NMW assuming a 35 hour work week). Moreover, targeted welfare support should be provided to protect the most vulnerable.

Participation rates

33. **To help rebuild participation rates over time, a reform of jobseeker assistance and benefits could be considered to reduce high replacement rates that arise from the flat and open-ended structure of the payments.** Some reductions have been implemented in Budget 2010 and 2011: payments to jobseekers aged 18 to 24 were lowered and criteria for full rate benefits were tightened. However, Pina (2011) estimates that these reforms have reduced the replacement rates for workers only marginally in both 2010 and 2011 as wages have also fallen, and additionally personal income taxes were increased in 2011. Despite these reforms, benefits remain flat for the duration of the unemployment spell. As unemployment durations extend, the attractiveness of initial employments options may decline, so the existing payment structure may increasingly hinder a return to employment.

34. **Reform of the supplementary welfare payments could also be considered**. As noted, these additional payments contribute to high replacement rates for some cohorts of the unemployed. The authorities are already preparing a reform of the housing supplement and plan to integrate the systems of social housing provision and rent supplement for those with long-term housing needs into a new means-tested Housing Assistance Payment. A further step would combine the supplementary payments into one means-tested payment, which should lower administrative costs while improving access to benefits, as some households may find it difficult to navigate the wide scope of payments (Pina, 2010).

Bibliography

Acemoglu, D., Autor, D., 2011, “Skills, Tasks and Technologies: Implications for Employment and Earnings”, In O. Ashenfelter and D. Card (Eds.), Handbook of Labor Economics, Vol. 4B, chapter 12, 1043-1171, Elsevier.

Ahrend, R., Arnold J., Moeser, C., 2011, “The Sharing of Macroeconomic Risk: Who Loses (and Gains) from Macroeconomic Shocks”, OECD Economics Department Working Paper No. 877.

Autor, D., Duggan, M., 2003, “The Rise in the Disability Rolls and the Decline in Unemployment”, Quarterly Journal of Economics, 118(1), February, 157–206.

Autor, D., Levy, F., Murnane, R., 2003, “The Skill Content of Recent Technological change: An Empirical Exploration”, Quarterly Journal of Economics 118(4), 1279–1333.

Babecky, J., Du Caju P., Kosma T., Lawless M., Messina J., Room T., 2009, “The Margins of Labour Cost Adjustment: Survey Evidence from European Firms”, ECB Working Paper No. 1106.

Barrett, A., McGuinness, S., 2012, “The Irish Labour Market and the Great Recession”, CESifo DICE Report 2/2012, 27–33.

Bergin, A., Kelly, E., McGuinness, S., 2012, “Explaining Changes in Earnings and Labour Costs During the Recession”, ESRI Economic Renewal Series 009.

Bredgaard, T, Larsen, F., 2008, “Quasi-Markets in Employment Policy: Do They Deliver on Promises?”, Social Policy and Society, 7(3), 341–352.

Clar, M., Dreger, C., Ramos, R., 2007, “Wage Flexibility and Labour Market Institutions: A Meta-Analysis”, Kyklos, 60(2), 145–163, May.

Dickens W., Goette L., Groshen E., Holden S., Messina J., Schweitzer M., Turunen J., Ward M., 2006, “The Interaction of Labor Markets and Inflation: Analysis of Micro Data From the International Wage Flexibility Project”, Brookings, Working Paper Fall 2006.

Druant, M., S. Fabiani, G. Kezdi, A. Lamo, F. Martins, Sabbatini, 2009, "How Are Firms’ Wages and Prices Linked: Survey Evidence in Europe", ECB Working Paper No. 1084.

Druant, M., Fabiani, S., Kezdi, G., Lamo, A., Martins, F., Sabbatini, R., 2009, “How Are Firms’ Wages and Prices Linked: Survey Evidence in Europe”, ECB Working Paper No. 1084.

Finn, D., 2008, “The British ‘Welfare Market”, Joseph Rowntree Foundation, November 2008.

Forfás, 2010, “Review of Labour Market Programmes”, February 2010.

Goos, M., Manning, A, 2007, “Lousy and Lovely Jobs: The Rising Polarization of Work in Britain”, Review of Economics and Statistics 89(1), 118-133.

Goos, M., Manning, A, Salomons, A., 2011, “Explaining Job Polarization in Europe”, American Economic Review: Papers and Proceedings 99(2), 58-63.

Groshen, E., Potter, S., 2003, “Has Structural Change Contributed to a Jobless Recovery?”, Federal Reserve Bank of New York Current Issues in Economics and Finance 9, No. 8 (August).

Grubb, D., Singh, S., Tergeist, P., 2009, “Activation Policies in Ireland”, OECD Social, Employment and Migration Working Papers No. 75.

IMF, 2012, Fiscal policy and employment in advanced and emerging economies, IMF Policy Paper, June 15.

Immervol, H., Pearson, M., 2009, “A Good Time for Making Work Pay? Taking Stock of In-Work Benefits and Related Measures across OECD”, IZA Policy Paper No. 3.

Jaimovich, N., Siu, H., 2012, “The Trend is the Cycle: Job Polarization and Jobless Recoveries”, NBER Working Paper No. 18334.

Kelly, E. McGuinness, S., O'Connell, P., 2012, “Submission to the Joint Committee on Jobs, Social Protection and Education on Unemployment and Youth Unemployment". ESRI Submission 2012/2

Kolesnikova, N., Liu, Y., 2011, “Jobless Recoveries: Causes and Consequences”, The Regional Economist, Federal Reserve Bank of St. Louis, April 2011

Koske I., J-M. Fournier and I. Wanner, 2012, “Less Income Inequality and More Growth – Are They Compatible? Part 2. The Distribution of Labour Income”, OECD Economics Department Working Papers, No. 925.

Kuddo, A., 2012. “Public Employment Services, and Activation Policies.” Washington. DC: World Bank.

McGuinness, S., O’Connell, P., Kelly, E., Walsh, J., 2011a, “Activation in Ireland: An Evaluation of the National Employment Action Plan”, ESRI Research Series 20.

McGuinness, S., O’Connell, P., Kelly, E., 2011b, “Carrots without Sticks: The Impact of of Search Assistance in a Regime with Minimal Monitoring and Sanctions”, ESRI Working Paper No. 409.

McGuinness, S., O’Connell, P., Kelly, E., 2011c, One Dummy Won’t Get It: The Impact of Training Programme Type and duration on the employment Chances of the Unemployed in Ireland”, ESRI Working Paper No. 410.

Neumark, D., Wascher, W., 2007, “Minimum Wages and Employment” IZA Discussion Papers 2570, Institute for the Study of Labor (IZA).

Nickell and Van Ours, 2000, “Why has Unemployment in the Netherlands and the United Kingdom Fallen so Much?”, Canadian Public Policy, University of Toronto Press, 26(1), 201–220, July.

OECD, 2012, “OECD Employment Outlook 2012”.

Pina, A., 2011, “Structural Policies to Reduce Unemployment and Restore Competitiveness in Ireland”, OECD Economics Department Working Paper No. 910.

Tatsiramos, K., 2010, "Job Displacement and the Transitions to Re-employment and Early Retirement for Non-employed Older Workers, “European Economic Review”, Elsevier, 54(4), 517–35, May.

Tergeist, P., Grubb, D., 2006, “Activation Strategies and the Performance of Employment Services in Germany, the Netherlands and the United Kingdom”, Employment and Migration Working Papers No. 42.

WDN, 2010, “Final Report of the Wage Dynamics Network”, Wage Dynamics in Europe, ECB.