Unclassified **ECO/WKP(2011)78**

Organisation de Coopération et de Développement Économiques
Organisation for Economic Co-operation and Development **02-Dec-2011**

English - Or. English

ECONOMICS DEPARTMENT

ECO/WKP(2011)78
Unclassified

GETTING BACK ON TRACK: RESTORING FISCAL SUSTAINABILITY IN IRELAND

ECONOMICS DEPARTMENT WORKING PAPER No. 909

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JT03312774

Document complet disponible sur OLIS dans son format d'origine
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ABSTRACT/RÉSUMÉ

Getting back on track: restoring fiscal sustainability in Ireland

Ireland's banking crisis, one of the most severe in the OECD area, and the associated economic recession have taken a heavy toll on public finances. Large public deficits have accumulated since 2008 and net public debt, which had been eliminated, has soared once again. The rapid deterioration of the fiscal accounts, together with the government guarantee of banks' liabilities, has led to Ireland losing the confidence of the sovereign bond market and requiring financial assistance from the international community. With one of the highest levels of gross public debt relative to GDP in the OECD, high bond spreads and weak nominal GDP growth, returning to a healthy fiscal position poses a significant challenge. A sustained effort will be needed to eliminate the budget deficit, regain the confidence of financial markets and to seek to increase trend growth through appropriate structural reforms. The economic adjustment programme supported by the IMF and the EU foresees a gradual consolidation of the public finances to stabilise and reduce the debt to GDP ratio and restore fiscal sustainability. The programme builds on significant progress that has already been made to contain the deterioration of fiscal accounts and the government plans to introduce further fiscal adjustment in 2012 and later years in line with the programme. The programme also foresees a strengthening of the fiscal framework, with large institutional changes intended to secure a path of fiscal sustainability in the medium-term. The consolidation effort is also underpinned by efforts to increase public sector efficiency, which provides a growth-friendly avenue for reducing the deficit in a durable way.

This Working Paper relates to the 2011 OECD Economic Survey of Ireland (www.oecd.org/eco/surveys/ireland).

JEL Classification: E62; E65; H11; H50; H61; H62 ;H63; H68
Keywords: Ireland; fiscal policy; fiscal rules; public debt; debt sustainability; fiscal consolidation; fiscal council; fiscal framework; public expenditure; contestability; public sector efficiency; performance indicators; public sector agencies; potential output.

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Rétablir la viabilité budgétaire en Irlande

La crise bancaire irlandaise, l'une des plus graves de la zone OCDE, et la récession qui l'a accompagnée ont lourdement pesé sur les finances publiques. Le pays connaît d'importants déficits depuis 2008 et la dette publique nette, qui avait été éliminée, est en forte résurgence. Á cause de la dégradation rapide des comptes budgétaires et de la garantie donnée par l'État aux engagements des banques, l'Irlande a perdu la confiance du marché des obligations souveraines et a dû recourir à l'aide de la communauté internationale. Sachant que le ratio dette brute/PIB est l'un des plus élevés de l'OCDE, que la prime sur les taux obligataires est importante et que la croissance du PIB nominal est faible, le retour à une situation budgétaire saine représente un sérieux défi. Un effort soutenu sera nécessaire pour résorber le déficit, regagner la confiance des marchés financiers et augmenter la croissance tendancielle par des réformes structurelles appropriées. Le programme d'ajustement économique soutenu par le FMI et l'UE prévoit un redressement graduel des finances publiques afin de stabiliser, puis de réduire, le ratio dette/PIB et de rétablir la viabilité budgétaire. Il s'appuie sur les progrès significatifs déjà réalisés, qui ont permis de contenir la dégradation des comptes budgétaires, et le gouvernement envisage de procéder en 2012 années suivants à un ajustement supplémentaire conforme au programme. Celui-ci prévoit aussi un renforcement du cadre de la gestion budgétaire comportant de grands changements institutionnels destinés à assurer la viabilité à moyen terme. L'effort de redressement bénéficie aussi des mesures prises pour rendre le secteur public plus efficace, ce qui est un moyen favorable à la croissance de réduire durablement le déficit.

Ce Document de travail se rapporte à l'Étude économique de l'OCDE de l'Irlande 2011 (www.oecd.org/eco/etudes/irlande).

Classification JEL:E62; E65; H11; H50; H61; H62 ;H63; H68
Mots-clés : Irlande; politique fiscale; règles fiscales ; dette publique; viabilité de la dette ; consolidation budgétaire; conseil fiscal; cadre fiscal; dépenses publiques; contestabilité; efficacité du secteur public; indicateurs de performance; organismes du secteur public; croissance de production potentielle

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GETTING BACK ON TRACK: RESTORING FISCAL SUSTAINABILITY IN IRELAND

By David Haugh[1]

This paper discusses Ireland's fiscal consolidation effort and progress in establishing a new fiscal framework and improving public sector efficiency. The first section covers the current fiscal situation and plans to reduce the deficit. This is followed by a discussion of the main elements of the planned new medium-term fiscal framework, including fiscal rules and the newly established Fiscal Advisory Council. A final section examines the government's public efficiency programme with a focus on performance indicators, contestability and human resource management.

Ireland's fiscal consolidation strategy

The recession and banking crisis transformed Ireland's fiscal position from one of the strongest in the OECD to one of the weakest. Rapid rises in current outlays and the large cost of bank support measures caused the headline fiscal balance to fall from a surplus of 2.9% of GDP in 2006 to a deficit of 32% (11.9% excluding banking support measures) in 2010, resulting in a sharp rise in general government debt (Figure 1). Social security outlays and debt interest have both increased sharply (Table 1). Financial markets eventually concluded that the extensive bank guarantee made by the government posed a threat to sovereign sustainability and Irish bond yields began to rise sharply in the second half of 2010, effectively shutting out the government from market finance. The weak fiscal position, compounded by contagion from fears of sovereign debt default in Greece and uncertainty about euro area level policies on sovereign debt, resulted in 10 year bond yields rising to over 13% by July 2011. Participants in financial markets are not yet fully convinced that Ireland will be able to return to a path of fiscal sustainability, and there is ongoing risk of contagion from other countries. However, financial market sentiment towards Ireland became more favourable during the late summer, with 10 year bond yields falling markedly to below 8% despite intensifying financial turmoil elsewhere in the eurozone. This reflects a confluence of good news, including the recapitalisation of the domestic banks and the decision taken by the euro area heads of state and government on 21 July to cut the interest rate on EU official finance to Ireland. The reduction in interest rates of around 290 basis points on loans from both the EFSF and EFSM facilities will lower Ireland's interest payments by around 0.5% of GDP in 2012 and 0.7% in 2013.

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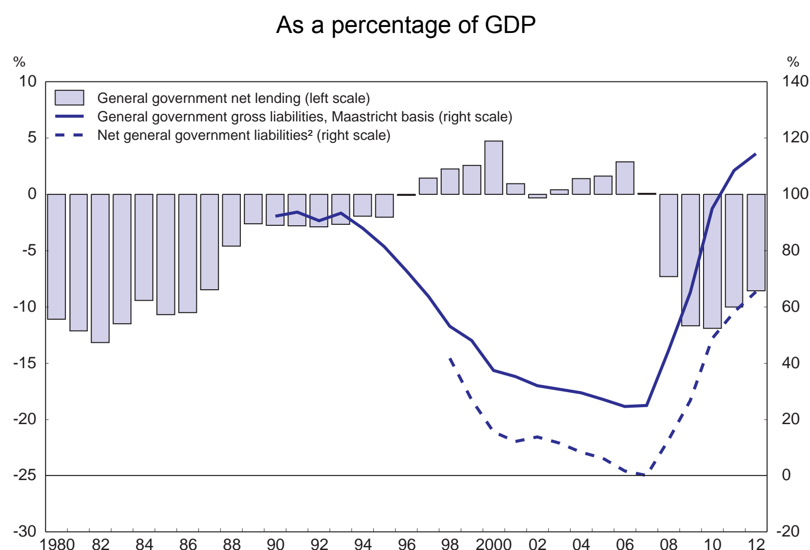
1 . This paper was produced for the OECD Economic Survey of Ireland, published in October 2011 under the authority of the Economic and Development Review Committee. David Haugh is a senior economist at the OECD Economics Department. The author is thankful for valuable comments on earlier drafts received from Andrew Dean, Robert Ford, Patrick Lenain and Álvaro Pina, as well as for discussions with Irish officials and independent experts, and with OECD colleagues from the Economics Department and the Directorate for Public Governance and Territorial Development. Statistical and research assistance from Josette Rabesona and editorial assistance from Heloise Wickramanayake and Olivier Besson are also gratefully acknowledged.

Figure 1. A long-term perspective on fiscal developments[1]

As a percentage of GDP



1. Projections for 2011 and 2012.
2. Net lending in 2009 and 2010 includes 2.5% and 20.1% of GDP respectively in bank support measures.

Source: OECD Economic Outlook database.

Table 1. General government receipts and outlays

% of GDP

	1995-2000	2001-07	2008	2009	2010	2011(f)	2012(f)
Total current receipts	**35.6**	**33.6**	**34.3**	**32.9**	**33.5**	**33.9**	**33.4**
-Household direct taxes	10.1	8.5	8.5	8.1	7.8	8.7	9.0
-Corporate direct taxes	3.4	3.7	2.9	2.5	2.7	3.2	3.3
-Indirect taxes	13.1	12.8	12.4	11.3	11.4	11.4	11.1
-Social security contributions	5.9	6.0	7.0	7.2	7.3	6.5	6.2
-Other receipts	3.2	2.6	3.4	3.8	4.2	4.0	3.7
Total current outlays	**32.6**	**30.1**	**37.0**	**42.0**	**43.3**	**42.0**	**40.5**
-Government consumption	15.1	15.8	18.2	19.9	18.9	18.2	17.3
-Social security benefits	9.9	9.2	12.4	15.2	15.7	15.1	14.3
-Interest / property income paid	3.5	1.2	1.4	2.1	3.2	3.5	4.1
-Other current outlays	4.1	3.9	5.0	4.8	5.5	5.2	4.7
Government gross saving	**3.0**	**3.5**	**-2.7**	**-9.1**	**-9.9**	**-8.1**	**-7.1**
Total receipts	**37.3**	**34.9**	**35.5**	**33.7**	**34.2**	**34.4**	**34.0**
Total outlays	**35.8**	**33.9**	**42.8**	**47.9**	**66.2**	**44.5**	**42.6**
Net lending	**1.5**	**1.0**	**-7.3**	**-14.2**	**-32.0**	**-10.0**	**-8.6**
Memorandum item							
Capital gains and financial transactions taxes	1.1	2.5	1.7				
Bank support measures				2.5	20.1		

Source: OECD Economic Outlook Database; OECD Revenue Statistics; Stability Programme Update 2011; Budget 2011

Restoring fiscal sustainability will require a determined effort. After a major consolidation from 2008 to 2010 that helped arrest the deterioration in the fiscal position, the government is undertaking a medium-term programme of measures to correct its budget imbalance with the goal of returning the budget deficit

below 3% of GDP by 2015 (Table 2). Around 60% of the consolidation measures being implemented from 2008 to 2012 are on the expenditure side, including cutting public sector wages and employee numbers, social welfare and capital spending. On the revenue side, the main measures up to 2010 were to introduce an income levy and increase social security and health levies, which were combined into one universal social charge in the 2011 Budget. Revenue is being further increased in 2011 and 2012 by broadening the income tax base, reducing the tax relief on pension contributions, cutting other tax expenditures, introducing an interim lump sum property tax (to eventually be replaced by a tax based on property values), increasing the carbon tax and reforming capital gain taxes.

Table 2. Consolidation targets and measures

% of GDP

	2008-10[1]	2011	2012	2013	2014	2015
Headline fiscal balance target[2]	-11.9	-10.0	-8.6	-7.2	-4.7	-2.8
Consolidation measures required[3]				2.0		
Consolidation measures implemented and planned	9.3	3.8	2.2			
Expenditure	5.7	2.5	1.3			
Current	4.4	1.3	1.1			
Capital	1.4	1.1	0.2			
Revenue	3.5	0.9	0.9			
Other[4]	-	0.4	-	-	-	-

Note:Consolidation measures planned for 2012 are consistent with those contained in the Stability Programme Update 2011 and the Joint EU-MF programme Memorandum of Understanding. The Government will set out a medium-term fiscal consolidation plan for the period 2012-2015 in the Pre-Budget Outlook in October. OECD projections for GDP are used. Totals may not add due to rounding

1. Measured as impact of 2008-10 measures on 2010.
2. For 2010, actual fiscal balance excluding bank support measures of 20.1% of GDP. The headline general government financial balance targets are the government's. The EU-IMF programme requires that the general government deficit not exceed 10.6% of GDP in 2011, 8.6% of GDP In 2012 and 7.5% of GDP in 2013.
3. Secretariat projection of requirement to meet headline target measured as the change in the underlying primary balance.
4. Includes asset sales, increased dividends and interest cost savings.

Source: Stability Programme Update 2011, 2011 Budget and Secretariat calculations.

The 2011 consolidation effort appears to be on track. High-frequency information suggests total tax receipts are close to the 2011 Budget target and expenditure is being managed within the limits set out by the government. As long as the economy evolves as envisaged by the government, by the end of 2011 the government will have carried out around two-thirds of the required adjustment to meet its headline deficit target for 2015. Nevertheless, under the programme, the headline deficit, even if falling, will remain large for quite some time (still above 7% of GDP by 2013). Savings from interest rate reductions on foreign financial assistance should be put towards consolidating faster. In addition, if growth allows, the authorities should introduce further measures to reduce the deficit faster than required by the programme. This will help to improve financial market sentiment and limit the build-up of debt from already high levels and ease the future repayment burden. Ireland's very open economy means the fiscal multiplier is relatively small, which reduces the drag on the economy from greater consolidation. It is important though that deficit targets are realistic as experience to date suggests that there is a large pay-off in terms of improved financial market sentiment and lower bond yields from meeting targets even if the deficit remains large in the shorter term.

Returning to medium-term sustainability

OECD projections suggest that the general government debt (Maastricht definition) will peak at around 117% of GDP in 2013, assuming that the government adheres to the adjustment programme. This high level of debt will act as a severe constraint on discretionary policy action to deal with both future cyclical downturns and structural changes the economy faces. In addition, the fiscal position needs to be strengthened to meet the upcoming pressures of ageing on public health and pension spending, which is projected to have an above-average impact on Ireland (European Commission, 2009; OECD, 2011).

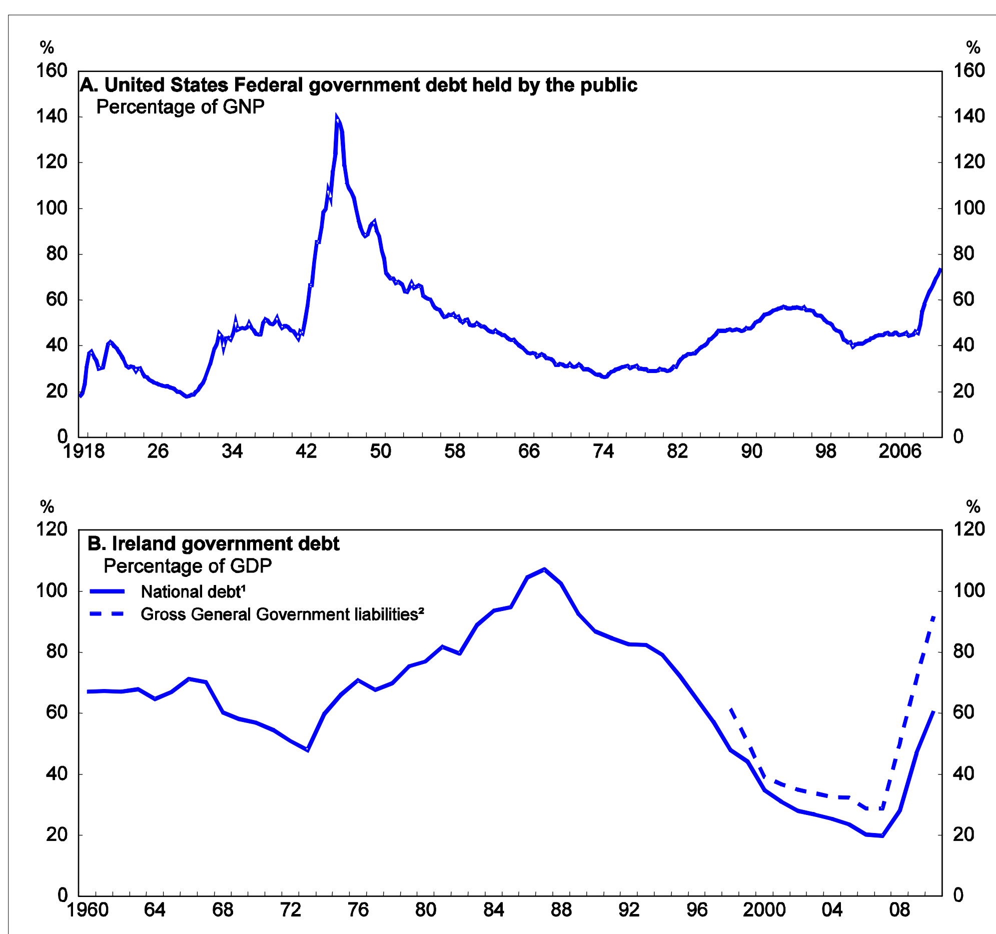
Feasible plans for restoring fiscal sustainability by stabilising and reducing the debt-to-GDP ratio will be shaped by medium-term growth prospects (Box 1). Holding all else equal, even a relatively small increase in real growth over the medium-term of around 1% per annum can have a meaningful effect on the debt trajectory (Annexes A1 and A2). Structural reforms to raise growth thus have strong potential returns as regards fiscal sustainability. The largest contribution fiscal policy can make to achieving sustainability is to restore credibility by adhering strictly to the government's fiscal targets to help establish a virtuous circle of lower deficits and market interest rates. To gain market confidence, the government should resist any slippage and take further measures to stay on track if necessary.

Box 1. Growth and fiscal policy during debt reduction episodes

An examination of episodes of sovereign debt reduction across time and countries suggests that output growth has an important role to play in reducing debt. This underlines the importance of Ireland carrying out structural reforms to boost growth in order to tackle fiscal problems. A historical perspective can be gained from the experiences of the United States and Ireland (Figure 2.). In three separate episodes in the United States, sustained debt reduction has been associated with a combination of both mildly stronger growth compared with the long-run average and a roughly balanced budget rather than particularly fiscal restrictive policy in an absolute sense. From 1919-2010, real GNP growth averaged 3.1% and the budget balance averaged -3.1% of GNP. By contrast, during debt reduction phases 1921-29, 1945-74 and 1993-2001, real GNP growth averaged 4.4%, 3.7% and 3.9% respectively while the budget balance averaged 0.9%, -0.8% and -0.7% of GNP in the 3 episodes. The experience was also similar in Ireland itself. From 1961-2010, GDP growth averaged 4.5% and the budget balance averaged -4.8% of GDP, while during two debt reduction phases, 1966-73 and 1987-2007, GDP growth averaged 5.3% and 6.4% respectively and the budget balance was -3.3% and -0.6% of GDP in the two episodes.

From a cross-country perspective, the available national accounts data show that, on 7 out of 9 occasions, GDP growth made a noticeable contribution to debt reduction. In some cases such as the Netherlands, the contribution from nominal GDP growth to debt reduction exceeds that of the primary balance (Table 3.).

Figure 2. Sovereign debt



1. National debt is the debt of the central government less liquid assets available for repayment of the debt.
2. Gross General Government liabilities include the National Debt as well as local liabilities and do not net off cash balances on hand.

Source: NBER; Irish National Treasury Management Agency and OECD Economic Outlook database.

Table 3. Decomposing sovereign debt reduction episodes

% of GDP

	Period	Change in gross debt[1.]	Contribution of: Net Interest	Primary balance	Real GDP growth	Inflation	other[2.]
Denmark	1993-2007	-58.0	28.7	-41.3	-8.6	-6.4	-30.5
Belgium	1993-2007	-52.6	85.1	-64.0	-32.7	-22.6	-18.4
Netherlands	1993-2007	-44.9	41.2	-20.0	-16.7	-13.1	-36.4
New Zealand	1993-2007	-38.0	19.5	-57.1	-11.7	-5.3	16.6
Sweden	1997-2008	-34.8	19.4	-32.2	-2.4	0.3	-19.8
Spain	1996-2007	-33.9	27.1	-21.3	-17.3	-15.4	-7.0
Ireland	1999-2007	-33.3	10.8	-25.3	-10.1	-5.5	-3.2
Australia	1995-2008	-27.7	19.3	-24.0	-4.2	-1.5	-17.4
United States	1993-2001	-17.4	24.0	-15.6	-13.7	-7.0	-5.1

1. Gross general government financial liabilities, SNA basis.

2. Includes changes in financial assets, valuation effects and a small residual

Source: OECD Economic Outlook Database No. 89

Improving the fiscal framework

The fiscal framework can make an important contribution to achieving fiscal targets and bolstering the credibility of fiscal policy. Over the past 5 years Ireland has made improvements to the framework including unifying social welfare expenditure estimates with other expenditure areas into a unified Budget, introducing annual output statements for departments, which set out outputs and expenditure on a programme basis, producing a detailed medium-term fiscal plan including expenditure ceilings (the National Recovery Plan 2011-14) in late 2010 and bringing forward the stability programme update to April from December as part of the European semester arrangements to improve fiscal management across the EU. In addition the Department of Finance publishes, on a monthly basis, expenditure and revenue out-turns versus Budget targets, allowing timely monitoring of current year fiscal progress. These various improvements provide a solid platform to introduce further wide-ranging reforms to the framework that are required under the programme, including to introduce a new fiscal responsibility law by the end of 2011 and an independent Fiscal Council that was set up in June 2011. In addition to a Fiscal Council, it is proposed that the main elements of the overall fiscal framework will be a medium-term budget plan, a set of fiscal rules including requirements for the fiscal balance and expenditure ceilings as well as performance budgeting (Department of Finance, 2011).

Medium-term budgeting

Together these framework elements can create a mutually reinforcing system to help the government meet its medium-term fiscal policy goals. Ireland's highly indebted fiscal position demands that stabilising and reducing the debt burden be the medium-term focus of fiscal policy for several years to come. To achieve this will require going beyond the standard EU medium-term objective of broadly balancing the budget. To provide a transparent anchor for the medium-term expenditure framework the government should consider adopting a medium-term target of reaching a debt-to-GDP ratio by a specified date. A debt target provides a visible goal to anchor medium-term policy requirements and inspire both fiscal prudence

and growth-enhancing reforms. It can also act as a simple and transparent tool to communicate the government's fiscal policy messages and commitments to the general public and financial markets. On realistic macro-economic projections, pushing debt below 60% of GDP by 2025 would require the government to increase the headline balance from -2.8% of GDP to 1.3% of GDP by 2020 and 2.7% of GDP by 2025. OECD experience suggests that a headline balance path of this nature would not be particularly exceptional. Denmark, Finland, Korea, New Zealand and Sweden have all maintained substantial headline surpluses, sometimes in excess of 4% of GDP, for sustained periods during the past 10 to 15 years.

The framework will also include a medium-term budget and economic plan. It is proposed that the plan would include the Budget year and at least two further years (Department of Finance, 2011). Consideration should be given to formally maintaining the four year plan horizon that is embedded in the National Recovery Plan as it allows more scope to demonstrate how progress towards ultimate targets will be met. To be an effective part of the framework the plan needs to be both feasible and have strong commitment. This requires that it be based on reasonable economic assumptions and that it takes account of political preferences. The medium-term plan should include a clearly specified medium-term debt target, a path for the headline fiscal deficit and estimates of the amount of discretionary fiscal action that will be required to achieve this. In addition it should include estimates for expenditure and revenue year-by-year and the specific measures that will be undertaken to achieve the targets. The assumptions underpinning the plan should be transparently laid out to give it credibility and also allow effective monitoring by the Fiscal Council, the Parliament and the wider public.

Fiscal rules

Fiscal rules can be used to help enforce the plan and achieve a medium-term fiscal target. Past experience suggests, however, that unduly rigid rules tend to be unworkable and not effectively enforced (Schick, 2010). They also need to be simple enough that they can be easily understood and monitored by the parliament and public, have broad coverage and be operationalised easily. The current government proposal is to introduce a set of three main fiscal rules: a public finances correction rule that specifies the minimum consolidation effort in terms of the primary budget balance that applies when debt exceeds 90% of GDP; a prudent budget rule that specifies the minimum consolidation effort in terms of the cyclically-adjusted primary balance when the debt is below 90% of GDP but the government has not met a specified medium-term objective; and a sustainable expenditure rule that would require overall current government expenditure to increase in line with the underlying medium-term nominal rate of economic growth once the medium-term objective is met.

Rules specified in terms of cyclically-adjusted balances or equivalently balances measured "over the cycle" are difficult to operationalise and monitor because they depend on forecasting the size of spare capacity in the economy, which cannot be observed and is particularly difficult to estimate for a small open economy such as Ireland's. The Swedish Fiscal Policy Council found it difficult to assess compliance with the government's target of a 1% surplus over the cycle (Calmfors, 2010). Disputes over when the cycle started and finished were among the most contentious aspects of the rule that operated in the United Kingdom until the end of 2008 (OECD, 2009). Reliance on such measures may also induce policy mistakes. With the benefit of hindsight, initial cyclically-adjusted fiscal balance measures appear to have given an overly optimistic view of the Irish fiscal position prior to the crisis, which may have contributed to a sharp rise in expenditure in 2007 before the crisis hit. At the end of 2006, when budget setting for 2007 took place, the Irish government estimated that the cyclically-adjusted balance fiscal balance in 2006 was 2.7% of GDP. The OECD estimate for 2006 was a similar 2.5% of GDP in mid 2007. However, by October 2011 OECD estimates suggest that the cyclically-adjusted balance was only 0.8% of GDP in 2006.

Once a medium-term goal for debt or the fiscal balance is set it is largely a technical matter to determine how much discretionary action is required from year to year to achieve these targets. Such a responsibility should remain with the Minister of Finance. These actions then inform the setting of nominal medium-term expenditure ceilings. These ceilings (or expenditure rules) could serve as an operational commitment to budget prudence by the government. This type of rule has the advantage that breaches are relatively transparent and spending ministers can be held accountable for their actions (Atkinson and van den Noord, 2001; Guichard *et al*. 2007; Price, 2010). Such a system would clearly separate out technical (growth and other assumptions) and ministerial expenditure control responsibilities, and thus help to better inform where corrective action is required if the budget appears to be off track in meeting its medium-term objectives. Like all rules, an expenditure rule will encourage efforts to circumvent it. To partly address this, the rule should have a wide scope, covering total expenditure (Price, 2010). It could also include tax expenditures, although this would complicate the rule as tax expenditures can be difficult to define. At the very least tax expenditures would need to be monitored carefully (Anderson and Minarik, 2006) perhaps via a "pay-as-you-go" rule that requires revenue lost from a tax cut to be made up elsewhere. Ireland has since 2004 set out capital expenditure in a multi-annual framework. To increase transparency consideration should be given to combining the proposed expenditure ceilings on current spending with the existing capital spending limits into an aggregate ceiling.

Establishing a Fiscal Council

As recommended in the previous *OECD Economic Survey of Ireland*, the government set up an independent Fiscal Council in June 2011. The Council comprises 5 independent Councillors appointed by the Minister of Finance (two from Ireland and three international experts) and a permanent secretariat of 4 people. Appointing international fiscal policy expertise to the Council is welcome as it will help to broaden the range of independent perspectives that the government will have access to in determining policy, this being one of the important potential benefits to be derived from such a body. The Council will report three times in the year, pre- and post- Budget and after the issuance of the Stability Programme in May. Reports will be submitted to parliament and published within 24 hours of them being provided to the Minister of Finance. The Council can play an important role in increasing commitment and improving the operation of the framework. It should monitor compliance with formal rules as well as evaluating whether the government's medium-term target is consistent with prudent fiscal and economic management and whether the government's fiscal policy decisions will achieve these targets. It is important that the Fiscal Council provide normative judgements and recommendations on fiscal policy rather than just advice as there is evidence that this increases the effectiveness of a council (Debrun, Hauner, Kumar, 2009). The Council should also assess the forecasts and assumptions underlying the medium-term plan. International experience shows that over-optimistic macroeconomic forecasts are an important source of deficit bias (Hagemann, 2010).

Performance budgeting

Effective scrutiny of public expenditure requires information not just about programme funding but also about the outputs and outcomes. As part of the fiscal framework reform, the government is progressively moving towards a more performance-oriented budgeting approach. Since 2007, Departments have produced annual output statements, which set out information on expenditure and the services on a programme basis. However, outputs are not always classified in the same way as the budget estimates making it difficult for the parliament to make full use of this information in scrutinising the budget. A further improvement was included in the 2011 Budget which contained output information alongside expenditure allocations for the Departments of Finance and Agriculture, Fisheries and Food. It is intended to roll this out to all departments in the 2012 Budget.

To ensure that the budget process delivers value for money and to facilitate proper monitoring of expenditure allocations, the government should keep improving the output and outcome indicators inserted into the budget estimate*s*. The budget process itself is an opportunity to gather parliamentary and government feedback on how to improve indicators to make them more relevant for assessing how funds should be spent and the provision of such feedback to departments and agencies should be built into the process. A performance-based budget process can also make a strong contribution to increasing public sector efficiency.

Raising public spending efficiency

Increasing public-sector efficiency is an important tool for reducing the fiscal deficit in an enduring and relatively growth-friendly way. There has been an ongoing programme to increase public sector efficiency in Ireland. An initial vision of a more performance-oriented public service was introduced in the mid 1990s (Strategic Management Initiative) but until recently the effort was mainly focused on putting processes in place rather than improving outputs and outcomes (OECD, 2008). This effort has been given new momentum by the weak fiscal position, with reducing costs by increasing public-sector efficiency being an important plank of the consolidation programme. An expert group reported on ways to reduce public service staffing and expenditure in 2009 and a new department of Public Expenditure and Reform, comprising divisions formerly in the Department of Finance and the Department of the Taoiseach, has been set up to lead this effort.

Some of the key principles governing the efficiency process are set out in the Public Service Agreement 2011-14 (Croke Park agreement) between the government and the public service unions. Following substantial net pay cuts between 2008 and 2010 (including the imposition of a pension levy deduction from public servant pay), the government has committed to no further pay cuts for existing employees in return for industrial peace and a commitment to measures to deliver efficiency gains including through reorganising the delivery of public services (Box 2.). An important step in reorganising public services is a comprehensive review of expenditure and it is proposed that this will be repeated every two to three years as part of the new fiscal framework. Expenditure review reports from all Departments were received by the end of September 2011 and will inform the 2012 Budget process.

Box 2. Reforming non-commercial state agencies

At end-April 2010 Ireland had 15 government departments complemented by around 250 national level non-commercial state agencies and around 300 local agencies. The number, role and governance of state agencies is controversial and under significant scrutiny, including in the comprehensive expenditure review. Earlier work in the *Report of the Special Group on Public Service Numbers and Expenditure Programmes* (2009) found widespread duplication of outputs across agencies and departments. There is significant potential to reduce their numbers and increase public sector efficiency through winding some of them up and merging others into government departments or with each other. For example, the Special Group Report recommends that the enterprise support functions that are spread across departments, and across agencies at local and national levels be merged into one single national support agency for indigenous industry with local branches. Mergers of this type offer the chance to reduce duplication, staff numbers and other costs such as accommodation as well as facilitating common measurement of performances and a more consistent range of policy interventions across various industries. Creating larger agencies through mergers is also likely to increase overall scrutiny of public expenditure, as small agencies with limited budgets tend to receive less attention. However, it is important to ensure the legislative process for rationalising agencies does not drag out as it has in the past, as this creates a high level of uncertainty with negative effects on productivity.

Agencies in Ireland typically have a high degree of policy autonomy but little management autonomy in both the financial and human resources areas and large participatory governing boards are widely used (McGauran, 2005, OECD, 2008). A number of weaknesses exist in governance arrangements. Departments have insufficient capacity to effectively monitor their agencies. There is also sometimes a mismatch between the type of governance structure and agency functions. For example, many agencies are working in clearly defined areas with well-delineated products, and have relatively easily identifiable performance objectives and measurement criteria. These service-delivery agencies need managerial autonomy, but little policy independence so a large participatory board comprising representatives

from many different stakeholder groups is unnecessary and may be counter-productive. A "departmental agency" with direct accountability of management for specified outputs to a policy-setting line department may be more appropriate in these cases (OECD, 2008). Boards or governing authorities are also excessively large; they average 12 persons while private-sector best practice suggests 6 to 9 would be sufficient (MacCarthaigh, 2010). The unnecessary use of participatory boards also increases the risk of interest group capture (McGauran, 2005). The large number of agencies and lack of performance indicators means it is practically impossible for parliament to assess their expenditure effectiveness and efficiency. In line with overall efforts to improve public sector efficiency, an important part of reforming agencies should be to increase their focus on performance by giving them greater management autonomy but less policy autonomy with policy goals being set more centrally (OECD, 2008). This can help to reduce mission creep as well as increase accountability to the government and maximise the potential operational efficiencies of having independent agencies. The number and size of boards should be reduced and governance structures better aligned with agency functions. Clear criteria for setting up agencies should be developed and all agencies should be subject to periodic review of their function and even whether the function for which they were set up is still needed.

The Croke Park agreement freezes pay through to 2014, introduces standardised terms and conditions to facilitate movement around the public service, and restricts promotion and recruitment. Reflecting recruitment restrictions, overall public service numbers fell from 319 000 in 2008 to 308 000 in 2010. Further reduction to 295 000 by 2014 (a return to 2005 levels), a reduction of around 3 300 per year, is targeted. In total, measures taken over 2011-14 are expected to reduce the overall public wage bill by EUR 1.2 billion (or 8%). The first official review of the Croke Park Agreement found that public service numbers are falling at a rate faster than required to meet targets, but also that not enough progress is being made in some of the areas designed to deliver efficiency savings, such as consolidating services and sharing information between government entities.

Performance indicators

As acknowledged by the government, moving to best practice in public sector efficiency requires shifting towards a more performance focussed approach (OECD, 2008). Better performance indicators, greater contestability in public services and greater managerial responsibility and discretion over human resources management can achieve a more efficient public sector. Improved indicators are required as ensuring an efficient public service is ultimately dependent on the data available to decision makers. Better indicators also complement the proposed comprehensive assessment of expenditure every two to three years. Indicators on whether current expenditure is achieving the government's goals would bolster the effectiveness of these exercises. As well as assisting efficient budget allocation, performance indicators can also have a useful role in increasing efficiency directly at the output delivery level. Developing robust output and outcome indicators at, for example the individual school or police station level, and making these publicly available can spur managers to identify where their organisation differs and how it could be improved (Lundsgaard, 2002).

Comparing the performance indicators used in Ireland to those in Australia, Canada and the United States suggests that Ireland could improve output and outcome indicators by greater use of quantitative indicators and presenting indicators with historical data and a target, so that performance trends can be observed (Boyle, 2009). To maximise the net public efficiency benefits of performance indicators, priority should be put on developing indicators for the largest areas of government expenditure. In particular there should be a focus on health and education, which together account for 70% of public service employment and 75% of the Exchequer wage bill (Boyle, 2010). This would help to reduce the risk that indicators become a costly bureaucratic exercise with no tangible benefits. It is also important that the indicators facilitate cross-department, agency and programme comparisons, which requires ensuring they are developed and presented in a consistent way.

Both output and outcome indicators should be provided. Ultimately the government is interested in achieving outcomes (for example, fewer fatalities per kilometre travelled), while effort also needs to be made to demonstrate the links from government outputs (police patrols) to outcomes. Indicators should

therefore be accompanied by an evidence-based performance narrative to give the user a better understanding of how outputs have contributed to better outcomes. The need to provide such arguments can be used to motivate desirable practices to establish evidence of causal links, such as information from randomised pilot experiments, which will in turn give decision makers more confidence in the robustness and meaningfulness of indicators. A performance narrative may also help to circumvent the problem that performance indicators can incentivise departments and agencies to concentrate solely on meeting a given output target even if it has no impact on a government goal (lower crime rates).

Contestability

As part of the comprehensive expenditure review, the government is requiring departments to reconsider how services are delivered, including whether some services can be delivered more efficiently by the private sector. Making service provision to or on behalf of government more contestable is an important potential avenue for increasing value for money. The private sector can provide cost benchmarks for the public sector, incentivise efficiency improvements and save money. Competition and greater incentives to operate efficiently can be introduced into provision of public services through a variety of institutional arrangements, including benchmarking across existing public agencies, using indicators as described above or through competitive tendering and contracting out as well as providing more user choice.

There is no “one-size-fits-all” approach and policies in this area need to take account of the characteristics of the service provided, market structure (*e.g.* natural monopoly), the scope for technological improvements, how well consumers are informed and transaction costs (Bel, Fageda and Warner, 2010). Benchmarking and performance contracts are a viable option for defence, security and core public administration functions, where wider competition with the private sector is not feasible. However, competitive tendering and contracting out can be used for support functions such as cleaning, wage administration and building maintenance. Empirical evidence suggests that this can generate savings in the order of 10-30% in these areas (Lundsgaard, 2002). Competitive tendering should also be considered for helping to deliver new shared services required under the Croke Park agreement, as has already been the case for the new human resource shared services centre for the civil service that will undertake the transactional elements of human resources processes for the civil service. It can also potentially play an important role in delivering new ICT and government solutions required by the agreement and provide an avenue for the government to make better use of the large private sector ICT and online solutions expertise that already exists in Ireland.

Greater user choice can also play a role in increasing competition and sharpening incentives to operate efficiently. The reorganisation of public employment services (PES) in Ireland provides an opportunity to contract out to a range of training providers and introduce greater choice into training for the unemployed. This policy lowered costs and improved job seekers’ and employers’ satisfaction relative to provision by the PES in Australia (Elliot *et al.*, 2005). However, there was substantial variance in outcomes across providers, as often appears to be the case when public services are provided by the private sector. This underlines the importance of first ensuring that government departments have the necessary expertise to effectively contract out. Consideration also needs to be given to ensuring that equity goals are being met in a system of greater user choice and to avoid problems such as “cream skimming” where suppliers will select “easy” customers. Without appropriate safe-guards a user choice system can tend to favour the higher–income and better-informed individuals (Besley and Ghatak, 2003). Funding may need to be adjusted depending on user characteristics and where service assessment requires professional oversight choice could be restricted to a limited range of government approved suppliers (Lundsgaard, 2002).

Human resource management

To achieve greater efficiency gains Ireland also needs to continue improving human resource management in the public service. Government agencies in particular are frustrated by the lack of autonomy over human resources (McGauran *et al.,* 2005). In the short run, the urgent requirement to consolidate the fiscal position in the current institutional framework (mostly permanent contracts, high redundancy costs, de-facto lifetime employment and the Croke Park agreement to impose no compulsory redundancies) requires a centralised approach to staff numbers and pay rates and this has saved money. However, this type of approach can have detrimental effects on the quality of the public service and therefore efficiency in the medium term; hiring bans and centralised setting of staff numbers remove managerial discretion over how to best achieve outcome objectives and hiring moratoriums may cause a deterioration in staff quality if better qualified staff leave.

The government's goal of a more output focused approach to the public service requires greater flexibility in human resource management. There is a tension between centralised human resources control and achieving a real performance-based system. To achieve objectives efficiently, public sector managers need flexibility and one of the key variables is human resources. Consideration should be given to eventually handing responsibility for managing staff costs to senior management of departments and agencies within a centrally-set wage bill envelope to give more scope for agencies and departments to choose the most efficient staff mix to meet their output and outcome objectives. This would also be consistent with the overall fiscal framework of expenditure limits. There is a risk that such a system could generate expenditure overruns and undesirable increases in overall numbers than are difficult to reverse. Minimising these problems could be assisted by ensuring that senior managers are incentivised to respect the wage bill ceiling, and by negotiating a less costly redundancy regime from the public service with the public service unions. The latter is challenging but strong employment protection for permanent contracts increases the incentive for a cash-strapped government to continue severely restricting hiring on permanent contracts.

The *OECD Public Management Review (2008)* found that the Ireland was not achieving the level of staff mobility within the public service that should be afforded by its career based public service, which aims to maintain a group of generalists. In addition the *Review* found that Ireland's career-based system suffered from a restricted scope for recruiting in new talent and a lack of specialisation. The standardisation of conditions across the public service required by the Croke Park agreement should assist in increasing mobility but opt-outs should be allowed where specific features of a post demand it. The redeployment of staff to fill gaps under the efficiency programme is a chance to streamline transfer procedures. Although there is open competition for positions at the starting level, external entry to the service at higher levels is more restricted. The Croke Park agreement calls for greater use of open recruitment at all levels and there has been a partial opening to recruitment from the private sector at senior levels although this appears to date to have resulted in very little actual recruitment from the private sector. Demands on government are increasingly complex. To have greater access to specialised skills and facilitate the movement of labour between the private and public sectors, the government should continue to expand the range of posts open to private sector applicants. This is especially important in a small economy like Ireland's where the pool of suitable candidates for technically demanding posts is limited.

Box 3. Summary of recommendations for restoring public debt sustainability and lifting public sector efficiency

- Implement the EU-IMF financial assistance programme to reduce the deficit to below 3% of GDP by 2015. Put money saved from interest rate reductions on official financial assistance towards faster consolidation. Providing growth allows, to gain greater credibility in financial markets and reduce the future debt repayment burden reduce the deficit faster than required by the programme. Focus the consolidation effort more on reducing spending. Broaden the tax base.
- Proceed with the implementation of a new fiscal framework. As part of the framework produce a multi-year budget. Focus on a debt-to-GDP target to be achieved by a specified date to anchor the fiscal framework. Use a ceiling for nominal expenditure broadly defined in each year of the medium-term framework to help achieve the debt target. Establish a central role for the Fiscal Council in the budget framework and continue to appoint international fiscal policy expertise to it.
- To improve public sector efficiency and expenditure allocation, introduce better performance indicators with historical data so that performance trends can be seen. Concentrate indicator development on large expenditure items, particularly education and health. Require a performance narrative to accompany indicators linking outputs with the government's desired outcomes.
- To get better value for money, make service provision to or on behalf of government more contestable through benchmarking, yardstick competition, contracting out, particularly for new shared services, as well as introducing greater user choice.
- To lift efficiency, reduce duplication and increase accountability of policy advisors to the government, reduce the number of agencies through mergers with government departments or other agencies and introduce sunset clauses that require a regular review of the need for an agency.
- To move towards a more performance based system of public management consider giving senior agency and department management responsibility for managing their labour costs within a centrally set wage envelope. This would require developing incentives for managers to comply with the envelope and moving to a less costly redundancy regime for the public sector. To give the government greater access to specialised skills and facilitate the movement of employees between the private and public sectors open up recruitment to the public service at all levels to private sector candidates.

BIBLIOGRAPHY

Anderson, B. and J. Minarik (2006), "Design Choice for Fiscal Rules", OECD Journal on Budgeting, 5(4), 159-208.

Atkinson, P. and P. van den Noord (2001),"Managing Public Expenditure: Some Emerging Policy Issues and A Framework for Analysis", *OECD Economics Department Working Papers*, No. 285.

Bel, G., X. Fageda and M. Warner (2010), "Is Private Production of Public Services Cheaper than Public Production", *Journal of Policy Analysis and Management*, 29 (3), 553-77.

Bergin, A. T. Conefrey, J. FitzGerald and I. Kearney, "Fiscal Policy for Recovery: The Case of Ireland", Economic and Social Research Institute Paper, Ireland.

Besley, T. and M. Ghatak (2003), "Incentives, Choice, and Accountability in the Provision of Public Services", *Oxford Review of Economic Policy*, 19 (2), 235-49.

Boyle, R. (2009), "Performance Reporting: Insights from International Practice", *Managing for Performance and Results Series,* Institute of Public Administration, Ireland.

Boyle, R. (2010), "Public Sector Trends 2010", *State of the Public Service Series*, 2, Institute of Public Administration, Ireland.

Calmfors, L. (2010), "The Swedish Fiscal Policy Council – Experiences and Lessons", *Paper for Conference on Independent Fiscal Policy Institutions*, Budapest, 18-19 March 2010. Available at: http://people.su.se/~calmf/sweFiscPolCoBudapestMars2010.pdf.

Cournède, B. (2010), "Gauging the Impact of Higher Capital and Oil Costs on Potential Output", *OECD Economics Department Working Papers*, No. 789.

DeBrun, X., D. Hauner and M.S. Kumar (2009), "Independent Fiscal Agencies", *Journal of Economic Surveys*, Vol. 23.Department of Finance (2011), *Reforming Ireland's Budgetary Framework: A Discussion Document*, Dublin, March 2011.

Department of Finance (2011), *Reforming Ireland's Budgetary Framework: A Discussion Document*, Dublin, March 2011.

European Commission (2009), *The 2009 Ageing Report: Economic and budgetary projections for the EU-27 Member States (2008-2060).*

Elliot, C., R. Owen and A. Stott (2005), "The use of contestability and flexibility in the delivery of welfare services in Australia and the Netherlands", *United Kingdom Department for Work and Pensions Research Report*, No. 288.

Guichard, S., M. Kennedy, E. Wurzel and C. André (2007), "What Promotes Fiscal Consolidation: OECD Country Experiences", *OECD Economics Department Working Papers* ,No. 553.

Hagemann, R. (2010), “Improving Fiscal Performance Through Fiscal Councils*”, OECD Economics Department Working Papers*, No. 829.

Haugh, D, P. Ollivaud and D. Turner (2009), “The Macroeconomic Consequences of Banking Crises in OECD Countries”, *OECD Economics Department Working Papers*, No. 683.

Lundsgaard, J. (2002), “Competition and Efficiency in Publicly Funded Services*”, OECD Economics Department Working Paper*, No. 331.

MacCarthaigh, M. (2010), “National non-commercial State Agencies in Ireland”, 1, *State of the Public Services series*, Institute of Public Administration, Ireland.

McGauran, A., K. Verhoest, P. Humphreys (2005), “The Corporate Governance of Agencies in Ireland”, CMPR Research Report, No. 6, Institute of Public Administration, Ireland.

OECD (2008), "Ireland: Towards an Integrated Public Service", *OECD Public Management Reviews*, Paris.

OECD (2009), *OECD Economic Surveys United Kingdom,* Paris.

OECD (2011), *OECD Economic Outlook*, No. 89, May

Price, R. (2010), “Political Economy of Fiscal Consolidation”, *OECD Economics Department Working Papers*, No. 776.

Schick (2010), “Post-Crisis Fiscal Rules: Stabilising Public Finance while Responding to Economic Aftershocks”, *OECD Journal on Budgeting*, 2010/2, 1-17.

ANNEX A1. SIMULATIONS OF MEDIUM-TERM DEBT REDUCTION PLANS

International experience shows that GDP growth tends to make a large contribution to most sovereign debt reductions and Ireland's fiscal future is very much tied to the performance of the economy. This annex examines a range of future debt scenarios for Ireland based on varying consolidation paths, which are driven by changes in real growth. The changes in growth are calibrated using recent developments in the Irish and international economies such as the sharp rise in unemployment, the increase in international risk aversion and the downsizing of the construction sector.

The debt simulations (except the pessimistic scenario described below) are divided into two main phases. In the first phase from 2011 to 2015, the headline fiscal balance follows the government's targets as set out in the Stability Programme Update 2011 with a reduction in the fiscal deficit to 2.8% of GDP in 2015. This also complies with the EU-IMF programme targets which are slightly less stringent. In this phase all assumptions, including GDP growth and interest rates are identical across scenarios. In the second phase, from 2016 to 2025, changes in GDP growth affect the headline fiscal balance and therefore the debt trajectory.

In the baseline scenario, real GDP growth is 1.2% in 2011, 1% in 2012 and 2.4% in 2013. From 2014 to 2025, to increase conservatism of the baseline scenario, a modified OECD Medium-Term Baseline No. 89 projection for GDP growth less 0.5% per annum is used in Table 1.A1.1. Discretionary fiscal policy from 2016 to 2025 is set in order to reduce debt to just below 60% of GDP by 2025 (Figure A1.1).

Table A1.1 Debt trajectory scenario assumptions

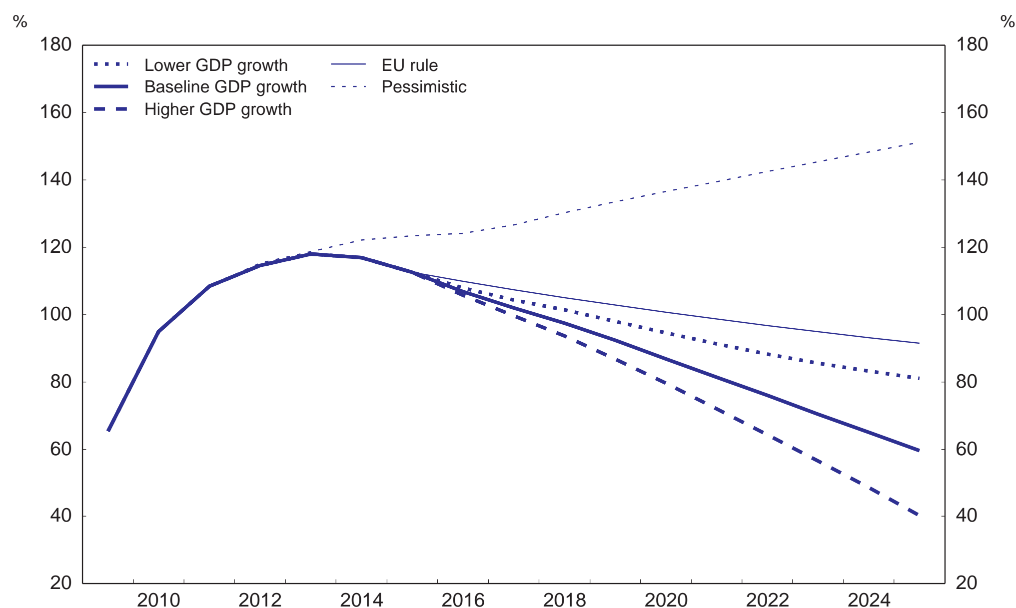
					Underlying Primary Balance			Headline Fiscal Balance		
	Trend Real GDP[1.,2]	Trend GDP Deflator[1.,2.]	Implicit Interest Rate[2.]	10 year bond spread versus Germany[2,3.]	2015	2020	2025	2015	2020	2025
baseline	2.8	2.0	5.2	125	3.0	5.0	5.0	-2.8	1.3	2.7
high growth	3.6	2.0	5.2	125	3.0	6.2	7.4	-2.8	2.8	5.8
low growth	2.0	2.0	5.2	125	3.0	3.7	2.4	-2.8	-0.2	-0.8
pessimistic	1.0	2.0	6.8	290	-0.8	0.7	3.6	-6.9	-6.9	-6.9

1. Per cent growth per annum
2. Average 2016-25
3. Basis points

Source: Secretariat calculations

Figure A1.1. Gross general government liabilities[1]

As a percentage of GDP



Note: Assumptions used in these scenarios are contained in Table A1.1.

1. Maastricht Treaty definition.

Source: OECD Economic Outlook database and Secretariat calculations.

The high and low growth scenarios explore how a shift in growth could affect the debt trajectory relative to the baseline. Even relatively modest changes in growth can have notable effects on debt. This is because a shift in the real growth rate permanently changes the level of GDP, which allows a permanent change in the primary fiscal balance and the debt trajectory. Medium-term growth rates are in turn dependent on potential labour supply, the capital stock and productivity. The shift growth is calibrated from simulations in Annex 2, which show that a combination of modestly higher/lower net inward migration, labour force participation, labour productivity and capital stock due to small differences in unemployment and interest rates together with *inter alia* the productivity change from the construction sector changing in size could see trend real GDP growth average 0.8% per annum higher/lower from 2016 to 2025. (Table A1.2).

Table A1.2. Impact of structural developments on potential growth

	Simulation	Change in growth rate per annum 2016-25
Labour Force: Migration	Unemployment gap between Ireland and United Kingdom shifts 2 percentage points	0.3
Labour Force: Labour force participation rate	Unemployment rate shifts 2 percentage points and female 45-59 participation rates are 10% different relative to the male cohort participation rate by 2025.	0.1
Capital Stock	Capital stock changes by 5% by 2025 due to a 0.5 percentage point change in corporate interest rates	0.05
Labour Efficiency	Growth changes by 0.5 percentage points per annum due to *inter alia* a change in the size of the construction sector	0.35
Total		0.8

Source: Secretariat calculations

The gap in the debt paths between the baseline and high and low growth scenarios illustrates the fiscal space created by growth by showing what the government can achieve in terms of debt reduction relative to the baseline without altering welfare in terms of the government spending level in real terms. In particular, real spending is held at the baseline level from 2016 through to 2025 and the full change in revenue from a shift in real growth of 0.8% per annum is added to the underlying primary balance. In practice the government may end up cutting real spending below the baseline level in order to offset lower growth or vice versa. At a minimum, the choice of debt target and speed of approach to this target must comply with Ireland's EU obligation to reduce debt each year by 1/20 of the difference between current debt and the 60% of GDP Maastricht Treaty threshold.

The above scenarios show a declining path of debt and a return to fiscal sustainability but financial markets are pricing in a high probability of default by Ireland. Apart from contagion effects from fears of default by Greece and EU-level policy uncertainty, this may reflect a view that debt will continue to rise in Ireland and therefore default will become increasingly likely. To illustrate this, a pessimistic scenario is shown where real growth averages only 1% per annum from 2011 through to 2025, the implicit interest rate on government debt rises to 8% by 2025, and the government does not meet its programme targets and the headline deficit remains around 7% of GDP from 2012 to 2025. This would cause debt to rise to over 150% of GDP by 2025.

The low growth scenario suggests that even with lower trend annual nominal GDP growth of around 4% (2% real growth) and no substantial further consolidation beyond that required to meet the government's 2015 deficit target of below 3% of GDP, sovereign debt would still start to fall noticeably. Continually rising debt, and therefore likely eventual default, would not only require growth to be very weak, and interest rates high, but also significant fiscal slippage. This is because even under the pessimistic scenario growth and interest rate assumptions, debt would stablise around 110% of GDP, provided the government met its fiscal targets to 2015 and Maastricht treaty obligations to ensure the deficit was below 3% of GDP from 2016 onwards.

ANNEX A2. CALIBRATING A CHANGE IN POTENTIAL GROWTH

Growth in the medium-run is determined by the potentially available amount of capital and labour and how productively these factors of production are combined to produce goods and services:

$$GDPV_{trend} = (Prod * Pop * LFPR * (1 - NAIRU) * HRS)^{1-\alpha} K^{\alpha}$$

where $GDPV_{\text{trend}}$ is the trend or medium term level of real GDP, *Prod* is labour efficiency, *Pop* is the working age population, *LFPR* is the labour force participation rate, *NAIRU* is the non-accelerating structural rate of unemployment, *HRS* is hours worked and *K* represents non-housing capital services and α is capital's share of total income. Total factor productivity (TFP) is equal to $Prod^{1-\alpha}$. This section simulates a change in potential growth calibrated on recent economic developments in Ireland and abroad.

Potential labour supply

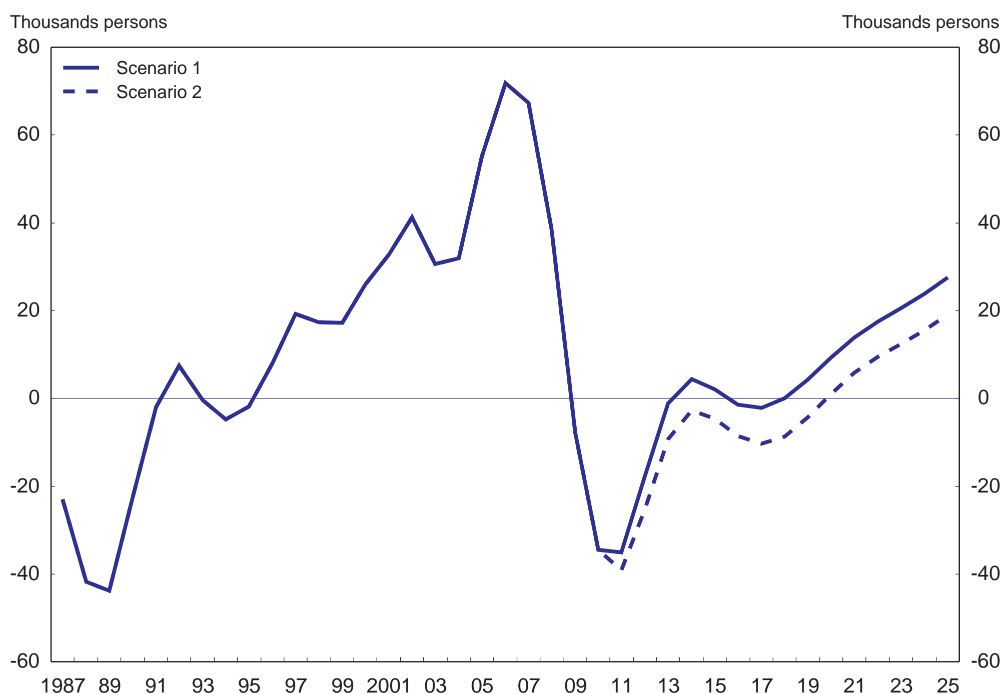
Migration

Ireland's working age population is notable for two features, it is relatively young by OECD standards and large migration flows play an important role in determining the size and nature of the working age population. Traditionally the literature has found that the best predictor of Irish net migration is differences in unemployment rates between Ireland and the United Kingdom (Bergin *et al.*, 2010). Outside this traditional influence was the large recent inflow of migrants from Central and Eastern Europe as result of admitting ten new member states to the European Union in 2004 from that region. Examining the available migration data suggests that this can be treated as a one-off event. Estimation of a simple equation with a dummy variable to capture the migration from Central and Eastern Europe confirms that the unemployment gap remains a valid explanatory variable:

$$M_t = 49.7 - 33.1 * \frac{UNR_{IRL_t}}{UNR_{GBR_t}} + 0.84 * M_{T-1} - 0.60 * M_{t-2} + 17.9 * EU10$$

where M_t is net migration in time t, UNR_{IRL} and UNR_{GBR} are the unemployment rates in Ireland and the United Kingdom respectively and *EU10* is a dummy variable for the period 2004 to 2008. Simulations for the period 2011-25 using this equation suggest that net migration will continue to exhibit a net outward migration pattern through until 2013 before stabilising (Figure A2.1). If the unemployment rate in Ireland were to be 1 percentage point higher from 2011 through to 2025 all else equal then net migration would total -49 000 for the period 2011 to 2025 compared with net 62 000 in the first scenario.

Figure A2.1. Net migration[1]



1. Scenario 1: unemployment gap between Ireland and the United Kingdom is taken from the OECD Medium Term Baseline 89; Scenario 2: the unemployment rate gap is 1 percentage higher than in the baseline from 2011 to 2025.

Source: Central Statistics Office Ireland; OECD Economic Outlook database and Secretariat calculations.

Labour Force Participation Rates

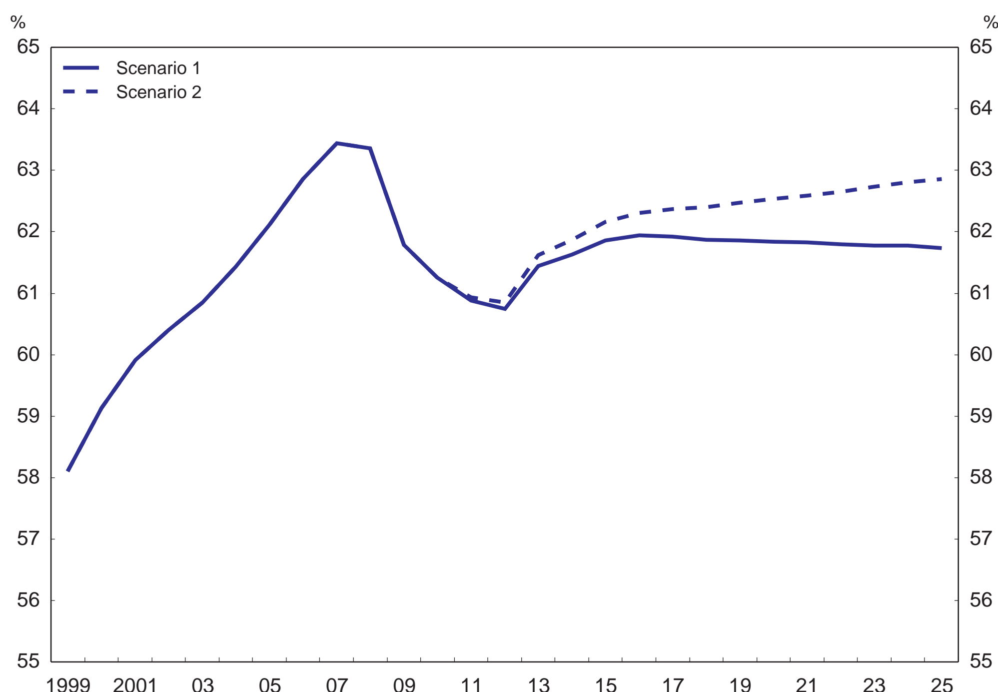
Falls in the working age population due to net outwards migration have been compounded by a decline in the labor force participation rate (Figure A2.2).[2] Simple equations for participation rates by age and gender cohort using time trends and the unemployment rate appear to explain participation rates reasonably well in Ireland. Notable exceptions are females and males aged over 65 where the encouragement effect appears to only play a role during periods of particularly tight labour market conditions. These individual cohort participation rates are weighted by the proportion of the working age population in each group to construct an overall participation rate for the population aged 15 and over.

The pattern for the overall participation rate is quite sensitive to the future trend in female participation rates. Ireland has a comparatively low rate of female participation and female participation rates for the cohorts aged 25-59 have exhibited a very strong and consistent upward time trend since 1996. If these trends continued for female cohorts aged 45-59, female participation rates would exceed male ones in the same age cohorts by 2025 so there will be some moderation in trends for these female groups. Simulations using these equations for the period 2011-25 but assuming that the trend for the participation rates of female cohorts aged 45-59 moderates and their rates converge to 85% of levels of male cohorts of the same age by 2025, shows that the overall participation rate would decline slightly from 2015 to 2025

2. The participation rate is measured as the proportion of the population 15 and over in the labour force.

(Figure A1.2). Altering the convergence rate for these female groups so that participation rates were 95% of male counterparts by 2025 would see a steady rise in the participation rate from 2015 through to 2025.

Figure A2.2. Labour participation rate scenarios[1]



1. Scenarios 1 and 2: Participation rates of females aged 45-59 converge to 85% and 95% respectively of the level of their male counterpart cohorts by 2025.

Source: Central Statistics Office Ireland; OECD Economic Outlook database and OECD calculations.

The Cost of Capital and the Capital Stock

An examination of previous banking crisis suggests that weak capital accumulation due to a rise in capital costs is a large contributor to the decline in potential output in the wake of a banking crisis (Haugh *et al.*, 2009). Risk aversion has increased in the wake of the 2008-09 global financial crisis and investors have become far more discerning about differentiating between debtors. The future cost of borrowing for the private sector could be higher than prior to the crisis over coming years. As a global benchmark, BBB real corporate bond yields in the United States fell from an average of 4.5% over the 1991-2001 business cycle to only 3% during the credit boom from 2003-07 but have since risen again. Due to a lack of data changes in the yield on this benchmark series are assumed to be partly reflected in the future borrowing costs of private sector firms based in Ireland. The US corporate bond market is a benchmark for global trends generally and there is also a more direct connection to Irish borrowing costs via the large stock of FDI owned by US based investors. The effect of changes in the cost of capital in the wake of the crisis on the capital stock and potential output is calculated using the production function approach set out in Cournède (2010) where the elasticity of capital with respect to its cost is given by:

$$\frac{\Delta K}{K} \Big/ \frac{\Delta c}{c} = -\frac{1}{1-\alpha}$$

where K is the capital stock, c is the cost of capital and α is capital's share of income

and the change in equilibrium output is given by:

$$\frac{Y_{after}}{Y_{before}} = (\frac{\delta + \theta_{after}}{\delta + \theta_{before}})(\frac{\delta + \theta_{after}}{\delta + \theta_{before}})^{\frac{\alpha}{1-\alpha}}$$

where Y is the level of potential output and $c = \delta + \theta$ where δ and θ stand for the scrapping rate and discount (interest rate) respectively. Assuming a scrapping rate of 10%, a difference in the interest rate of 0.5 percentage points would see the equilibrium level of the capital stock change by 5.7%.

Total Factor Productivity

Total Factor Productivity (TFP) is calculated as a residual in the production function approach and this means it captures the influence of many factors including the innovative progress of a country. By definition, it will tend to be where atypical or one-off and/or particularly large shocks to the economy will show up. This makes it difficult to determine how TFP will behave in the longer run in Ireland following the large 2008-10 recession. Nevertheless, the construction bubble distorted productivity levels in Ireland during the boom period. As a guide to the proximate effect of the housing boom on TFP, a simulation was conducted assuming that housing construction had grown at a far slower rate in the 2003-07 period so that housing construction's share of GDP fell slowly to the average level from 1990-95 by the end of 2007 when the recession hit. All else equal this would have reduced construction employment and GDP. However, as the level of productivity in construction is lower that the economy overall, this would have increased average labour efficiency by 0.25% and TFP growth by 0.4% per annum during this period.

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