

### Box H: Ireland's Public Debt Burden

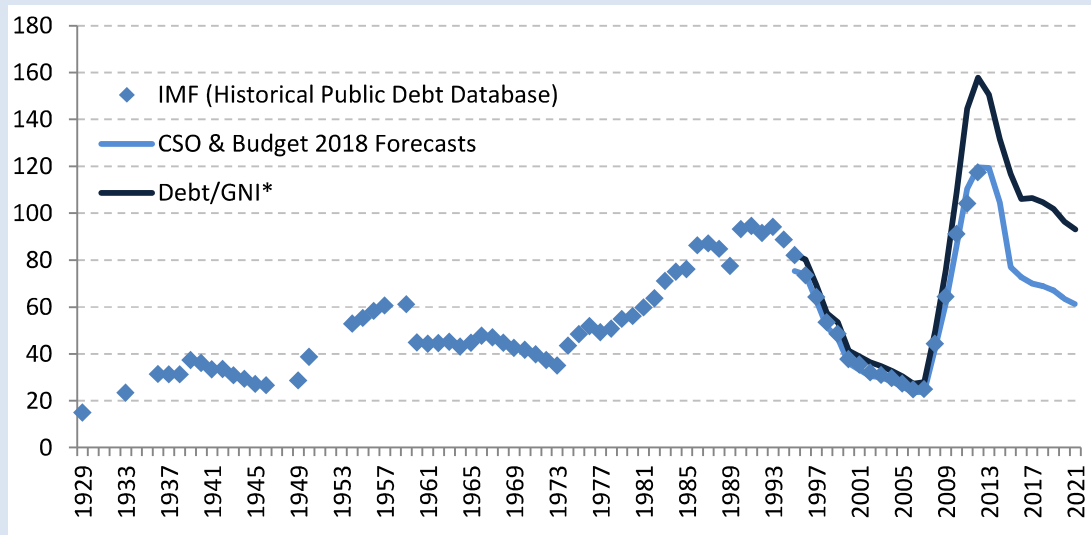
This box examines Ireland's nominal GDP growth and the interest costs associated with public debt: two of the key drivers of debt dynamics. The international and historical experiences of selected EU countries provide context for assessing the future path of public debt. The high volatility of nominal GDP growth and the effective interest rate on public debt in Ireland suggest that a prudent debt target would be lower than that of other larger economies.

#### Irish Government Debt in Historical Terms

Taking a long-term perspective on Ireland's public debt burden reveals three periods where debt has risen above the *SGP* limit of 60 per cent of GDP (Figure H1). During the 1950s, the balance of payments crisis was a contributing factor; in the late 1970s during a period of investment a shock occurred due to the oil crisis, although the fiscal position improved in the late 1980s, the early 1990s saw a deterioration in the fiscal position due to external demand conditions, especially in the UK; while the most recent collapse in the late 2000s followed the bursting of the property/credit bubble, and saw losses in cyclical and property-related revenues while costly banking-sector support measures were also incurred. When scaled against an appropriate measure of national income, debt is currently higher than at any period in the history of the State. Government plans suggest a steady pace of reduction in coming years, though debt forecasts remain above 90 per cent of GNI\* by 2021.

**Figure H1: Long-Run Perspective on Ireland's Debt Ratio**

Gross debt as share of GDP and GNI\*



Sources: CSO, IMF and Department of Finance.

Note: IMF Historical Public Debt Database begins in 1929. For 2017-2021, *Budget 2018* forecasts are used.

#### Relative Volatility of Irish Debt Dynamics

Central to how debt levels evolve are three factors: growth ( $g_t$ ); the average interest costs on debt ( $i_t$ ) and the primary (i.e., non-interest) budget balance that a government runs ( $PB_t$ ). These factors when coupled with existing debt levels ( $D_{t-1}$ ) plus any other “stock-flow” ( $SF_t$ ) changes that take place<sup>86</sup> will drive the evolution of Irish debt levels in coming years. The role of these factors can be elaborated using the standard “debt snowball” equation:

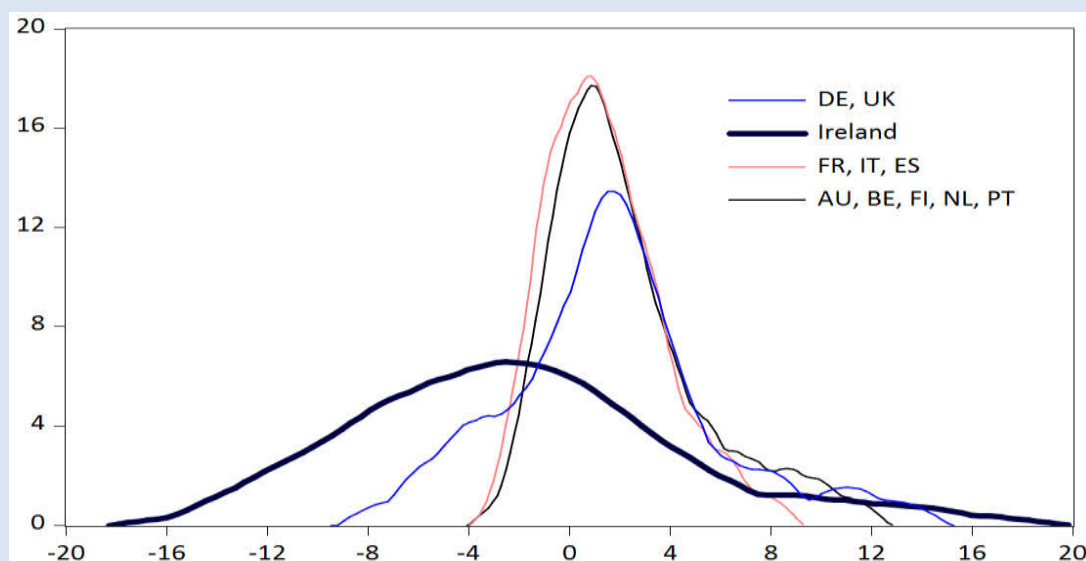
$$\Delta D_t = \left( D_{t-1} * \frac{i_t - g_t}{1 + g_t} \right) - PB_t + SF_t$$

<sup>86</sup> Examples include changes in holdings of debt-corresponding assets, fluctuations in domestic-currency values of foreign-currency funding, and asset disposals that reduce gross debt.

While the primary balance run by a government is a key consideration, it is worth examining the dynamics that are (to a larger extent) outside of its control. The interest-growth differential ( $i_t - g_t$ ) can be analysed in order to understand how debt levels might evolve in future.

Figure H2 shows distributions of the interest-growth differentials for Ireland and selected other European countries for 1991-2016. A differential below (above) zero is more (less) favourable. Ireland's distribution is shown to be more favourable on average compared to other countries in the sample. Looking ahead with *Budget 2018* forecasts for 2017-2021, these measures remain in the favourable area of the distribution – that is, below zero – ranging between -1.6 and -2 percentage points and averaging -1.7 percentage points. The average sits at around the 60<sup>th</sup> percentile of outturns, approximately 1.3 percentage points above the median of -3 percentage points.

**Figure H2: Ireland's Debt Dynamics: More Favourable, But More Volatile**  
Interest-growth differentials in Ireland and selected European countries, frequency



Sources: Eurostat; IMF; OECD; CSO; and Department of Finance (*Budget 2018* forecasts).

Note: Annual data, 1991-2016 (to 2021 for Ireland). A differential below (above) zero is more (less) favourable. DE Germany, FR France, IT Italy, ES Spain, AU Austria, BE Belgium, FI Finland, NL Netherlands, PT Portugal.

An important factor to consider is that Ireland enjoyed strong convergence growth during the sample period, particularly during the 1990s and early 2000s. Moreover, the volatility of this measure of debt dynamics has been much greater for Ireland, as witnessed by the wider base of the distribution (this remains the case with the extremely favourable outlier observation for 2015 of -31 percentage points excluded from the analysis). Table H1 below shows the inter-quartile range of the various countries included in the sample, for which Ireland's is the widest at nearly 8 percentage points. While the distributions elsewhere in Europe are less favourable on average, their variability is much lower – the average of their ranges is 3.5 percentage points.

**Table H1: Ireland's Broad Historical Range of Debt Dynamics**  
Inter-Quartile Range of Interest-Growth Differentials

	AU	BE	DE	ES	FI	FR	IRL	IT	NL	PT	UK
25th Percentile	0.3	0.4	-1.3	-2.4	-0.7	0.2	<b>-6.6</b>	1.2	-0.4	-0.3	-1.9
75th Percentile	2.4	4.8	3.1	3.4	2.4	2.1	<b>1.3</b>	3.6	3.9	2.7	1.9
Range	2.2	4.4	4.4	5.8	3.1	1.9	<b>7.9</b>	2.4	4.4	2.9	3.9

Sources: Eurostat; IMF; OECD; and CSO.

Note: Annual data, 1991-2016.

### **An Appropriate Debt Ceiling for Ireland**

On balance, the potential may be limited for Ireland's interest-growth differentials to continue as favourably in future as they have been in recent decades. While 94 per cent of end-2016 gross debt was financed at fixed interest rates (C&AG, 2017), risks to economic growth remain manifold (as discussed in Section 2.4). Indeed, debt rollovers may become costlier for the Irish Government if global long-term interest rates rise faster than currently anticipated, in particular as the ECB and central banks worldwide withdraw monetary stimulus measures.

These substantive downside risks over the medium term may add to the challenge of gradually reducing debt to safer levels. As analysed by the Council in Box A of the previous *FAR* (IFAC, 2017b), a 45 per cent debt-to-GDP ratio should not necessarily be considered a low or prudent debt burden. Rather, the ratio needs to be considered alongside a number of other factors, including long-term spending pressures for areas such as health and pensions. The greater volatility of Irish interest-growth differentials, in combination with the elevated debt-to-GNI\* ratios forecast to 2021, suggest a prudent ceiling for Ireland's public debt should be below 45 per cent of GDP.

Table 3.7 (below) shows the fiscal risks identified in *Budget 2018* along with the Department of Finance's assessments of relative likelihoods and impacts. The Council provides an assessment of each of the risks, and three additional risks, as assessed by the Council, have also been added to the table.