Banc Ceannais na hÉireann
Central Bank of Ireland
Eurosystem

Box E: QB 1 – January 2021

This Box content is extracted from the Quarterly Bulletin – Q1 2021

How Robust are Debt Dynamics over the Medium Term?

By Rónán Hickey & David Horan

Ireland's Debt Profile

In nominal terms, and expressed as a percentage of GNI*, Ireland entered the pandemic with elevated Government debt. Nominal debt stood at just over €204bn in 2019, four times higher than its level prior to the financial crisis. This is set to grow significantly over the medium term, as the government uses borrowing to finance most of the widening gap between spending and revenue. Debt to GNI* - the most appropriate ratio for the Irish economy – was still 95.5 per cent in 2019 (Figure 1). While this represented a significant decline from its post financial crisis peak of 166.1 per cent in 2012, it remained amongst the highest ratios in the Euro Area[1].

Favourable debt dynamics played an important role in reducing Ireland's debt ratio since 2013 (Figure 2)[2]. The interest growth differential (IGD) and the deficit-debt adjustment (DDA) drove most of the improvements in the debt ratio over the period 2013-2016, while the primary balance played a more significant role in later years as the budget balance was brought under control. Conefrey et al. (2019) have shown that developments in Ireland's IGD and DDA in the years following the financial crisis

[1] European Commission (2020) European Economic Forecast, *Autumn 2020.*
[2] Public debt dynamics are driven by developments in three key variables:
(i) The primary balance, which is the headline government balance excluding interest payments.
(ii) The interest growth differential, which reflects the difference between the nominal interest rate paid on government borrowing and the nominal GNI* growth rate,
(iii) The deficit debt adjustment, which incorporates factors that affect debt but are not included in the budget balance – such as the rundown of cash balances or the divestment of banking assets.

were exceptional when compared to other Euro Area countries, suggesting that these factors may not continue indefinitely[3].

In the absence of these exceptional debt dynamics, while Ireland's debt ratio is still expected to decline in the years ahead, this is projected to occur at a much slower pace. In this Box, we extend the debt projections presented earlier in the Chapter out to 2026 by incorporating a number of macroeconomic and fiscal assumptions. This enables us to undertake a longer, medium term assessment of Irish debt dynamics which, alongside factors such as debt structure, funding costs and contingent liabilities, are an important consideration in assessing sustainability. As Figure 1 shows the debt ratio is projected to peak at 104 per cent this year, before starting a gradual decline and is still above 90 per cent of GNI* in 2026[4].

Fig 1: General Government Debt Profile

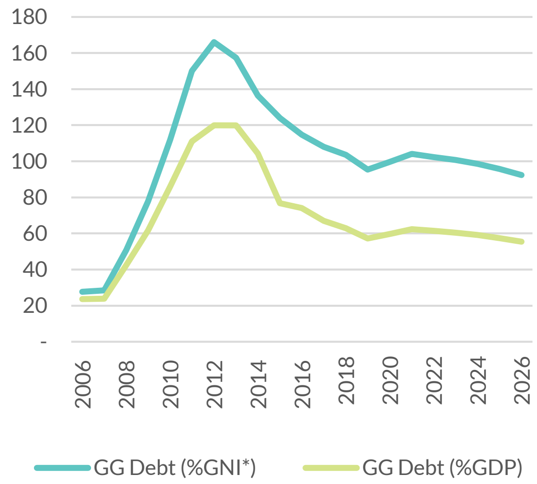
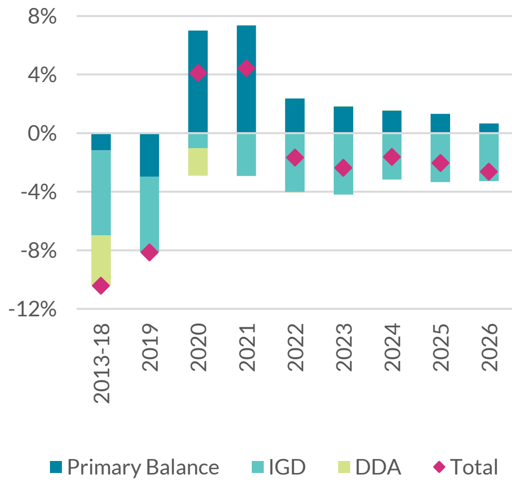


Fig: 2: Decomposition of Changes in Irish Debt



Source: CSO and Central Bank of Ireland Calculations.
Note: 2013-18 reflects the average change in the various components over the period.

Borrowing Costs

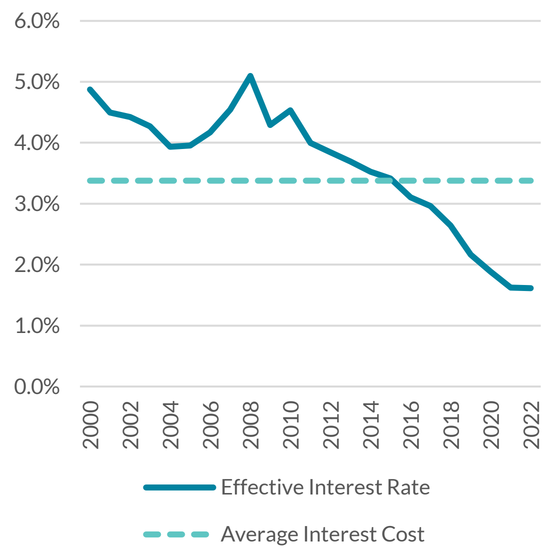
Debt-service costs have fallen significantly in recent years, as seen by the notable drop in effective interest rates (Figure 3)[5]. At the height of the last crisis, the effective interest rate peaked at just over 5 per cent, however this fell below 2 per cent last year. The NTMA took advantage of favourable market conditions in recent years to improve Ireland's maturity profile by extending out borrowing and replacing expensive loans with cheaper ones. Looking at other metrics of debt-servicing costs in

[3] Conefrey, T., Hickey, R. and Walsh, G. '[Debt and Uncertainty: Managing risks to the public finances](#)', Central Bank Economic Letter No. 11 2019.
[4] For this analysis, we assume that the DDA makes a neutral contribution from 2022 onwards, while GNI* returns to its potential rate of growth beyond the projection horizon. As such, there is some positive (upside) risk to our baseline scenario as outlined above and in the DSA.
[5] Effective interest rate = interest payment (t) / stock of national debt (t - 1).

Ireland, interest payments as a percentage of total tax revenue peaked at 12 per cent in 2013 before declining below 5 per cent in 2019. Despite the significant rise in Government debt over the projection horizon, both the effective interest rate and the debt to tax revenue ratio would remain stable in the absence of additional shocks to the economy.

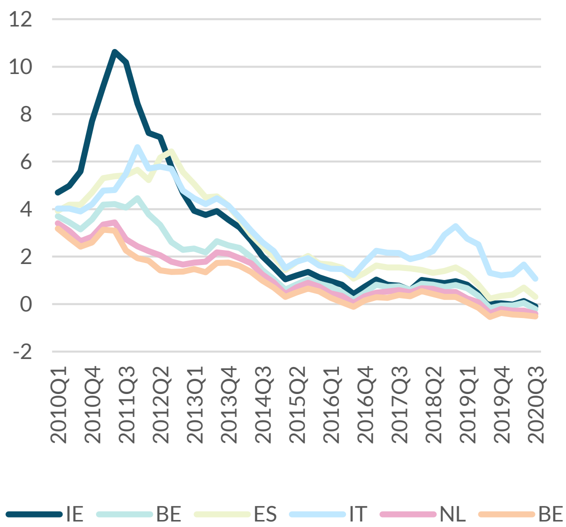
The cost of Irish sovereign borrowing has decreased substantially in recent years, supported most recently by the ECB's pandemic emergency purchase program (Figure 4). For example, in their first bond auction of 2021, the NTMA raised almost €5.5 billion with the sale of a ten-year Irish bond at an interest rate of -0.26 per cent. Whilst this currently allows governments across the Euro Area to borrow cheaply, should inflation pressures emerge, interest rates could rise in the years ahead. For this reason, it useful to test the assumptions contained in our debt projections by applying adverse shocks to the baseline scenario.

Fig 3: Effective Interest Rate on Irish Government Borrowing



Source: CSO and Central Bank of Ireland Calculations

Fig: 4: Sovereign Bond Yields (Ten Year Bonds)



Source: Eurostat

Shocks to the Medium Term Outlook

Debt projections over the medium term are inherently sensitive to the macroeconomic and fiscal assumptions that underpin them. This is particularly the case when the improvement in the debt ratio is expected to be relatively gradual, as the downward momentum is more vulnerable to changes in interest rates, economic growth rates and the budget balance. As a result, it is useful to test our key assumptions by incorporating a range of shocks to assess how debt dynamics evolve in less favourable circumstances. The shocks we apply are:

Standard interest rate shock, which assumes interest rates on new sovereign borrowing increase by 200 basis points from 2023 onwards.

Severe interest rate shock, which assumes interest rates on new sovereign borrowing increase by 400 basis points from 2023 onwards.

Constant primary balance shock, where there is no change in the primary balance post 2022.

Historical growth shock, where the nominal growth rate in output (GNI*) reverts to its long run (10-year) average post 2022.

The interest rate shocks begin in 2023 to account for the current favourable funding environment. This is a purely technical assumption for the purposes of the analysis and should not be seen as a prediction of future rate movement or policy change. Rather it allows us to see what could happen if funding conditions were to deteriorate in the future. Similarly, the constant primary balance shock does not pre-empt any future decisions on budgetary policy; deficit reduction could occur at a faster than expected pace as well as slower. There is considerable uncertainty over both the economic and budgetary outlook at the current juncture however, highlighted by the Government limiting their projections to just 2020 and 2021 in Budget 2021.

Under each of the shock scenarios, the debt ratio is expected to remain on a downward trajectory over the forecast horizon (Figure 5). A constant primary balance beyond 2022 has the most adverse effect, with the higher primary deficit resulting in a debt ratio 7 percentage points higher than the baseline scenario in 2026. This is not sufficient to offset the favourable developments in the interest growth differential, however, and the debt ratio remains on a downward path. Similarly, while a return to nominal historical growth or an increase to funding costs would elevate the debt ratio beyond 2022 (particularly in the event of a severe interest rate shock scenario), the trajectory of the debt ratio remains consistent with sustainability in all three scenarios.

Fig 5: Debt to GNI* in Baseline and Alternative Scenarios

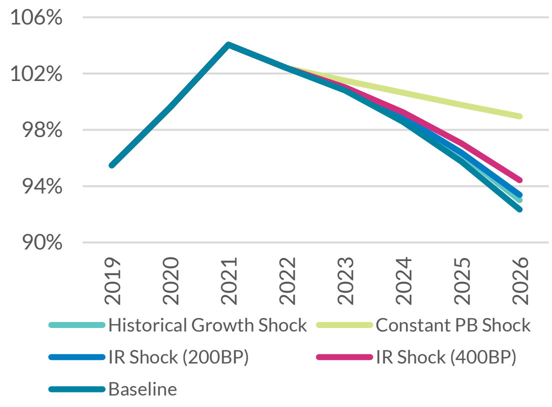
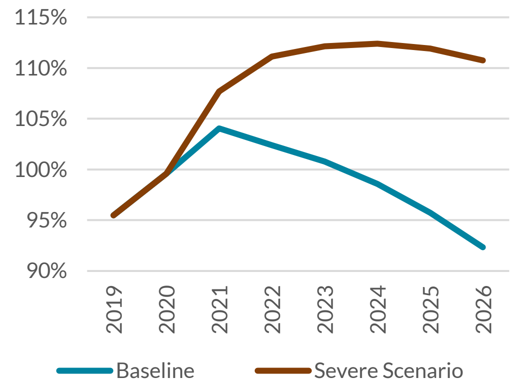


Fig 6: Debt to GNI* in Baseline and Severe Scenarios



Source: CSO and Central Bank of Ireland Calculations.

Although the adverse scenarios suggest that debt dynamics are relatively robust to shocks in our assumptions, there are three important caveats to note. The first of these is, while we assess the various scenarios in isolation, the shocks we have outlined could occur in some combination, resulting in a less favourable outcome. For example, when we combine the primary balance shock with the severe interest rate shock, the debt ratio is increasing at the end of the projection horizon. The second is the considerable level of uncertainty that currently surrounds both the macroeconomic and fiscal outlook. Incorporating the severe macroeconomic scenario outlined in Box B would see the debt ratio peak at 112 per cent in 2024, and remain elevated over the projection horizon (Figure 6). While the debt ratio begins to decline at a modest rate in the final two years, it would be around 18 percentage points above our baseline at the end of the projection horizon. Finally, it is important to note that under all scenarios – including the baseline – the debt ratio remains at an elevated level throughout. This leaves the economy more vulnerable to other risks that could occur over the medium to longer term. As highlighted by the Irish Fiscal Advisory Council[6], an ageing population will have major implications for public spending, while overreliance on corporation tax receipts have been well documented. In addition, despite a Brexit deal being agreed, the new trading relationship between EU and the UK will have negative consequences for the Irish economy (see Box C).

[6] Irish Fiscal Advisory Council (2020) Long-term Sustainability Report, Fiscal challenges and risks 2025-2050.