



Rialtas na hÉireann  
Government of Ireland

# ANNUAL REPORT ON PUBLIC DEBT IN IRELAND 2023

February 2024

Prepared by the Economics Division  
Department of Finance  
[gov.ie/finance](http://gov.ie/finance)



## SUMMARY AND KEY MESSAGES

### ***Public debt ratio on the decline but debt per capita amongst highest in developed world***

- > Public debt stood at an estimated €223 billion at the end of last year. At end-2019, before the pandemic, public debt amounted to €203 billion.
- > Relative to modified gross national income (GNI\*), public debt amounted to 76 per cent last year, a 90 percentage point reduction relative to its peak in 2012.
- > Net debt stood at an estimated €184 billion (63 per cent of national income) at the end of last year. If the Irish Strategic Investment Fund (ISIF) assets were included, the net position would be further improved.
- > However, at just over €42,000 per person, Ireland has one of the highest gross public debt levels in the world.

### ***Structural aspects of public debt insulate the public finances in the short-term***

- > Structural features of Irish public debt – the vast majority of debt is locked-in at fixed rates and the average maturity profile is relatively long – have helped insulate the public finances from the changing interest rate environment in the short-term.
- > Nevertheless, around one-third of outstanding medium- and long-term debt instruments are due to mature over the next five years; most of the bonds maturing over this period carry relatively low coupons, having been issued during a period in which the *eurosystem* was back-stopping sovereign debt issuance.
- > If rolled-over, new debt instruments will – in all likelihood – carry a higher coupon than the maturing bonds; in other words, borrowing costs will almost certainly be higher.

### ***Debt dynamics supported by a favourable interest rate and growth differential***

- > The key factor behind the decline in the debt-income ratio over the last few years was a nominal growth rate of income (GNI\*) in excess of the average (or ‘effective’) interest rate on public debt.
- > Beyond the short-term, structural economic changes (the “4Ds”: shifting demographics, decarbonisation, digitalisation and de-globalisation) pose significant challenges for the public finances, by adversely affecting both the interest rate and the growth rate.
- > In this context, legislation is being drafted that provides for the establishment of two longer-term savings vehicles, the objective of which is to help finance these structural challenges.

### ***Large volume of global debt issuance in the years ahead could affect pricing***

- > In many advanced economies, economic activity (and inflation) have rebounded strongly post-pandemic, helping to put the debt-income ratio on a downward trajectory.
- > As both growth and inflation moderate, these favourable dynamics are set to diminish. Combined with still-large primary deficits in some countries, this could potentially reverse the decline in debt-GDP ratios that have been evident since the peak of the pandemic.
- > With large volumes of (global) sovereign debt issuance expected in the coming years, the question arises as to how this will be absorbed, especially with central banks in advanced economies reducing their footprint in sovereign debt markets.



# Debt Dashboard 2023 [IE\* = Irish data as share of GNI\*]

Note: IE\* = Irish data as share of GNI\*





## Strengths

maturity profile

low interest burden

strong credit rating

bulk of debt at fixed rates

strong growth potential

## Weaknesses

core inflation 'sticky'

corporation tax concentration

binding capacity constraints

age-related costs increasing

climate-related costs rising

## Opportunities

supply-side reforms

physical investment - NDP

long-term savings vehicles

## Threats

structural shift in interest rates

a 'risk-off' episode

significant fall in corporation tax receipts

Source: Department of Finance





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<sup>1</sup> The data and analysis set out in this document are compiled by Department of Finance staff. It does not necessarily reflect the views of the Minister for Finance or the Irish Government. Every effort is made to ensure accuracy and completeness. If errors are discovered, corrections and revisions are incorporated into the digital edition available on the Department’s website. Any substantive change is detailed in the online version. Data presented are as end of December 2023.

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## Section 1: Introduction

Across the world, public indebtedness has increased significantly, as governments have deployed their balance sheets in order to absorb the impact of the Covid-19 pandemic and, most notably in Europe, the energy price shock.

In lower income and emerging market economies, debt distress has become more prominent; in advanced economies, stronger institutional frameworks (such as independent central banks) have enabled sovereigns to accumulate additional debt while simultaneously lowering debt service costs. That said, debt incurred at minimal cost during the pandemic will need to be refinanced at higher rates in the years to come, while budget deficits remain large in several countries, even at the top of the economic cycle. These trends, alongside structurally higher borrowing costs, have prompted a renewed focus on public debt sustainability.

Monitoring and reporting on public debt dynamics is an important part of the Department's fiscal toolkit. Stress-testing debt dynamics to severe, though plausible, economic developments is an integral part of any fiscal risk assessment.

In this context, an assessment of public debt developments has been published each year since 2017; this is the Department's seventh annual report.

This year's assessment is prepared against the backdrop of slowing external demand amid a synchronised tightening of monetary policy. As well as the standard policy tool of short-term interest rates, ancillary monetary policy instruments are consistent with a tighter stance: most central banks are reducing their footprint in sovereign debt markets (quantitative tightening) and, in doing so, raising sovereign borrowing costs.

Beyond short-term cyclical factors, it is clear that longer-term structural change is underway that will shape economic developments in the years and decades ahead. These structural forces can usefully be grouped together as the "**4Ds**": **d**emographics, **d**igitalisation, **d**ecarbonisation and **d**e-globalisation.<sup>2</sup>

This combination of cyclical and structural economic developments will pose challenges for the public finances in Ireland. While a budget surplus was recorded last year, much of this stems from revenue streams that are likely to prove 'windfall' in nature; the underlying position, in other words, is less benign than suggested by the headline position.

The purpose of this document is to report on public debt developments in Ireland. In line with previous iterations, the recent evolution of public debt is outlined in section 2. Section 3 presents an analysis of the external debt landscape in light of recent shocks to the global economy. Section 4 highlights the potential impact of structural change on the Irish public debt trajectory. Section 5 undertakes a debt sustainability assessment in order to better understand how the debt trajectory might evolve under different scenarios over the medium-to-long-term. Section 6 draws some conclusions.

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<sup>2</sup> See *Summer Economic Statement (2023)*, Government of Ireland. Available at: <https://www.gov.ie/en/publication/cfde8-summer-economic-statement-2023/>

## Section 2: Public debt developments

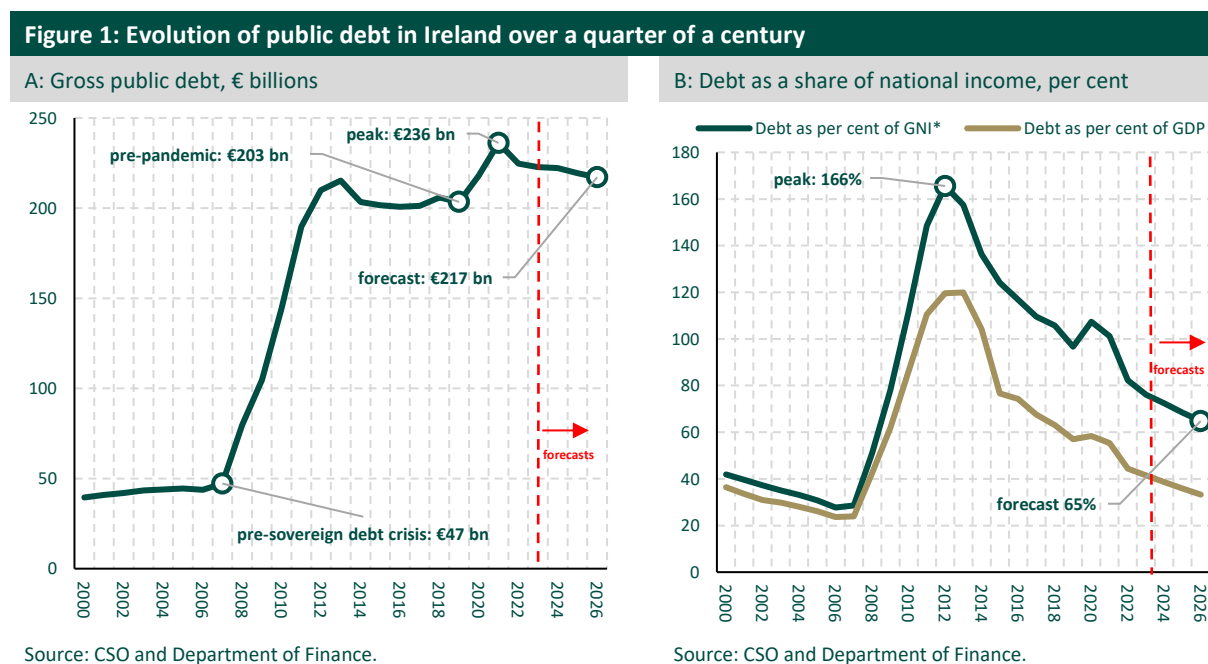
### 2.1: introduction

Ensuring debt remains on a sustainable path is a prerequisite for economic stability and prosperity. Prudent debt levels, for instance, help to minimise the amount of public resources that need to be devoted to servicing debt. In addition, lower levels of debt help to ensure sovereign access to capital markets at reasonable cost, including during cyclical downturns when counter-cyclical budgetary support may be required. Finally, against the backdrop of mounting structural fiscal challenges, such as ageing populations, prudent levels of debt generate important ‘starting point’ effects.

In this context, the following chapter summarises debt developments in Ireland over the past few decades and briefly looks ahead to review the central scenario regarding expectations for the next few years.

### 2.2: public indebtedness in Ireland: 2000-2026

The evolution of gross public debt in Ireland over a quarter of a century is presented below (**figure 1A**) based on the Department’s *Budget 2024* projections.<sup>3</sup>



The collapse of the property bubble exposed serious short-comings in the management of the public finances and in the oversight of financial stability, and triggered the first wave of debt accumulation between 2007 and 2013. Over this period, public debt increased from €47 billion to €215 billion; in very broad terms, roughly one-third of this increase stemmed from direct support provided to the domestic banking system, with the remaining two-thirds due to the gap between revenue and expenditure arising from the narrowing of the taxation base.

A second smaller wave of debt accumulation was triggered by the pandemic and the need for fiscal transfers in order to ‘save lives and livelihoods’; the former involved additional healthcare spending while the latter involved transfers to households and businesses in order to prevent ‘scarring’

<sup>3</sup> *Economic and Fiscal outlook*, Department of Finance, October 2023. Available at: <https://www.gov.ie/pdf/?file=https://assets.gov.ie/273320/7da13749-b1d2-4f12-a6cd-6e705b0b11d3.pdf#page=null>

(permanent damage) to the economy. Public indebtedness increased from €203 billion pre-pandemic to peak at €236 billion in 2021.

Strong revenue growth, driven in particular by a doubling of corporation tax receipts since just before the pandemic, has generated large budgetary surpluses and underpinned a reduction in public debt to an estimated €223 billion at end-2023. This is still nearly €20 billion higher than pre-pandemic levels and is the equivalent to c.€42,000 for every citizen in the State (**table 1**). The Department’s baseline projection involves nominal debt amounting to c.€217 billion by end-2026, around €40,000 for every person in the State.

As a share of modified gross national income, gross public debt peaked at 166 per cent in 2012 (**figure 1B**). The correction of the fiscal accounts, allied with (and related to) strong growth in national income from the mid-2010s onwards resulted in a sharp fall in the debt-income ratio, which fell below 100 per cent just before the pandemic. This downward trend was temporarily reversed in the first year of the pandemic; the resumption of national income growth in 2021 helped put the debt-income ratio back on a downward path, reaching an estimated 76 per cent at end-2023. The Department’s baseline scenario involves a debt-to-income ratio of 65 per cent by 2026.

Table 1: Public debt – key metrics 2020-2026 under baseline scenario								
	2019	2020	2021	2022	2023	2024	2025	2026
Gross nominal debt, € bn	203.4	217.9	236.1	224.8	222.7	222.2	219.4	217.1
Gross debt-to-GNI*, per cent	96.7	107.4	101.2	82.3	76.1	72.3	68.4	64.8
Per capita, €	41,000	43,300	46,500	43,350	42,200	41,600	40,700	39,900
EDP assets, per cent GNI*	13.8	15.7	18.5	13.4	13.1	9.0	8.3	7.4
Net nominal debt, € bn	174.3	186.0	193.0	188.1	184.3	194.5	192.9	192.2
Net debt-to-GNI*, per cent	82.8	91.7	82.7	68.9	63.0	63.3	60.1	57.4
National net debt, per cent <sup>^</sup>	82.8	91.7	82.7	68.9	60.9	60.0	54.9	50.3

<sup>^</sup> This is a broader measure than the EDP debt instrument assets that includes fund assets – *Future Ireland Fund (FIF)* and the *Infrastructure, Climate and Nature Fund (ICNF)* – that can consist of equity investments.

Source: CSO, Department of Finance and NTMA.

### 2.2.1: debt ‘law of motion’ – an introduction

To probe deeper into the drivers of the debt-income ratio, the debt ‘law of motion’ decomposes annual changes in the debt-to-income ratio ( $\Delta D$ ) into its constituent parts:

$$\Delta D_t = \frac{(r_t - g_t)}{(1 + g_t)} * D_{t-1} + PB_t + SFA_t$$

where:

- >  $\Delta D_t$  represents changes in the debt-to-income ratio;
- >  $r_t$  is the effective interest rate;<sup>4</sup>
- >  $g_t$  is the nominal growth rate of the economy;
- >  $D_{t-1}$  represents the previous year’s debt ratio;
- >  $PB_t$  is the primary balance as a percentage of national income;<sup>5</sup> and,
- >  $SFA_t$  is the stock flow adjustment.<sup>6</sup>

<sup>4</sup> Interest payments in the current year relative to the stock of public debt in the previous year.

<sup>5</sup> Headline balance adjusted for interest expenditure.

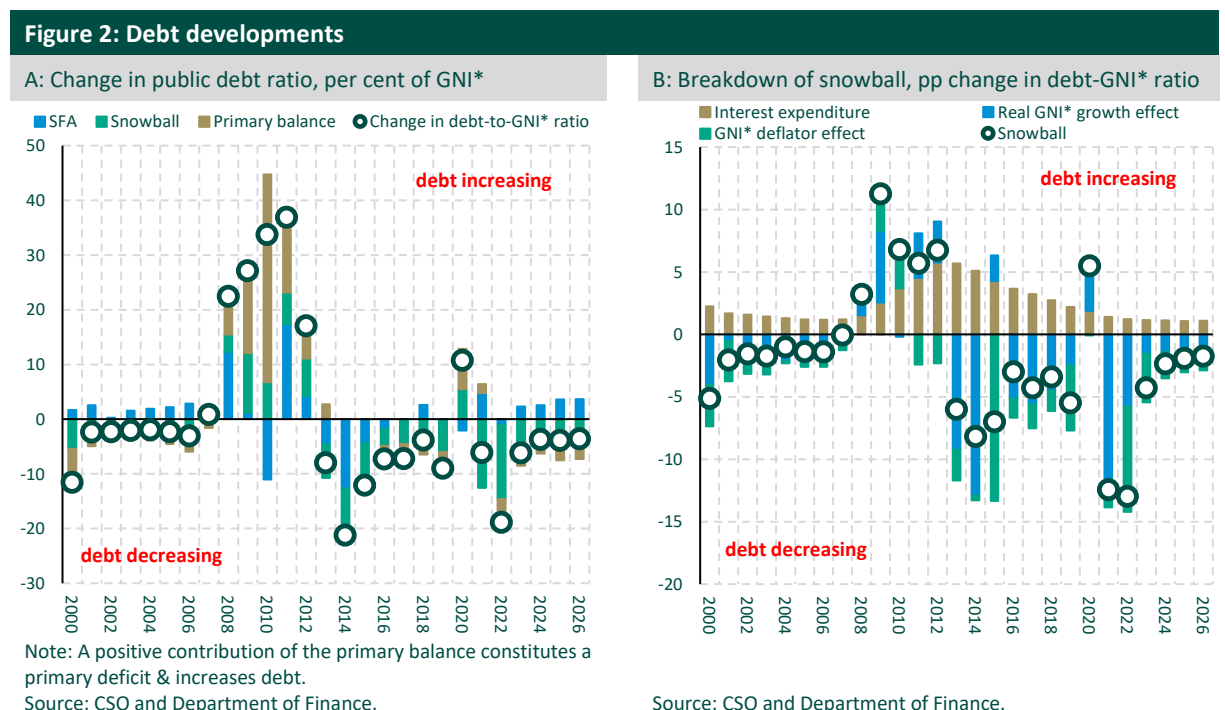
<sup>6</sup> A residual term that reflects a combination of ‘below-the-line’ operations that do not affect the general government balance, as well as standard debt management operations carried out by the National Treasury Management Agency (NTMA).

The interest rate-growth differential term,  $(r_t - g_t)$ , is known as the *snowball effect*, and is a key variable in fiscal economics. *Ceteris paribus* a positive snowball effect ( $r_t > g_t$ ) increases the debt-income ratio; a negative snowball effect ( $r_t < g_t$ ) has the opposite effect.

### 2.2.2: debt law of motion – application to debt dynamics in Ireland

With the exception of 2020 – when the economic and fiscal impact of the pandemic was most severe – the debt-GNI\* ratio has been on a continuous downward trajectory for the past decade or so. The interest rate-growth differential (hereafter r-g) and, to a lesser extent, primary surpluses (figure 2A) have been the key drivers of these favourable dynamics. In 2022, for instance, the debt-income ratio fell by 19 percentage points (pp), with r-g accounting for 13½ pp of the decline and the primary surplus accounting for 4¼ pp of the reduction.

The very strong contribution from r-g over the past two years must be seen in the context of the sharp, post-pandemic acceleration in price inflation. The snowball term is calibrated upon *nominal* (as opposed to *real*) economic growth and, accordingly, the jump in price inflation had a favourable impact on r-g (figure 2B).



The Department’s medium-term forecasts are calibrated on the assumption of a further debt-decreasing impact from both the snowball and the primary balance. Reasonably strong – though more modest than in recent years – nominal economic growth is projected over the next few years, which is expected to be in excess of the effective interest rate.

In addition, and equally important, the baseline budgetary numbers are calibrated on the assumption of no decline in corporate tax receipts in the next few years and, accordingly, primary surpluses are in prospect. That said, the baseline scenario cannot be taken for granted and alternative scenarios are set out later in this document.

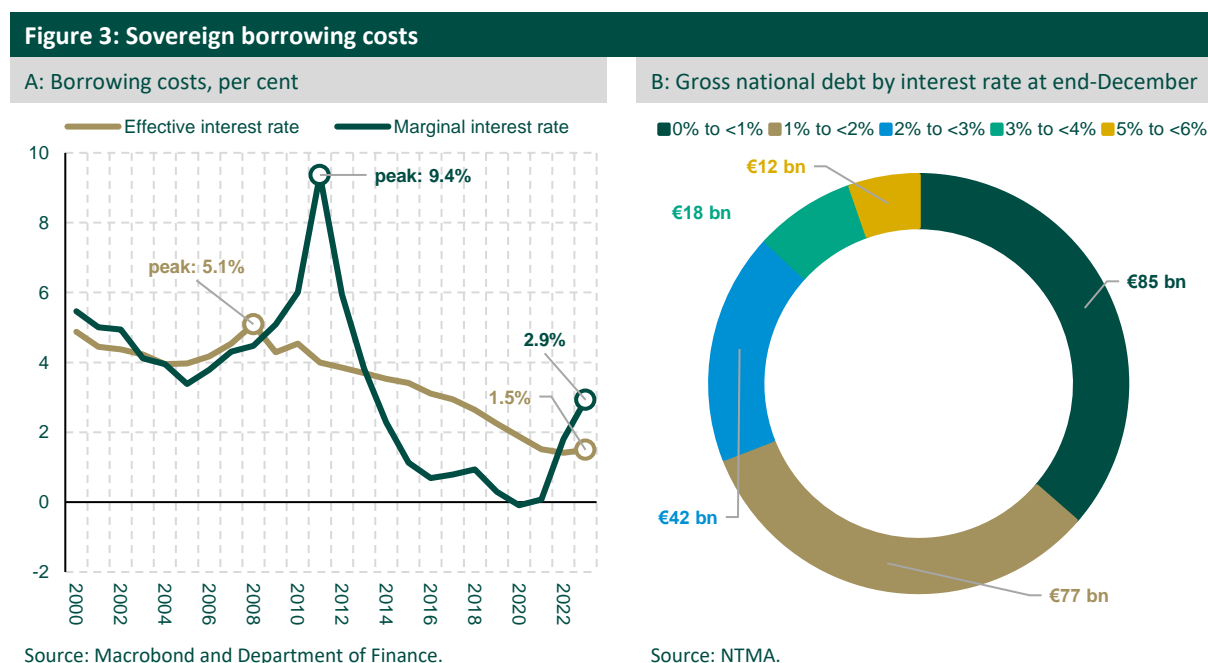
Working in the opposite direct, the stock-flow adjustment (SFA) is expected to have a debt-increasing impact, mainly due to debt management operations.

### 2.3: structural aspects of debt

A more comprehensive approach to assessing the risks to debt sustainability also takes account of key structural features of public debt. The most important structural dimensions relate to borrowing costs, the composition and maturity of the debt portfolio, the repayment capacity (debt burden) and the government’s holdings of financial assets (net public debt).

#### 2.3.1: borrowing costs

As evident from the ‘law of motion’, sovereign borrowing costs are a key determinant of debt dynamics. In this framework, an important distinction must be drawn between the effective (or average) and marginal interest rates: the former is the average cost of servicing the outstanding stock of debt while the latter refers to the cost of new debt instruments. Over time the two metrics will tend towards convergence but, in the near term, can diverge (sometimes) significantly. The effective rate is a slower-moving variable (**figure 3A**) but, nevertheless, an increase in the marginal rate will, over time, raise the effective (or average) cost of borrowing.



The jump in consumer price inflation has triggered an aggressive and rapid monetary policy response: in the euro area, for instance, policy rates have increased by 450 basis points since mid-2022. Sovereign borrowing costs have risen as a result (though not by as much as the increase at the short-end of the curve); in Ireland, 10-year money carried a coupon of close to 3 per cent last year.

However, average borrowing costs remain below the marginal rate (for now); this largely reflects the issuance of longer-dated debt by the National Treasury Management Agency (NTMA)<sup>7</sup> during the post-Global Financial Crisis (GFC) era of low interest rates. As a result, around two-thirds of government debt liabilities bear an interest cost of under 2 per cent (**figure 3B**). That said, as older debt matures – including debt issued at near-zero rates during the pandemic – it will likely be replaced by debt instruments carrying a higher coupon; this means that the effective rate has bottomed-out and is set to rise in the years ahead, albeit in a slow-burner manner.

<sup>7</sup> Ireland’s debt management office.

### 2.3.2: debt maturity

When assessing debt sustainability, it is also important to consider the maturity profile of a sovereign's debt portfolio in order to identify potential exposure to changes to the interest rate environment.

Over two-thirds of Ireland's medium- and long-term debt portfolio consists of liabilities maturing after 2028, with the majority of these locked-in at fixed rates (**box 1**). This relatively healthy position partly reflects the non-standard monetary policies adopted in the euro area (and in most advanced economies) over the last decade or so. These policies have involved the expansion of central bank balance sheets – the European Central Bank and Central Bank of Ireland in the case of Ireland – through so-called 'quantitative easing'. This entails *inter alia* purchases of sovereign debt via secondary debt markets, with the objective (in the euro area) of ensuring an effective transmission of monetary policy to all parts of the single currency area. With, in effect, central banks backstopping the issuance of sovereign debt, debt management offices in most advanced economies have been able to lock-in lower borrowing costs and lengthen the maturity profile of their debt portfolios.

From an Irish perspective, the weighted average maturity of the medium- to long-term debt portfolio is now above ten years; this relatively long maturity profile – it compares with a euro area average of less than eight years – provides additional insulation against any unforeseen adverse changes in the financing environment.

### 2.3.3: debt burden

For any country, analysing the debt burden as a share of government revenue provides a key insight into the government's repayment capacity. This is especially the case in Ireland where the signalling properties of debt expressed as a share of GDP are extremely limited.

The debt service burden has taken on a greater role in fiscal analysis in recent years. This is because, in many jurisdictions, the post-GFC era of historically low interest rates has greatly reduced the fiscal cost of sovereign borrowing; this, in turn, has motivated a belief in some quarters that governments, in theory at least, could continue borrowing without compromising debt sustainability.<sup>8</sup> However, the re-normalisation of monetary policy over the past year-and-a-half has since put an abrupt end to this argument.

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<sup>8</sup> See, for instance, *Public Debt and Low Interest Rates*, O. Blanchard (2019), American Economic Review. Available at: <https://www.aeaweb.org/articles?id=10.1257/aer.109.4.1197>



### Box 1: Profile of Ireland’s medium- and long-term debt

In simple terms, public debt is the total amount of financial liabilities of the sovereign. These liabilities can take the form of short-term borrowings (typically less than one year) as well as medium- and longer-term (MLT) borrowings (longer than one year).

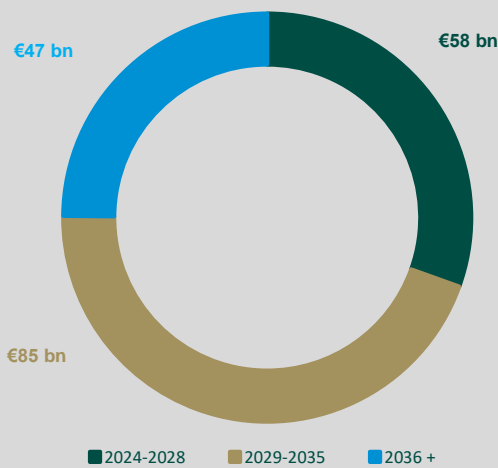
At the end of last year, the nominal value of Ireland’s outstanding MLT portfolio was €191 billion (figure 4A). Of this, €9 billion is due to mature in 2024, with a further €14 billion to mature next year. Following that, an average of approximately €12 billion is due to mature between 2026 and 2028 (figure 4B), meaning nearly one-third of the outstanding stock of Irish MLT debt is due to mature over the next half decade. Nearly half of the MLT portfolio will mature between 2029 and 2035, with the remaining quarter of the outstanding stock maturing beyond 2035.

Given the shift in the interest rate environment over the last two years, the refinancing of this maturing debt is likely to come with higher debt servicing costs. In particular, Irish Government bonds issued in recent years (notably during the pandemic) carried very low coupons, including issuances with a zero or near-zero coupon,<sup>^</sup> reflecting the policy of ‘quantitative easing’ (expansion of central bank balance sheets). This has now gone into reverse – quantitative tightening (contraction of central bank balance sheets) – with sovereign borrowing costs for many countries now higher than at any stage over the last decade.

In recent months, the ECB has accelerated the shrinking of its balance sheet by discontinuing reinvestments under the *Asset Purchase Programme*. The bank also intends to reduce its *Pandemic Emergency Purchase Programme* reinvestments from the second half of this year, with reinvestments fully stopped at the end of 2024. The impact of this will be *ceteris paribus* to raise the cost of refinancing (or rolling over) maturing debt.

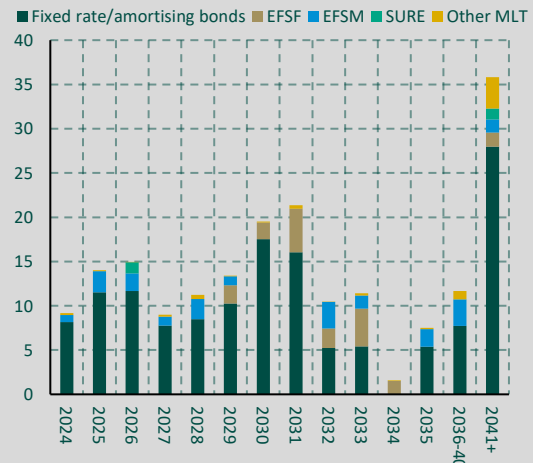
Figure 4: Maturity profile of Irish debt instruments

A: Maturity profile of medium- and long-term debt at end-2023



Source: NTMA.

B: Maturity profile by type of debt at end-2023, € billions



Source: NTMA.

The vast majority of the outstanding stock of MLT debt is locked in at fixed rates. Indeed, inflation-linked bonds account for less than 1 per cent of the outstanding liabilities.

Of the outstanding stock of MLT debt, over 20 per cent relates to the external support programme agreed by the Government, the EU and the IMF in 2010. Ireland’s bilateral loans from the IMF, the United Kingdom, Sweden and Denmark have been repaid in full.

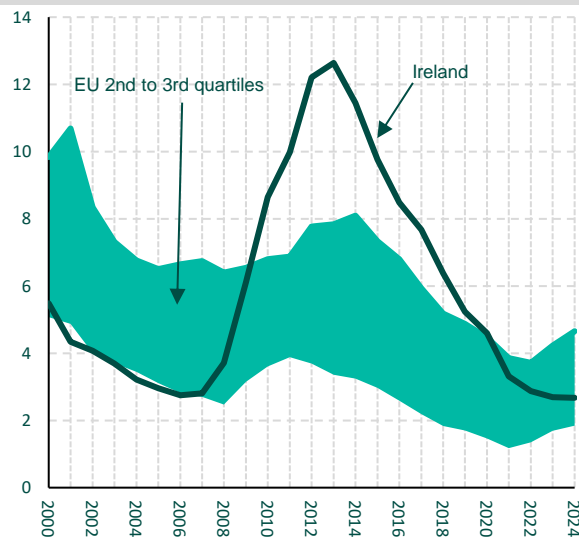
Ireland will start to repay the principal on the EFSF loans in 2029 with the final repayment scheduled for 2042. Repayment of the EFSM loans has already begun. The first maturity of €2 billion took place in Q4 2023, with €800 million due to mature this year and final maturities also scheduled for 2042.<sup>^^</sup>

<sup>^</sup> Outstanding Irish Government bonds include bonds with coupons rate of 1.0 per cent (2026) 0.2 per cent (2027), 0.9 per cent (2028), 0.0 per cent (2031), 0.35 per cent (2032). Maturity dates indicated in parentheses.

<sup>^^</sup> The EFSM was created for the European Commission to provide financial assistance to EU Member States experiencing severe financial difficulties. The EFSF was created as a temporary crisis resolution mechanism by the euro area Member States in 2010 and provided support to Ireland, Greece and Portugal. Member States are now expected to seek assistance from the European Stability Mechanism (ESM) if requiring financial assistance. While the EFSM remains in place if required, the EFSF no longer provides assistance (replaced by the ESM).

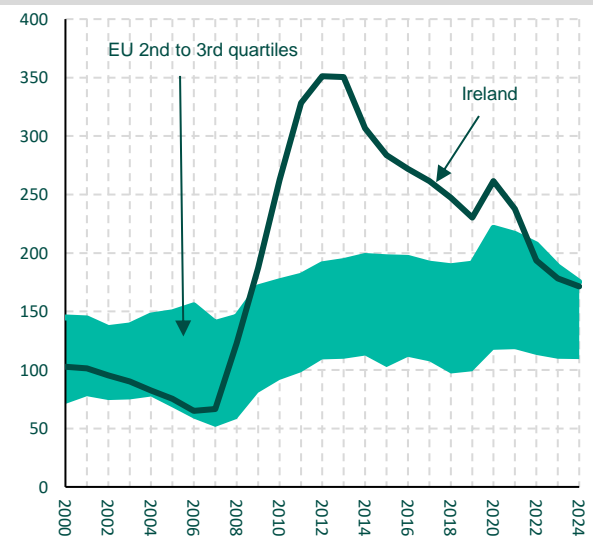
**Figure 5: Debt burden**

**A: Interest-to-revenue, per cent**



Source: AMECO, CSO and Department of Finance.

**B: Debt-to-revenue ratio, per cent**



Source: AMECO, CSO and Department of Finance.

For Ireland, the debt service burden is set out above (**figure 5A**). Ireland’s relatively low interest expenditure at present, combined with strong tax receipts, means that interest costs absorbed just under 3 per cent of government revenue in 2023, 10 percentage points lower than a decade ago and now in line with the EU average. That said, Ireland’s stock of public debt as a share of government revenue remains above EU norms at an estimated 178 per cent in 2023 (**figure 5B**). If estimates of ‘windfall’ corporate tax receipts were excluded from the denominator, this share would increase to just under 200 per cent.

### 2.3.4: financial assets

Assessing the sustainability of the public finances also needs to take account of the asset side of the government’s balances sheet. The rationale is clear: financial assets of the general government sector, such as cash, can be used to redeem at least some of the sector’s financial obligations. Put simply, *net* debt – that is, financial liabilities less financial assets – is a better indicator of creditworthiness than *gross* debt (gross debt is often the focus given definitional issues *inter alia* regarding what constitutes financial assets across countries).

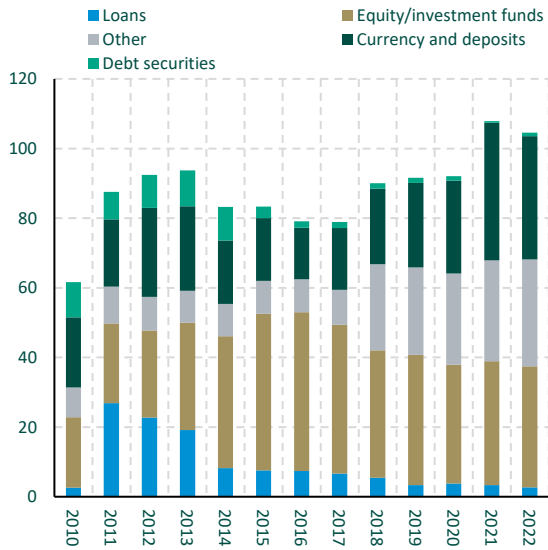
In 2022 (latest available full-year data), the government’s wide range of financial assets amounted to a market value of €105 billion (**figure 6A**).

Currency and deposits amounted to €35 billion in 2022, down from €40 billion in 2021. This is mainly made up of cash balances held by the NTMA as part of the Government’s normal liquidity management and pre-funding activity. These substantial cash balances reflect robust primary surpluses as well as the pre-funding activities of the NTMA.

Equity investments amounted to €35 billion in 2022. These include equities held by government in a range of banking and non-banking (semi-state enterprises) entities. The remainder of government financial assets mainly comprises of loans and other accounts/monies receivable.

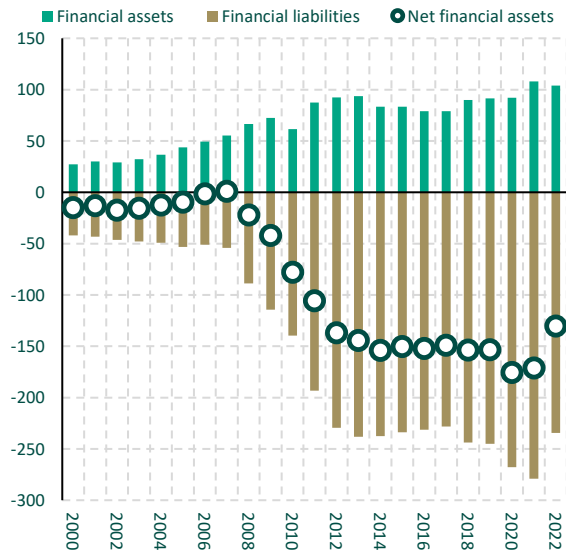
**Figure 6: Balance sheet approach**

**A: General government financial assets, € bn**



Source: Eurostat.

**B: Net debt, € bn**



Source: CSO.

Therefore, from a balance sheet perspective, net financial liabilities equalled €131 billion or 48 per cent of GNI\* in 2022 (figure 6B).

#### 2.4: implicit and contingent liabilities

As well as actual liabilities, a comprehensive assessment of fiscal sustainability includes *off-balance sheet financial obligations* of the general government sector. Indeed, international best practice<sup>9</sup> highlights the importance of transparency regarding off-balance sheet obligations. In broad terms, off-balance sheet obligations can be broken into two buckets: implicit liabilities and contingent liabilities of the government sector.

In Ireland, the main implicit liabilities of the government sector that are not included on its balance sheet relate to the pension obligations for current and future public sector employees. These are significant: this liability was estimated at €176 billion (c. 55 per cent of GNI\*) at end-2021.<sup>10</sup>

On top of its public sector pension liabilities, the Government has additional off-balance sheet commitments, in the shape of contingent liabilities. These liabilities have declined significantly from over €350 billion (226 per cent of GNI\*) in 2008 to €6 billion (2 per cent of GNI\*) in 2022. This reduction is driven in the main by the conclusion of the banking guarantee scheme introduced during the financial crisis. While at a significantly lower value now, the financial crisis illustrates the impact that contingent liabilities can have on the broader public finances.

<sup>9</sup> For more information, see IMF *Fiscal Transparency*, available at: <https://www.imf.org/en/Topics/fiscal-policies/fiscal-transparency#Fiscal%20Transparency%20Evaluation>

<sup>10</sup> For more information, see the *Actuarial Review of Public Service Occupational Pensions in Ireland*. Available at: <https://www.gov.ie/en/publication/39ca4-actuarial-review-of-public-service-occupational-pensions-in-ireland/>

As set out below (**table 2**), the biggest current commitment relates to Public Private Partnerships (PPPs) – partnership agreements between the public and private sector to deliver infrastructural projects and services. <sup>11/12</sup>

<b>Table 2: Contingent liabilities, € millions</b>						
	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Contingent liabilities	5,315	5,066	5,314	6,182	6,185	6,187
<i>Of which:</i>						
Guarantees	282	7	7	656	659	660
Off-balance sheet PPPs <sup>^</sup>	5,032	5,059	5,307	5,526	5,526	5,526

<sup>^</sup> note includes concessions

Source: Department of Finance.

## **2.5: summary**

In common with other advanced economies, the government’s balance sheet has been deployed to absorb exceptionally large shocks in recent years. Public indebtedness has increased, though supportive monetary conditions and windfall corporate tax receipts have cushioned the impact.

Beyond the near-term, debt issued with a zero (or close to zero) coupon as a result of accommodative monetary policy will likely have to be re-financed at notably higher rates in the coming years.

<sup>11</sup> PPP projects are considered *off-balance sheet* and as such the initial capital costs of the project do not impact the general government balance over the construction period. Instead, the cost is spread over the life time of the project through unitary payments or termed availability payments.

<sup>12</sup> For more information, see *Contingent Liabilities: an overview*, available at: [https://www.gov.ie/en/publication/d8727-contingent-liabilities-an-overview\\_april-2021/](https://www.gov.ie/en/publication/d8727-contingent-liabilities-an-overview_april-2021/) and the Department’s annual statistical update on Contingent Liabilities, available at: <https://www.gov.ie/en/publication/5f84d-contingent-liabilities-october-2023/>

## Section 3: Debt landscape in a shock-prone world

### 3.1: introduction

As a small and open economy, the public finances in Ireland are not immune from wider global developments; the external environment matters. A re-pricing of global risk, for instance, could impact on Ireland’s sovereign borrowing costs (positively or negatively); these ‘contagion’ dynamics were particularly strong during the euro area sovereign debt crisis and highlight the importance of understanding the wider, global debt landscape.

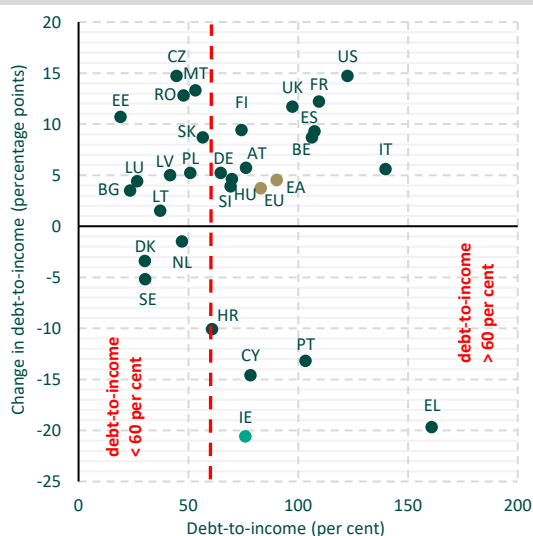
### 3.2: public finance developments in the EU

Sharing a common currency, and therefore common monetary policy, with 19 other Member States means analysis of Ireland’s debt profile is incomplete without considering the fiscal developments in the euro area and the EU as a whole. For completeness, fiscal developments in Ireland’s other main trading partners (UK, US) are included also.

Fourteen EU member states (MS) – thirteen of which are in the euro area – are estimated to have debt-to-income ratios above 60 per cent last year (**figure 7A**);<sup>13</sup> Ireland is one of these, with debt-to-GNI\* at 76 per cent. For the EU as a whole, the debt-to-GDP ratio is estimated at 83 per cent last year; for the euro area, the figure was 90 per cent. Ireland is one of the few Member States whose debt ratio improved between 2019 and 2023, reflecting *inter alia* significant nominal growth and large primary surpluses.

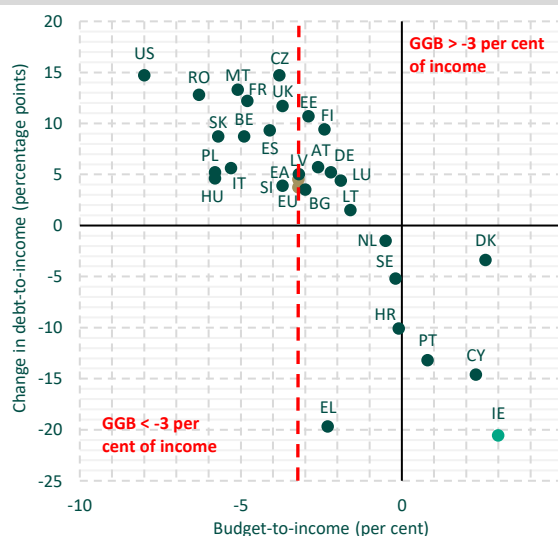
**Figure 7: High public indebtedness in EU Member States, UK and US**

A: Debt ratio (2023) vs change in debt ratio (2019-23)



Note: IE as per cent of GNI\*.  
Source: AMECO, Department of Finance.

B: Budget balance (2023) vs change in debt ratio (2019-23)



Note: IE as per cent of GNI\*.  
Source: AMECO, Department of Finance.

Debt ratios in excess of 100 per cent are estimated for six Member States last year. The sharp jump in debt-to-GDP since 2019 highlights the impact on the public finances of successive shocks in recent years (pandemic, war and energy price shock): in 19 of the 27 EU Member States (14 of the 20 euro

<sup>13</sup> Debt-to-income in this context refers to debt-to-GDP for all EU member states except Ireland, where debt-to-GNI\* is used. According to the Maastricht Treaty, the debt and budget deficit of EU MS cannot exceed 60 per cent and 3 per cent of GDP. While compliance with requirements from the EU fiscal framework is assessed based on ratios scaled by GDP, GNI\* is used in this report as a better indicator of the repayment capacity of the Irish economy.

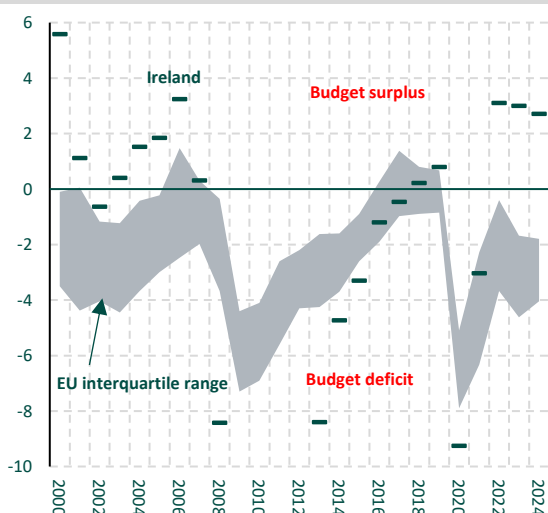
area Member States), the debt-to-GDP ratio last year was above pre-pandemic levels, some of whom were already starting from high debt levels.

Notwithstanding high levels of indebtedness and an advanced cyclical position, many advanced economies ran large budgetary deficits last year (**figure 7B**). In the EU, budget deficits were recorded in 23 MS (17 euro area countries), including 13 MS with budget deficits in excess of 3 per cent of GDP. Notably, all MS with increasing debt ratios between 2019 and 2023 had projected budget deficits in 2023, including five of the six MS with debt ratios above 100 per cent. Such deficits are anticipated despite many EU economies being just past or at the peak of the economic cycle.

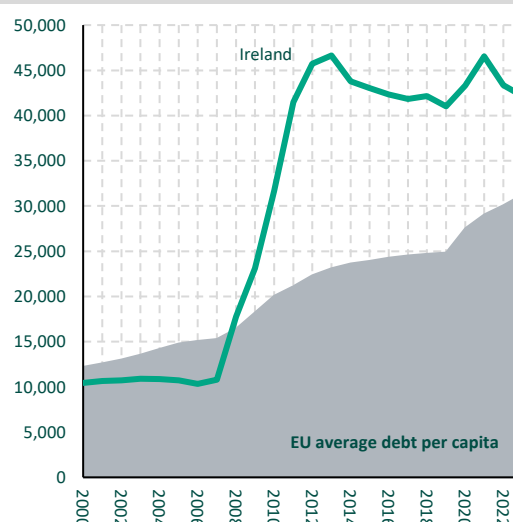
While last year’s budget deficits partly reflect the rollout of one-off energy and cost-of-living supports, it appears budget deficits have evolved into a structural fixture of the public finances (**figure 8A**). A general government budget deficit has repeatedly been recorded in the EU over the past two decades, with an average deficit of less than 0.5 per cent of GDP only seen in 2007, 2018 and 2019.

**Figure 8: Persistent budget deficits despite significant debt**

A: Budget balances over time, per cent of GDP



B: Debt per capita, €



Note: IE given in terms of GNI\*.  
 Figures for Ireland in 2009-2012 are excluded due to size of deficit.  
 Source: Ameco and Department of Finance.

Source: Ameco and Department of Finance.

In 2023, only four Member States recorded budget surpluses. That said, removing windfall corporation tax receipts from the Irish budget balance (GGB\*) reveals an underlying budget deficit of 0.7 per cent, which is much closer to the EU average. In terms of the debt ratio, Ireland’s debt-to-income ratio last year is still estimated to rank as the ninth highest in the EU<sup>14</sup> while Irish debt per capita, at €42,200, is amongst the highest in the EU (**figure 8B**).

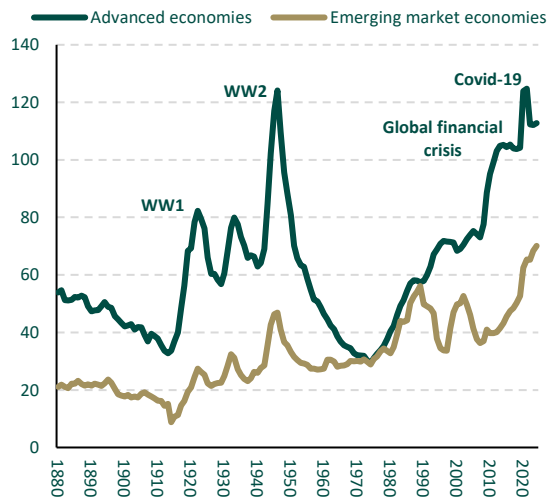
### 3.3: global debt landscape

The fiscal impact of cumulative global shocks has altered the global debt landscape. Debt-to-income ratios in advanced economies are now at their highest levels in nearly 80 years – during the pandemic, debt-to-GDP ratios reached levels not seen since the Second World War (**figure 9A**). Public indebtedness in emerging market economies (EMEs) is also now well above previous peaks. In parallel, private debt, i.e. household and non-financial corporate debt, has also increased significantly (**box 2**).

<sup>14</sup> When the stock of Irish debt is scaled by GNI\*.

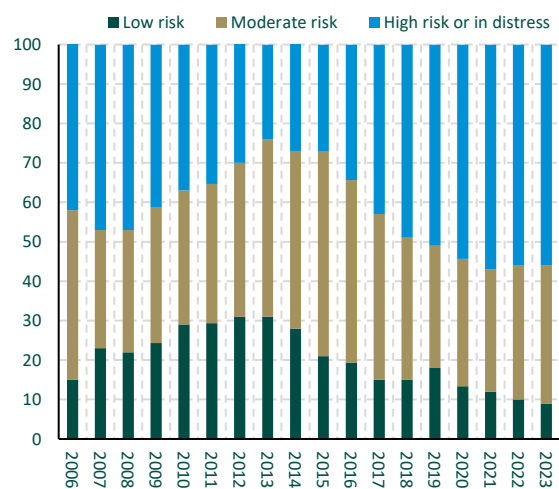
**Figure 9: Global debt developments**

**A: Global public debt, per cent of GDP**



Source: IMF.

**B: Risk of external debt distress among IDA-eligible countries**



Note: IDA = International Development Association.  
Source: World Bank.

Against this backdrop of heightened indebtedness, as well as balance sheet reduction by many advanced economy central banks, global borrowing costs have increased over the past two years. The fall-out has mainly been felt in emerging market economies due to *inter alia* the structure of government debt (shorter maturities, prevalence of inflation linked bonds) and higher risk premiums demanded by investors. In this context, the World Bank expects debt-servicing costs for the 24 poorest countries<sup>15</sup> to increase by up to 39 per cent in 2023 and 2024. Indeed, over the past three years, there have been 18 sovereign defaults in 10 EMEs, which is higher than the total amount recorded in the previous 20 years. Analysis by the World Bank also suggests about 60 percent of low-income countries are at high risk of, or already in, debt distress (**figure 9B**).

<sup>15</sup> The 24 poorest countries eligible to borrow from the World Bank's International Development Association, which provides loans and grants to the world's poorest countries.

## Box 2: Public and private debt

Global public indebtedness is now at historic highs; this trend is largely independent of income level, with public debt in low income, emerging market economies and advanced economies at elevated levels. In parallel, private debt, i.e. debt held by households and non-financial corporations (NFC), has also increased significantly, accounting for nearly two-thirds of the global debt-to-GDP<sup>^</sup> ratio in 2022 (figure 10A).

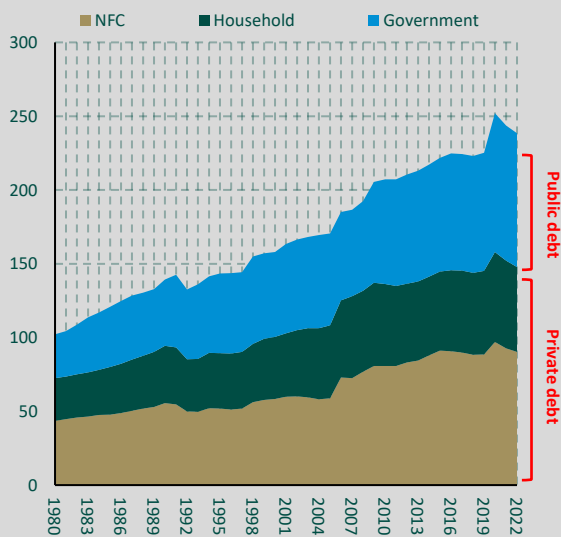
Across many countries, NFC indebtedness is in excess of public debt (figure 10B – there are more countries below the 45-degree line).

The substantial debt burden of the private sector – which had already been spurred upwards by post-GFC supportive financial conditions – reached record highs in 2021, following the onset of the pandemic. Indeed, while the post-pandemic rebound and higher inflation have since helped reduce public debt-to-GDP levels, the private sector debt burden still sits above pre-pandemic levels.

The private sector's significant debt burden underlines the vulnerability of households and firms – not just governments – to a tighter monetary environment. This vulnerability can have knock-on effects for economic and financial stability as, in addition to dampening consumer demand and investment, higher interest rates and borrowing costs may also increase the possibility of debt defaults, especially as debt accumulation during the pandemic was (in many cases) concentrated among vulnerable firms and households.<sup>^^</sup>

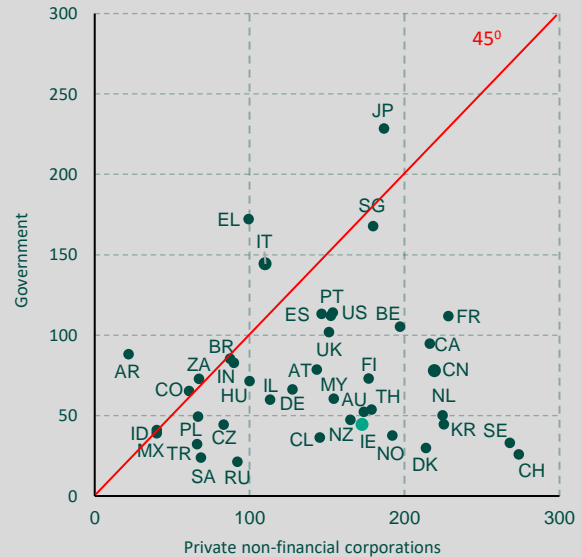
Figure 10: Reduced capacity to absorb significant public debt

A: Breakdown of global debt, per cent of GDP



Source: IMF.  
Note: NFC is non-financial corporations.

B: Public vs private NFC debt, per cent of GDP (2023)



Source: BIS.

Moreover, for many countries, the response of central banks and governments to recent crises has increased their exposure to corporate sector vulnerabilities.

All else equal, a highly leveraged private sector also reduces the capacity of households and firms to absorb additional public debt issuance. In the context of increased efforts by central banks to unwind their vast balance sheets (quantitative tightening<sup>^^^</sup>), this raises the question as to the terms and conditions with which the private sector will be willing to absorb new public debt instruments.

The significant indebtedness of both public and private sectors also raises questions around the overall capacity of the economy to absorb any further shocks, or even the fiscal cost of incoming structural challenges.

<sup>^</sup> public- and privately-held debt.

<sup>^^</sup> *Private Sector Debt and the Global Recovery*, IMF World Economic Outlook (April 2022). Available at: <https://www.elibrary.imf.org/downloadpdf/book/9781616359423/CH002.xml>

<sup>^^^</sup> The ECB discontinued reinvestment maturing debt instruments under the APP from July 2023. In December 2023, the ECB announced that PEPP reinvestments would be reduced on average by €7.5 billion per month over the second half of 2024, with PEPP reinvestments fully discontinued at end-2024.



### 3.4: interest rate-growth (r-g) developments in the euro area

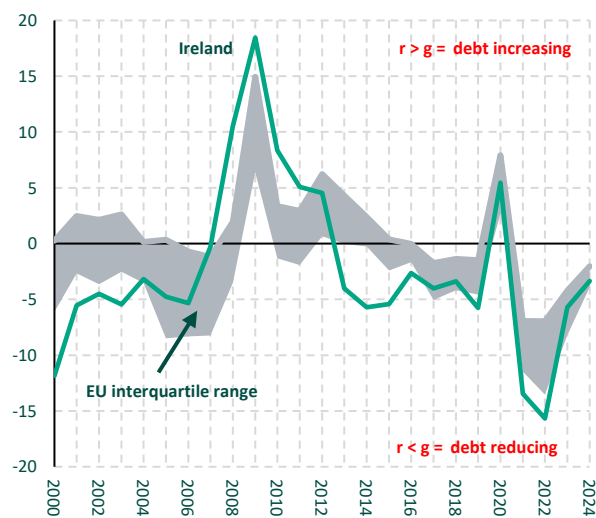
The pandemic build-up of debt and continued adoption of loose fiscal policies have, so far, been largely masked by changes to other key determinants of debt dynamics – namely, the so-called *snowball effect*, i.e. the interest growth differential (r-g). Notwithstanding notable spikes during the Covid-19 pandemic, the snowball effect in the euro area has been negative for large parts of the past 10 years, i.e.  $r < g$  (figure 11A). This trend has been mainly driven by a steady decline in the effective interest rate, with changes in nominal growth rates contributing to year-to-year fluctuations (figure 11B).

In the years prior to the pandemic, historically low interest rates led to a sustained fall in borrowing costs relative to nominal growth, pushing r-g into negative territory (i.e. debt reducing) for several years. As such, these historically low rates somewhat camouflaged the risks of persistent budget deficits and continued debt accumulation at already high public debt levels. Prior to the recent shift in the interest rate environment, there was growing commentary that low interest rates were the ‘new normal’ leading to some arguments that, in theory at least, public debt may no longer bear any fiscal cost (Blancard, *op. cit.*).

While these favourable debt-reduction dynamics were briefly reversed by the adverse economic shock of the pandemic, significant post-pandemic nominal growth has brought r-g back into negative, debt-reducing territory and even enabled the euro area to reduce its debt ratio while still running primary deficits since 2021. Initially, this sharp rise in nominal growth was prompted by the post-pandemic economic rebound in 2021. For instance, in the euro area, the real GDP growth component of nominal growth had a debt-reducing impact of nearly 5½ percentage points in 2021.

Figure 11: Changes in r-g over time

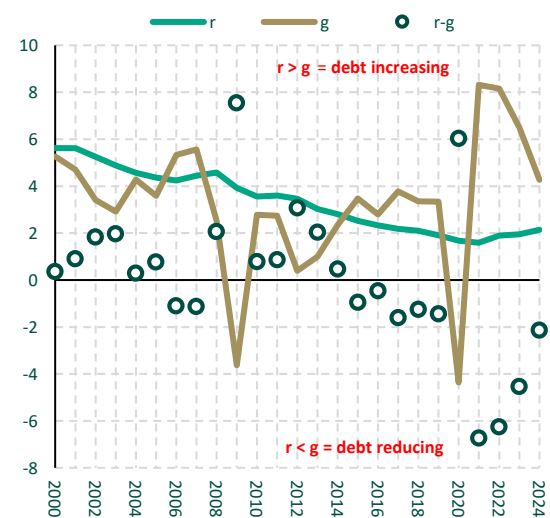
A: r-g, 2000-2024



Note: IE given in terms of GNI\*.

Source: AMECO, Department of Finance.

B: Breakdown of r-g for the euro area, 2000-2024



Source: AMECO, Department of Finance.

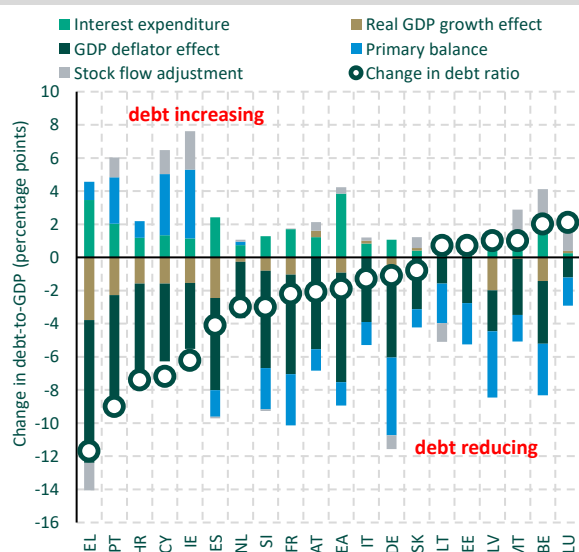
However, since 2022, nominal growth and r-g dynamics have instead been driven by higher inflation, reflecting the inflation shock and subsequent slowdown in economic activity. That being said, the elongated maturity of government debt in many Member States (MS) means that interest expenditure has only slightly increased, and therefore the effective interest rate remains well below marginal interest rates. As such, despite sluggish real growth and a high primary deficit, the positive impact of inflation on nominal growth is set to keep r-g negative in the euro area. As a result, it is estimated that euro area debt ratio fell by 2 percentage points last year.

The breakdown of the change in debt across euro area MS reveals how the significant debt-reducing impact of inflation is masking other less favourable developments for debt sustainability (**figure 12A**). Indeed, while debt-to-income ratios are expected to stabilise or decline in fourteen MS this year, primary deficits are projected in three-quarters of MS. The debt-increasing impact of interest expenditure is much larger for MS with the highest debt ratios.

Nevertheless, it is likely that the favourable impact of inflation on the r-g equation, and government debt sustainability more generally, is short-lived.<sup>16</sup> Indeed, there are a number of reasons suggesting that the longer-term impact of higher inflation may turn the r-g relationship positive, in particular given the lagged impact of inflation on interest payments.

**Figure 12: Significant nominal growth driving r-g negative**

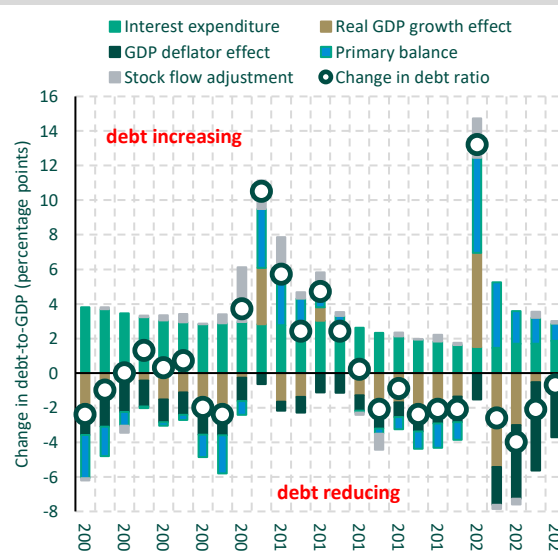
**A: Cont. to change in debt for euro area MS (2023), pp**



Note: IE given in terms of GNI\*. A positive contribution of the primary balance constitutes a primary deficit & increases debt.

Source: AMECO, Department of Finance.

**B: Cont. to change in debt for euro area (2000-2024), pp**



Note: A positive contribution of the primary balance constitutes a primary deficit & increases debt.

Source: AMECO, Department of Finance.

Firstly, as inflation moves beyond its peak and falls towards the ECB’s target rate,<sup>17</sup> the inflation component of nominal growth will dissipate meaning the gap between nominal and real growth rates will close. It is expected that the GDP deflator will have a weaker impact on the euro area debt ratio this year compared to 2022 and 2023 (**figure 12B**). More significantly, as shown by recent experience, higher inflation forces central banks to tighten monetary policy. This real impact is often seen with a lag, reflecting the elongated maturity of government debt in many MS. Furthermore, in the euro area, reflecting a decision to tighten their accommodative monetary policy and reduce their balance sheet, the ECB intend to reduce their APP and PEPP portfolios as investments reach maturity.

Such movements will likely *inter alia* keep sovereign yields and refinancing costs above those pre- and during the pandemic, in the immediate future (as well as require sovereigns to seek alternative funding sources – **box 2**). Over time, this can narrow the negative r-g gap by reducing real growth and increasing interest expenditure, with the latter particularly impacting governments with larger debt stocks (albeit dependent on the average maturity of the debt).

<sup>16</sup> For further analysis on debt dynamics in a high inflation environment, see *Annual Report on Public Debt in Ireland 2022*, Department of Finance (2023). Available at:

<https://www.gov.ie/en/publication/cb74e-annual-report-on-public-debt-in-ireland-2022/>

<sup>17</sup> The ECB has an inflation target of 2 per cent for the euro area as a whole.

### **3.5: summary**

Recent shocks to the global economy have had a lasting impact on public indebtedness though, clearly, deploying the public sector balance sheet was the *quid pro quo* for shuttering the private sector during the pandemic.

While fears over debt distress have to date been mostly confined to emerging market economies, debt ratios across advanced economies are still above pre-pandemic levels.

The capacity of the private sector to absorb any further debt issuance, at least at current prices, may also become increasingly constrained.

Several countries continue to run large deficits at the peak of the economic cycle, indicative of a large underlying (or structural) deficit that will need to be corrected.

## Section 4: Impact of structural challenges on the debt landscape

### 4.1: introduction

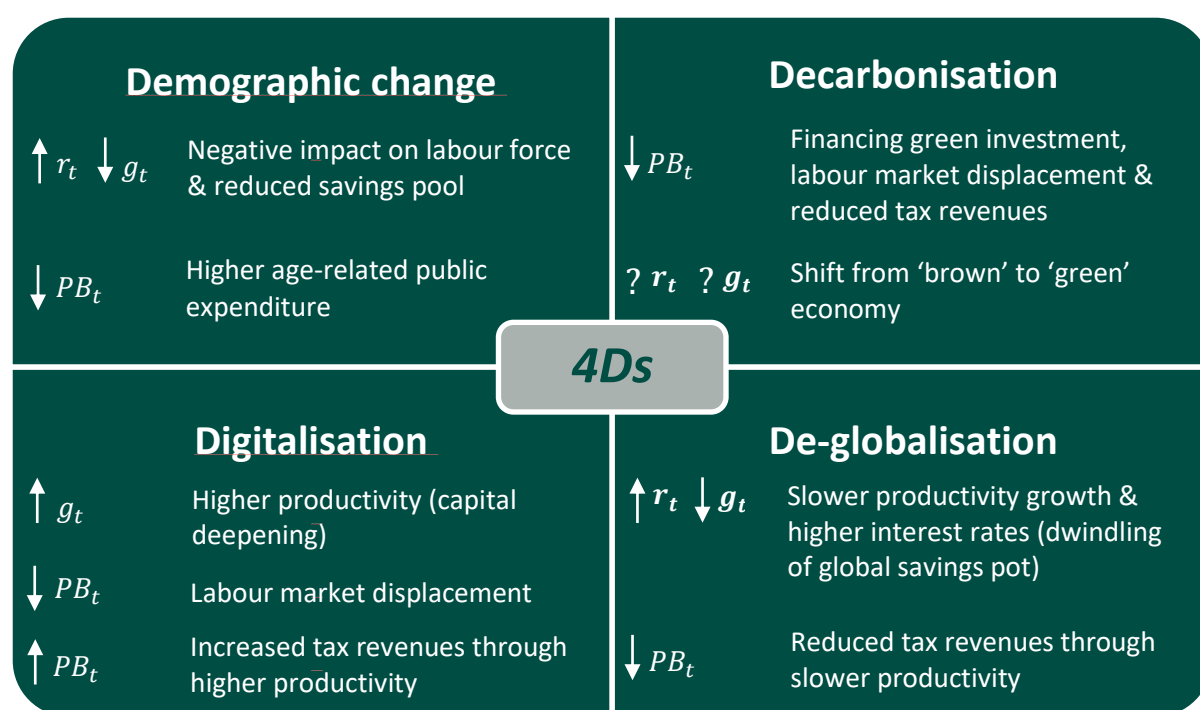
Beyond the near-term, fiscal sustainability faces threats not only from less favourable  $r-g$  dynamics and *unknown* shocks, but also from known structural changes. Decarbonisation, demographic change, digitalisation and de-globalisation – collectively the “4Ds” – are set to play an increasingly important role in shaping economic trends in advanced economies in the years and decades to come.<sup>18</sup>

### 4.2: impact of the “4D’s” on debt trajectory

The global economy is, almost certainly, facing into a period of slower growth, as several structural headwinds begin to bite. Population ageing – which is set to accelerate over the coming decades – will put downward pressure on growth through its negative impact on the labour force and productivity.<sup>19</sup> Decarbonisation will require shifting capital and labour from the ‘brown’ economy to the ‘green’ economy, while the rapid acceleration in digitalisation must be matched by firm investment in order to fully recoup its benefits on productivity. Geopolitical and other factors have slowed the pace of integration and may even trigger de-globalisation; this could reverse productivity gains and slow down global growth.

A useful framework for thinking about these structural factors and their impact on debt sustainability is set out below (figure 13).

Figure 13: Impact of structural challenges on debt dynamics ( $r - g$ )



Source: Department of Finance.

<sup>18</sup> *The Irish economy in 2030 – enabling a sustainable future for all*, Department of Finance (2023). Available at: <https://assets.gov.ie/260158/50762603-827c-4269-a5cf-995edaa651dd.pdf>

<sup>19</sup> See *Horizon Scanning – calibrating medium to long-term economic projections*. Available at: <https://www.gov.ie/en/publication/c31bc-horizon-scanning-calibrating-medium-to-long-term-economic-projections/>

#### **4.2.1: impact of demographic change on debt drivers**

While the demographic structure is relatively favourable at present, the Irish population will age rapidly over the coming decades, with more ‘older’ people and less ‘younger’ people. By the mid-part of this century, there will be just two people of working age for each retiree compared with four at present. In the transition phases, economic growth is set to slow (because of slower growth in labour supply). Slower revenue growth (arising from more modest economic expansion) and increased expenditure (as a result of increased outlays in demographically-sensitive areas) will negatively impact the primary balance and put significant pressure on the public finances as a whole.

Other advanced economies are ageing also and this will have implications for the cost of capital (and, hence, productivity as well as sovereign borrowing costs) While the share of the population in the ‘prime saving’ stages of their life has pushed down  $r^*$ ,<sup>20</sup> this relationship may change as these cohorts move away from the saving-intensive period of their lives and into retirement. Such a shift will likely reduce the savings pool, driving up  $r^*$ .<sup>21</sup>

#### **4.2.2: impact of decarbonisation on debt drivers**

While the overall impact of decarbonisation on the growth potential of the Irish economy is difficult to estimate precisely at present, it will undoubtedly have significant implications for production and consumption.

At the same time, the shift to a greener economy will have an impact on the public finances, with several transmission channels. On the expenditure side, the transition to a low carbon economy will require investment in a number of areas such as in renewable energy infrastructure and the public transport system. At the same time, supports will be needed to help smooth the transition of labour and capital from ‘brown’ to ‘green’, including the upskilling and re-skilling of workers and providing supports to those displaced in the labour market. The State’s revenue stream will, *in tandem*, be impacted by changes in spending patterns, such as the reduction in excise duty receipts as agents shift from fossil fuel consumption. The combined impacts of these changes will have a large negative impact on the primary balance.

#### **4.2.3: impact of digitalisation on debt drivers**

The importance of the information technology sector in the Irish economy would suggest the digital transition, in particular the roll out of artificial intelligence, could boost productivity and, hence, economic growth, with positive spill-overs to the public finances. A large ‘upside’ scenario is one in which capital deepening (more capital per worker, especially digital capital) could (partly) offset some of the negative labour impacts of population ageing.

This is not a foregone conclusion however. If digital capital was used as a substitute – rather than a complement – for labour it could be associated with increases in unemployment. In reality, the most likely scenario is one in which there are both job gains and job losses and, in these circumstances, the role of public policy will be to smooth the labour market transition, *inter alia* via increased expenditure on upskilling and working age-supports.

#### **4.2.4: impact of de-globalisation on debt drivers**

Recent geo-political tensions and the Covid-19 pandemic have added to the post-financial crisis suggestions that ‘peak globalisation’ may have already been passed. Ireland’s position as a highly globalised economy with a significant reliance on foreign-direct investment and exports makes it

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<sup>20</sup> The natural rate of interest, or  $r^*$ , is the real interest rate that is neither expansionary nor contractionary when the economy is at equilibrium.

<sup>21</sup> See C. O’Connor (Dept. of Finance, forthcoming).

particularly vulnerable to reversals in global economic linkages. As such, de-globalisation would inevitably have a negative impact on the growth potential of the Irish economy. The negative impact of de-globalisation will also likely be seen in the public finances through reductions in tax revenues, most notably corporation and income tax receipts. The cost of sovereign borrowing could be adversely affected in the event of a segmentation of global capital markets, which in effect would involve a shallowing of the global savings pool.

### 4.3: policy implications

These structural changes are not unique to Ireland. With  $r-g$  becoming less negative and approaching positive, debt-increasing territory, many governments will become increasingly vulnerable to any further adverse changes to  $r-g$  (figure 14A). This is a particular risk for high debt countries, reflecting the relationship between the magnitude of the  $r-g$  impact on debt and the initial government debt ratio. Indeed, *ceteris paribus* the larger  $r-g$  becomes, the faster the debt ratio will grow, further amplifying the potential fiscal vulnerability of high debt countries.

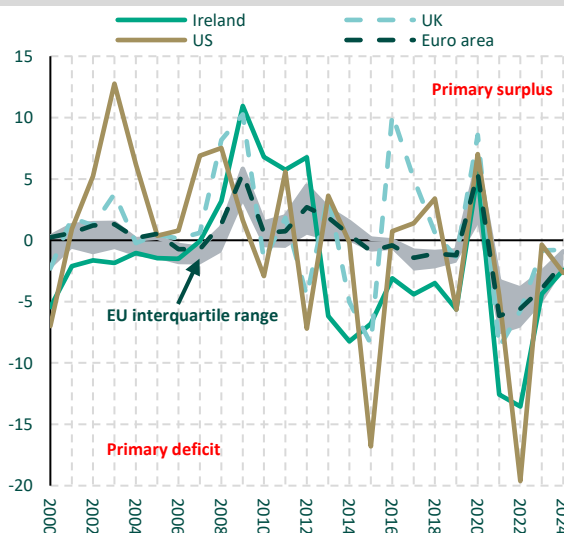
**Figure 14: Key factors shaping  $r-g$  and debt sustainability paths**

A: Debt-to-GDP ratio vs  $r-g$  (2024)



Note: IE given in terms of GNI\*  
Source: Ameco and Department of Finance

B: Debt-stabilising primary balance, per cent of GDP



Note: IE shown in terms of GNI\*  
Source: Ameco and Department of Finance.

A transition from a negative to positive  $r-g$  environment would place binding constraints on fiscal policy. Indeed, in line with the narrowing of the snowball effect, the fiscal space of governments has also narrowed, as evident by the anticipated debt-stabilising primary balance (figure 14B). When governments can no longer rely on negative snowball effects ( $r < g$ ) to offset primary deficits, primary surpluses will be required to keep debt ratios stable.

However, running primary surpluses will require governments to deviate from recent and historical norms. Indeed, it is anticipated a primary deficit of 1.5 per cent will be recorded in the euro area this year, despite being at the top of the cycle. Furthermore, reining in spending will also be increasingly difficult in light of known and unknown challenges coming down the line, reflecting the 4Ds as well as the increasing frequency of economic shocks.

Failing to abide by these binding constraints imposed on budgetary policy may cause debt ratios to increase at an unsustainable pace, especially given the already high levels of public indebtedness throughout the euro area.

#### **4.4: summary**

While Department forecasts point to the downward trajectory of the debt-to-income ratio continuing over the short-term, significant structural challenges are clearly identifiable on the horizon. The impact of some of these challenges, namely demographic change, can be quantified in a robust manner, while the precise impact of the other challenges (decarbonisation, digitalisation and de-globalisation) remain uncertain. Despite this uncertainty, there are several clear channels in which these challenges could put significant upward pressure on the debt trajectory. In this context, the debt trajectory will require prudent management in order for the public finances to be in the best position to face these inevitable future challenges.

## Section 5: Debt sustainability analysis

### 5.1: introduction

As the last section highlighted, there are several structural developments on the horizon that could impact the debt trajectory, and the public finances more generally. While the publication to this point has concentrated on the baseline short-term projections for debt developments in Ireland, the impact of these structural challenges are likely to be most felt beyond the short-term horizon. With this in mind, the debt sustainability analysis (DSA) included this year differs from previous reports in that it focuses on the long-run, with a horizon to the mid-point of the century.

This is particularly important in an Irish context given the expected impact of demographic change on the public finances. While the Irish population is amongst the youngest in the EU at present, it is projected that the coming decades will see Ireland become one of the fastest ageing populations in Europe. A DSA that goes beyond the short-term allows for the tipping points of these costs to be integrated into the fiscal risk analysis.

Similar to the European Commission's DSA methodology, analysis in this section is based on a no-policy change scenario. Reflecting this, the scenarios presented should not be viewed as forecasts but potential outcomes for the debt ratio without further policy intervention.

While it is assumed that transfers to the Future Ireland Fund (FIF) take place each year until 2035 and to the Infrastructure, Climate and Nature Fund (ICNF) until 2030, the analysis focusses on the gross debt ratio rather than the net debt ratio. The accumulation of assets related to the two new savings vehicles announced as part of *Budget 2024* will have an impact on the net debt position and, if used to tackle structural challenges, will improve debt sustainability (**box 3**).

### 5.2: baseline

The baseline scenario in this chapter, like all other scenarios considered, is produced on the basis of no-policy change. In using such an approach, the baseline projections are driven by the starting point position at the end of the Department's autumn 2024 forecasts, and crucially, assumptions made on how growth and ageing costs will develop over time (the baseline scenario makes no provision in the longer-run forecasts for the impact of other structural changes).

Last year, corporation tax (CT) receipts of €24 billion were collected. This represented more than a doubling of receipts collected in 2019. A number of publications from the Department of Finance over recent years have raised questions about the sustainability of the current trends in CT receipts. Indeed, the Department estimates that approximately €11 billion of last year's CT could be considered as windfall receipts or transient in nature, i.e. cannot be explained by underlying economic drivers and, therefore, may be more vulnerable to a shock. In this context, the baseline assumes the 'excess' or 'windfall' element of CT revenue falling to zero by 2030.<sup>22</sup>

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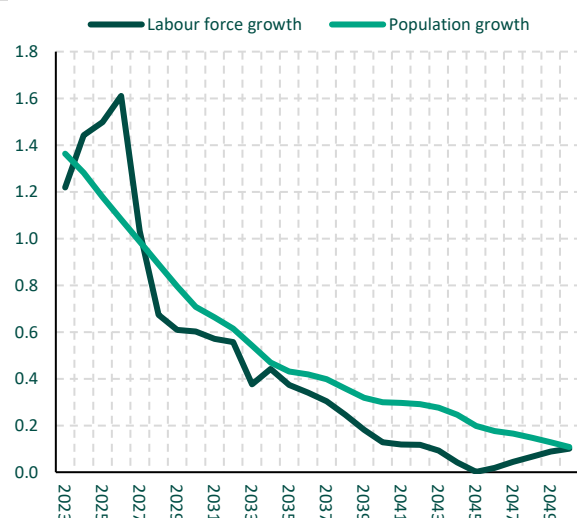
<sup>22</sup> This analysis assumes transfers take place to the ICNF until 2030 and the FIF until 2035 under the baseline and under each scenario. As a purely technical assumption, the projected annual returns from the FIF are used to offset part of the projected ageing costs from 2041 onwards. As the baseline scenario assumes excess CT receipts fully unwind by 2030, projected annual headline deficits are expected to average around 1 per cent between 2030 and 2035. During the lifespan of the National Pension Reserve Fund, prior to the financial crisis, annual contributions were still made when deficits were recorded. In this context, transfers are assumed to continue despite the projected deficits. If no transfers were to take place between 2030 and 2035, it estimated that this would reduce the debt ratio by approximately 9 percentage points versus the baseline by 2035. However, by reducing the accumulated assets in the FIF, this would reduce the ability of the fund to offset projected ageing costs from 2041. As such, by 2050, this would result in a debt ratio approximately 5 percentage points lower than baseline.



In addition, the analysis makes use of the medium-to-long-term growth projections set out in a recent Department publication, *Horizon Scanning – calibrating medium to long-term economic projections*. While Ireland has seen remarkable output growth of late, as the aforementioned publication shows, a moderation in the pace of economic growth is expected over the medium-to long-term, driven by population ageing and the resulting slowing in labour supply (**figure 15A**). Indeed, as a consequence of rapidly shifting changes in the demographic structure, output growth (real GNI\*) is expected to converge to just 1 per cent by 2050 (**figure 15B**).<sup>23</sup>

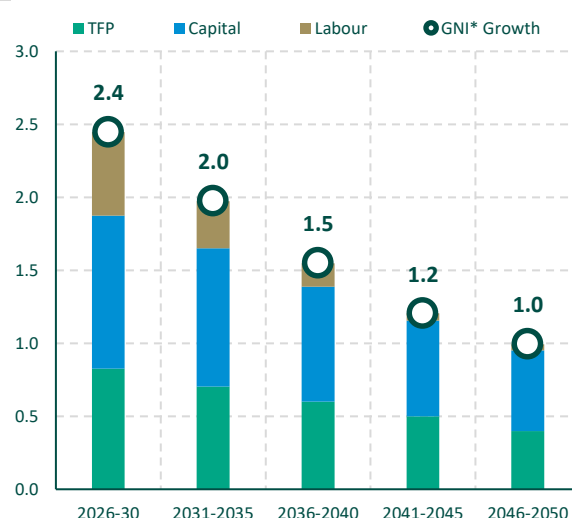
**Figure 15: Long-term growth assumptions**

**A: Population and labour force growth, 2023-2050, per cent**



Source: Department of Finance

**B: Drivers of GNI\* growth, 2026-2050, per cent of GNI\***



Note: TFP = total factor productivity.  
Source: Department of Finance

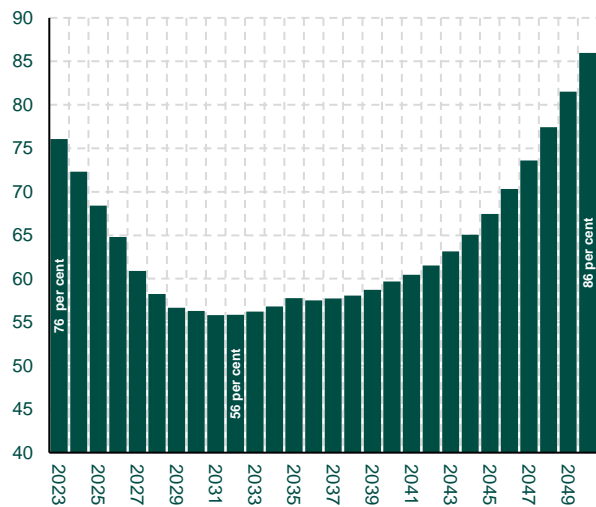
As well as weighing heavily on the growth potential of the economy through its impact on labour supply, demographically-sensitive components of public expenditure (pensions, healthcare, long-term care) are set to increase significantly. This constraint will have an increasingly negative impact on the fiscal position over the coming decades with annual age-related expenditure expected to increase by approximately 6 percentage points of GNI\* by 2050.

In this context, the baseline gross debt-to-GNI\* ratio is projected to continue on a steady declining path until the start of the next decade, falling to 56 per cent of GNI\* (**figure 16A**). However, given the assumed reduction in corporation tax receipts, the slowdown in growth and the increase in age-related costs, the ratio is expected to increase hereafter, in particular with increasing pace after 2040. By 2050, under the baseline scenario, the gross debt-to-GNI\* is projected to increase to 86 per cent, 10 percentage points higher than in 2023.

<sup>23</sup> See *Horizon Scanning – calibrating medium to long-term economic projections*. Available at: <https://www.gov.ie/en/publication/c31bc-horizon-scanning-calibrating-medium-to-long-term-economic-projections/> Horizon Scanning reference

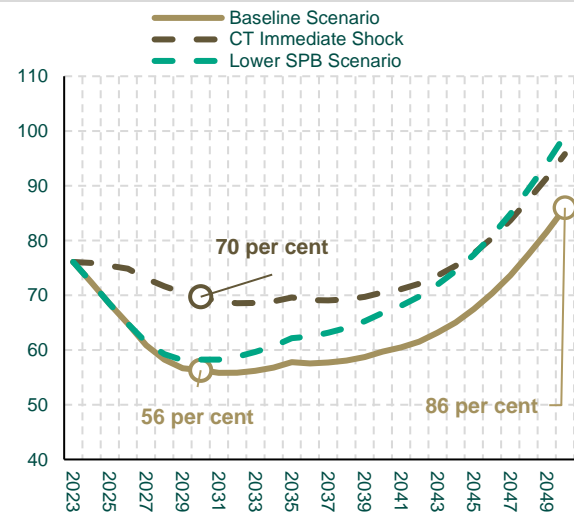
**Figure 16: Debt-sustainability analysis – baseline and fiscal scenarios**

A: long-term debt outlook- baseline, per cent of GNI\*



Source: Department of Finance calculations.

B: fiscal scenarios, per cent GNI\*



Source: Department of Finance calculations.

While attention in medium-to long-term DSAs focuses on the baseline, the frequency and magnitude of unforeseen economic and global geo-political shocks over the past decade necessitates an analysis that looks beyond this and at a range of economic/fiscal scenarios when assessing the sustainability of debt. Such analysis is presented below.

### 5.3: fiscal balance shock

The first block of deterministic shocks carried out in this analysis looks at the impact of different scenarios for the evolution of the primary balance. While, as explained above, the baseline assumes windfall CT receipts unwind by 2030, the first fiscal shock assumes excess CT receipts reduce far earlier. A further shock considers a longer-term general shock to the overall fiscal position. Shocks are summarised as:

- > CT receipts face an immediate hit with ‘windfall’ receipts falling to zero from 2024;
- > a 0.5 percentage point reduction in the structural primary balance (SPB) from 2027.<sup>24</sup>

Notwithstanding both the CT shock and fiscal balance shock, the debt-to-income ratio is expected to continue on a downward trajectory until the start of the next decade (**figure 16B**). Nevertheless, such scenarios suggest the ratio would be 13 and 2 percentage points higher than the baseline by that point. Overall, by 2050, the debt-to-GNI\* ratio under the CT shock is expected to be 10 percentage points higher than the baseline, while the lower structural primary balance scenario is expected to result in a ratio 13 percentage points higher than baseline. The reversal of the gap between the scenarios reflects the assumption that ‘windfall’ CT unwinds over the medium-term in the baseline, while the reduction in the structural primary balance from 2027 is maintained over the projection period. Both scenarios see the debt-to-GNI\* ratio come close to 100 per cent of GNI\* (96 and 99 per cent respectively).

<sup>24</sup> 2027 represents the first year after the Department’s autumn forecast horizon. The structural primary balance relates to headline balance adjusted for cyclical and temporary/one-off factors and interest expenditure.

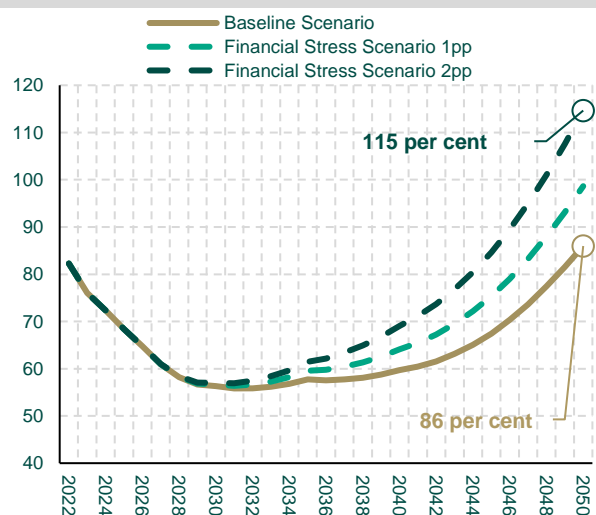
### 5.4: financial stress (interest rate) shock

While inflationary pressures have eased in recent months, and it appears interest rate increases have peaked in the short-term, there still remains some uncertainty regarding future interest rate developments. For this reason, a financial stress scenario is carried out. This assumes an increase in the marginal rate for 10- year government bonds in 2027 of 100 and 200 basis points.<sup>25</sup> Under such scenarios, it is assumed that the interest rate stays at the new elevated points relative to the baseline interest rate projection for the remainder of the projection period.

The relatively elongated maturity profile of the Irish debt stock (weighted average maturity of 10 years) insulates the public finances from the direct impact of a shock from increases in the interest rate in the short-term. As such, the impact of the two interest rate scenarios takes some time to materialize (figure 17A). Nevertheless, by the mid-point of the century, such scenarios would also see the debt ratios 13 and 29 percentage points above the baseline respectively (99 and 115 per cent of GNI\*). From 2033 onwards the r-g dynamic turns positive in the second financial stress scenario with the heightened interest rate adding close to 2 percentage points per annum to the debt-to-GNI\* ratio on average from that point.

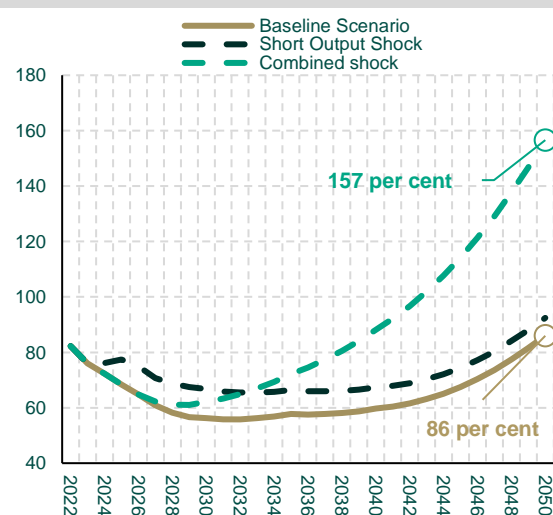
**Figure 17: Debt-sustainability analysis- financial stress and output scenarios**

A: interest rate scenarios, per cent GNI\*



Source: Department of Finance calculations.

B: output scenarios, per cent GNI\*



Source: Department of Finance calculations.

### 5.5: output shock

As above, the baseline projections of the debt ratio make use of the medium-to-long-term projections estimated by the Department in a recent publication. This suggests the growth rate of the economy will slow notably over the coming decades.

Given, the uncertainty in the external environment and the volatility of Irish economic activity, alternative growth scenarios are also considered as outlined below:

<sup>25</sup> In line with the European Commission’s Ageing Report and Debt Sustainability Monitor, it is assumed that interest rates converge to an EU average real interest rate over the long-run (2050) of 4 per cent. This long-run average is increased by 100 and 200 bps respectively in the interest rate shock scenarios. The interest rate scenario focuses on the direct impact of the increase in interest rates only. As such, it does not take account of potential second round impacts on growth.

- > A short-term period of economic contraction;<sup>26</sup>
- > A structural shock that permanently reduces potential output by 0.5 percentage points, reduces the structural primary balance by 1 percentage point and increases the yield on 10 year Irish bonds by 200bps.<sup>27</sup>

The short-term output shock reduces the growth rate significantly in the early years of the projection period, resulting in negative real growth in 2024 and 2025. However, after this, the return to the baseline growth rate from 2029 sees less of a fiscal impact relative to the structural shock. By 2050, the short-term shock is expected to result in a debt ratio 7 percentage points higher than the baseline (92 per cent of GNI\*).

Under both of these scenarios, it is anticipated that the debt ratio will be lower than today's ratio by the end of the decade. However, the impact of the combined structural shock, from the beginning of the next decade in particular, is large (**figure 17B**). Such a shock is anticipated to result in the debt ratio reaching over 157 per cent of GNI\* by 2050, 71 percentage points higher than the baseline ratio.<sup>28</sup>

These scenarios are mechanical, no-policy change simulations and should not be considered as forecasts of the how the gross debt ratio will develop. Nevertheless, this analysis suggests that while one particular shock alone may not significantly threaten the sustainability of the public finances, a scenario in which a number of shocks occur at the same time – as seen during the financial crisis - would have a massive negative impact on the trajectory of the debt ratio over the medium-to long-term.

### 5.6: net debt

The analysis above focusses on the gross debt ratio. The net debt ratio, on the other hand, takes into account the Government's liquid assets (**box 3**). These liquid assets can be used to refinance/roll-over debt or to fund the deficit. The establishment of the *FIF* and the *ICNF* will likely see the accumulation of significant reserves built up over the coming decades. The annual contributions to the funds do not reduce the gross debt ratio, instead they enter the debt accumulation formula through the SFA in the simulations above.<sup>29</sup> As such, if used in an appropriate manner, the balance of the funds can be used to, partially at least, offset some of the expected pressures on the public finances over the coming decades from the increase in age-related expenditure and the slow-down in economic growth, illustrated in the simulations above.

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<sup>26</sup> It assumed that nominal output growth is reduced by 3.5 percentage points (the equivalent of half a standard deviation) in 2024 and 2025 respectively and by 2 per cent in 2026 to the baseline. After this, it is assumed there is a recovery in 2027 and 2028 resulting in growth 2 and 1 percentage points above the baseline growth rate in those years respectively. Such a shock would see real GNI\* growth fall by 1.5 and 1.4 percentage points in 2024 and 2025 before remaining flat in 2026. On the fiscal side of the equation, it is assumed revenue grows in line with output, while primary expenditure is unchanged in the first two years of the shock before adapting to the fiscal challenge and reverting back to the baseline share of GNI\*.

<sup>27</sup> It is assumed potential growth and the structural primary balance is unchanged until 2027.

<sup>28</sup> Drawdowns from the ICNF are not assumed in either of these scenarios. Under the short-term output shock, the public finances remain in surplus during the period of negative growth. Under the combined shock, the debt ratio would be approximately 4 percentage points lower by 2050 if all funds were drawn down from the ICNF.

<sup>29</sup> As above, projected returns from the FIF are used to offset projected ageing costs from 2041 onwards.

### Box 3: Gross and Net General Government Debt

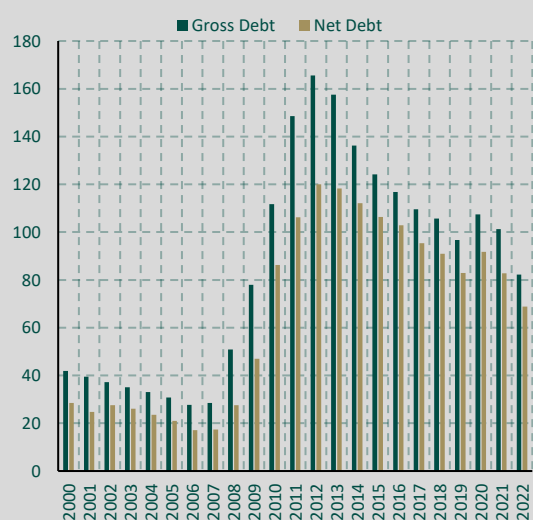
When assessing the health of the public finances, analysis has traditionally focussed on gross government debt as a percentage of GDP, or in Ireland’s case, as a percentage of GNI\*. However, this measure only tells part of the story, as it does not take into account the assets on the government balance sheet.

On the other hand, net general government debt considers the liquid assets (EDP financial assets) of a government and thus provides a more comprehensive measure of the sustainability of government finances by considering the ability of government to service debt in the long run.^

The evolution of gross and net general government debt is set out below (figure 18A). Since the GFC, significant financial assets have been accumulated by the state. At the end of 2022, the gross debt ratio stood at 82.3 per cent of GNI\* and the net debt ratio at 68.9 per cent of GNI\*, with assets amounting to €36.7 billion.

Figure 18: Debt developments

A: Gross and Net Debt, per cent GNI\*



Source: CSO and Department of Finance

B: Net and national net debt, per cent of GNI\*



Source: Department of Finance

Looking ahead, the accumulation of assets from the two new funds announced in Budget 2024 – *Future Ireland Fund* (FIF) and the *Infrastructure, Climate and Nature Fund* (ICNF) will help drive Ireland’s asset accumulation up further. From 2024 to 2035, 0.8 per cent of GDP is set to be invested into the FIF annually. Additionally, approximately €4.1 billion will be transferred to the fund from the dissolution of the National Reserve Fund (NRF) in 2024. The Department estimates that over the long-term, and under various conditioning assumptions, the FIF could grow to €100 billion by 2035.

The ICNF will operate alongside the FIF and €2 billion will be invested into it annually from 2024 until it reaches its cap of €14 billion in 2030.^^ The FIF and the ICNF will be used to help address known expenditure pressures in the future including those relating to ageing, the climate and digitalisation transitions and other economic and fiscal challenges.

As the investment strategy of these new funds has not yet been decided, *Budget 2024* included an indicator entitled ‘national net debt’.^^^ This measure provides a more nuanced and comprehensive picture of government financial health by including the accumulation of assets in the FIF and the ICNF in its calculation. This measure of net debt is projected to decrease from around 61 per cent of GNI\* in 2023 to 50 per cent of GNI\* by 2026 (figure 18B).^^^^

^ In Ireland, EDP-defined financial assets include liquid assets held by the Exchequer, Ireland Strategic Investment Fund cash and non-equity investments and other cash and liquid assets held by the general government sector.

^^ €2 billion from the NRF will be transferred into the ICNF in 2024.

^^^ This is a broader measure than EDP debt instrument assets. This measure includes the assets in the FIF and the ICNF, which can also consist of equity investments.

^^^^ *Budget 2024: Economic and Fiscal outlook* (October 2023), available at:

<https://www.gov.ie/pdf/?file=https://assets.gov.ie/273320/7da13749-b1d2-4f12-a6cd-6e705b0b11d3.pdf#page=null>

### **5.7: summary**

The medium- to-long-term outlook for the debt sustainability analysis set out in this year's document recognises, and builds upon, impending structural changes in the Irish economy, which the Department has labelled the "4Ds" – demographics, decarbonisation, digitisation and de-globalisation.

The results of the no-policy change deterministic analysis in this chapter suggest that while it is likely that the debt-income ratio will continue to fall over the short-term, structural factors will put significant upward pressure on the public finances over the coming decades.

The key takeaway is that a shock which has a permanent, structural impact on the growth potential of the economy will make these challenges far more difficult to address.

These factors highlight the importance of the Government's two new longer-term savings vehicles, the objective of which is to ring-fence 'excess' corporate tax receipts in order to partly pre-fund some of the future costs associated with structural changes.

## Section 6: Conclusion

Since the turn of the decade, the Irish and global economies have been buffeted by major shocks: the global health pandemic, war on the border of the European Union and the highest rate of consumer price inflation in almost half a century. It is an open question as to whether the global economy is becoming more ‘shock-prone’.

The global public debt landscape has been transformed by these shocks: debt distress is a key feature of several low- and middle-income economies while, in advanced economies, high debt levels alongside structural fiscal deficits mean that some countries are vulnerable to a change in market sentiment.

In the case of Ireland, the public sector balance sheet has been deployed to help the economy absorb the worst of the recent shocks. Very strong growth in corporate tax receipts, and to a lesser extent, income tax receipts, have limited the increase in public indebtedness; the rapid bounce-back in economic activity means that the debt-income ratio has fallen sharply.

That said, the maintenance of corporation tax receipts at their current level cannot be taken for granted while, at the same time, the economy remains exposed to sector-specific (and even product-specific) developments.

On top of this, the public finances face significant impending structural challenges due the so-called “4Ds” – **d**emographics, **d**igitalisation, **d**ecarbonisation and **d**e-globalisation. As such, the debt trajectory will require careful management to ensure the public finances are in the best position to support these fundamental changes.

The establishment of two longer-term savings vehicles is a key part of the Government's fiscal risk management strategy; legislation is currently being drafted. The accumulation of financial assets over time will help alleviate some of the future costs of structural change in the economy.



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