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Post-Programme Surveillance Report

Ireland, Autumn 2022

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Directorate-General for Economic and Financial Affairs

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The Post-Programme Surveillance assessment was prepared in liaison with staff from the European Central Bank (ECB) ([2]).

This report reflects information available and policy developments that have taken place until 31 October 2022. However, the macroeconomic and budgetary projections, including those underlying the debt sustainability analysis, are in line with the Commission 2022 autumn forecast released on 15 November 2022 (with cut-off date 31 October 2022).

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([1]) The report was adopted as Commission Communication C(2022)8550 on 21 November 2022, accompanied by a Staff Working Document (SWD(2022)371).
([2]) ECB Staff participated in this mission, and in the drafting of this report, in accordance with the ECB's competences and thus provided expertise on financial sector policies and macro-critical issues, such as headline fiscal targets and sustainability and financing needs.

ABBREVIATIONS

CBI	Central Bank of Ireland
CBRE	Coldwell Banker Richard Ellis
CCyB	Countercyclical capital buffer
CET1	Common Equity Tier 1
CRE	Commercial Real Estate
CSO	Central Statistics Office Ireland
CT	Corporation tax
ECB	European Central Bank
EFSF	European Financial Stability Facility
EFSM	European Financial Stabilisation Mechanism
ESM	European Stability Mechanism
GDP	Gross Domestic Product
GGB*	Underlying general government balance
GNI*	Modified Gross National Income
HICP	Harmonised Index of Consumer Prices
LTI	Loan-to-Income
NFCs	Non-Financial Corporations
NPL	Non performing loan
NTMA	National Treasury Management Agency
O-SII	Other Systemically Important Institutions
PPS	Post programme surveillance
q-o-q	Quarter-on-quarter
RoE	Return on Equity
SME	Small and medium sized enterprises
SURE	Support to mitigate Unemployment Risks in an Emergency
VAT	Value Added Tax
y o y	Year on year

EXECUTIVE SUMMARY

The 17th post-programme surveillance visit to Ireland took place in Dublin from 4 to 6 October 2022. This in-person visit involved European Commission staff in liaison with European Central Bank staff. European Stability Mechanism (ESM) staff participated on aspects relating to the ESM's Early Warning System.

The Irish economy continued growing strongly in the first half of 2022, but a deceleration set in during the summer, particularly in the domestic part of the economy. Private consumption rebounded in the first two quarters of the year and investment was buoyant, though volatile. Employment has risen to historic heights. However, Russia's war on Ukraine has precipitated substantial inflationary pressures, particularly in the energy sector, which are spilling over into other goods and services. An erosion of real disposable income and wealth, combined with high uncertainty, has weighed on consumer sentiment and spending and is slowing private consumption growth. The energy crisis, persisting supply bottlenecks, tightening financial conditions and a deteriorating global economic outlook are set to negatively affect the corporate sector, although multinational corporations are expected to remain fairly resilient and ensure continued high export activity. Ireland's real GDP is expected to record growth of 7.9%, in 2022 higher than previously projected, but it is set to moderate in 2023 and 2024 to 3.2% and 3.1%. Modified domestic demand is expected to grow by 8.3% in 2022, 6.0% in 2023 and 2.8% in 2024. Inflation is also expected to be higher for longer.

The outlook for public finances is favourable, in spite of risks on the downside. In its Budget 2023 publications, the Irish government announced a 'cost of living' focused package of EUR 11 billion – consisting of both tax reductions and additional public spending, with the expectation of a budget surplus in 2023 and beyond. Long-term fiscal sustainability risks persist, due to the cost of population ageing and a possible reversal of currently buoyant growth in corporate tax receipts. Risks to the fiscal outlook overall are somewhat tilted to the downside given the challenging macroeconomic backdrop.

The Irish financial system remains sound and has not suffered any major setbacks from the pandemic, but the deteriorating economic outlook warrants some caution. On the whole, Irish banks and their asset quality proved resilient to the shock of the pandemic. Even though credit quality for loans to non-financial corporations deteriorated somewhat, the volume of non-performing loans (NPLs) declined overall. This was achieved by banks continuing to work out legacy NPLs, chiefly on mortgages. Going forward, the rise in inflation and decline in real incomes could put vulnerable borrowers under pressure. Irish retail banks are still struggling with low cost-efficiency and subdued profitability levels. However, their underlying performance should improve as their net interest income is expected to rise in an environment of increasing interest rates. Non-bank lenders have increased their market share, but their competitiveness could be eroded by higher interest rates as their funding costs are impacted by increases in the cost of wholesale funding.

Ireland retains the capacity to service its debt. Ireland enjoys favourable market access in the face of increasing interest rates. There is only one bond redemption in 2023.

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1. INTRODUCTION

Staff from the European Commission, in liaison with staff from the European Central Bank (ECB), visited Dublin from 4 to 6 October 2022 for the 17th post-programme surveillance (PPS) visit to Ireland. Staff from the European Stability Mechanism (ESM) participated in these in-person meetings on aspects relating to the ESM's early warning system. Under PPS, the Commission carries out regular review visits to EU Member States that have had an EU-supported financial assistance programme. The objective of the PPS visit is to assess the economic, fiscal and financial situation to ensure the Member State maintains its capacity to service its debt to the European Financial Stabilisation Mechanism (EFSM), the European Financial Stability Facility (EFSF) and bilateral lenders ([3]).

This report reflects information available and policy developments that have taken place up to 31 October 2022. The macroeconomic and budgetary projections, including those underlying the debt sustainability analysis, are in line with the Commission 2022 autumn forecast released on 15 November 2022 (with cut-off date 31 October 2022).

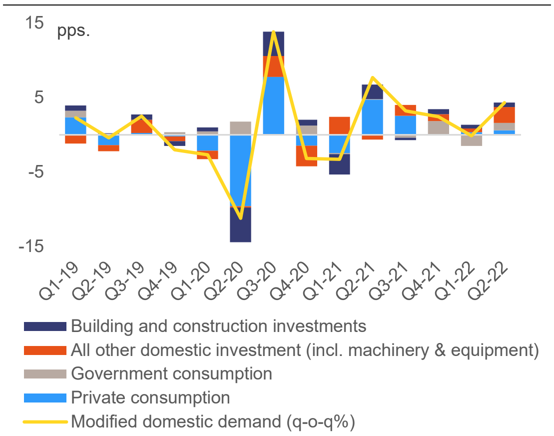
([3]) Ireland has already repaid the outstanding bilateral loans from Denmark and Sweden, early and in full. On 26 March 2021, Ireland also completed the repayment of the outstanding bilateral loan from the UK. Under Regulation (EU) No 472/2013, PPS will continue until at least 75% of the financial assistance received under the programme has been repaid. Under the current repayment schedule, PPS will last until 2031.

2. RECENT ECONOMIC DEVELOPMENTS

The outlook for GDP growth remains positive, albeit subject to heightened uncertainty. In the first half of 2022 Ireland's real GDP grew by 10.9% year-on-year, well above the euro area average of 4.7%, while modified domestic demand increased by 11.9%. GDP growth is expected to be strong in 2022, particularly supported by exports by multinational corporations (see Graph 2.1). The worsening external environment, high inflation, and significantly higher uncertainty are set to cause economic growth to slow somewhat in 2023 and 2024. However, the dynamic and resilient multinational sector is expected to continue to bolster the economy and keep real GDP growth rates in robustly positive territory.

Investment activity is projected to be strong in 2022. In the first half of 2022, headline investment grew by 22.5% year-on-year. Building and construction activity increased by 18%, beating expectations. Investment is expected to maintain its momentum, despite rapidly rising input prices and persisting labour shortages. Headline investment remains heavily influenced by investment by multinational corporations, which tends subsequently to drive up their exports. Public investment is also set to gather speed.

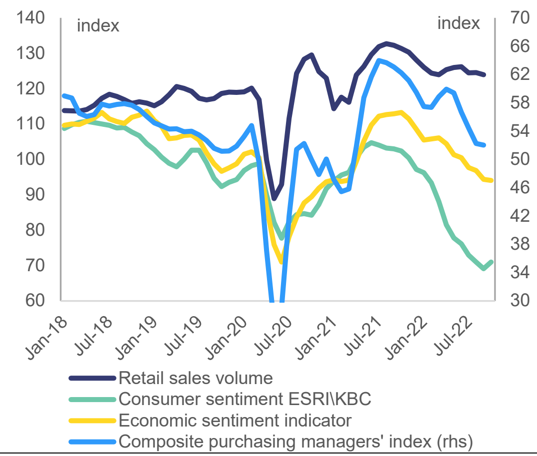
Graph 2.1: **Drivers of domestic growth**



Source: Central Statistics Office (CSO).

Private consumption benefitted from the full reopening of the economy, but rising inflation reduces real disposable incomes and constrains spending. Following the lifting of the final pandemic-related restrictions in February 2022, the services sector rebounded. Nevertheless, household spending in the first half of the year remained below pre-pandemic levels, despite increased saving during the pandemic, and which have persisted in recent quarters. Russia's war on Ukraine and the related jump in inflation has saddled consumers with rising living costs and energy bills, the full extent of which is not known yet. Consumer sentiment has worsened since the spring, reaching a decade-low in September, and retail sales have fallen (see Graph 2.2). Further moderation in private consumption can be expected over the coming quarters.

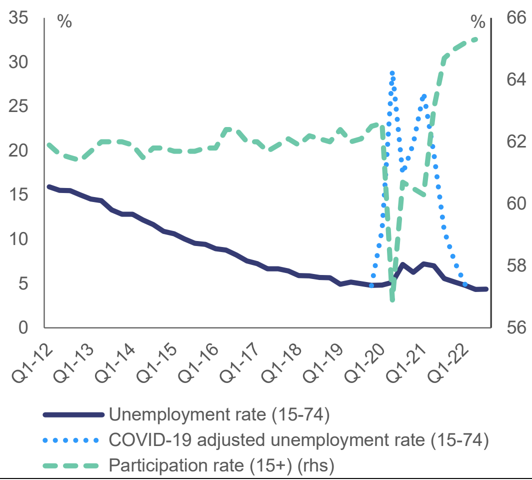
Graph 2.2: **Sentiment indicators and retail sales**



Three-month moving average.
Source: IHS Markis, CSO, European Commission.

The labour market is tight, with employment at record highs. The unemployment rate in Ireland continued to decline in 2022, hovering slightly above 4% over the summer, and is now considered to be near to or even below its natural rate (see Graph 2.3). Employment levels remained firm in the first half of the year despite heightened uncertainty and the ending of the pandemic-related labour market support measures. By mid-summer, 2.55 million people were in work, the highest number on record. Participation rates, particularly among women, have risen substantially since the start of the pandemic, helped by the more flexible working arrangements that have become common. Youth activity has also increased substantially over the past few quarters, notably in the hospitality sector, as the pandemic period triggered cross-sectoral labour reallocation. Skill and labour shortages are widespread, though particularly noticeable in the information and telecommunications sector, the pharmaceutical industry and construction, reflected in high vacancy rates. Inward migration has picked up, with non-Irish nationals contributing materially to the expanding labour force and alleviating some labour shortages. Newly arriving foreign workers tend to be highly qualified, with nearly 70% of those arriving in 2022 having a third-level education, typically finding their way into the information and communications technology (ICT), health and other services sectors ([4]). Ukrainian refugees also added to the labour force, though their participation rates tend to be lower due to the composition of arrivals (predominantly women with children). By end-September, almost 55 000 Ukrainians had arrived in Ireland and almost 8 000 were working. Employment is expected to keep increasing but at a moderating pace, in line with the projected slowdown in economic activity.

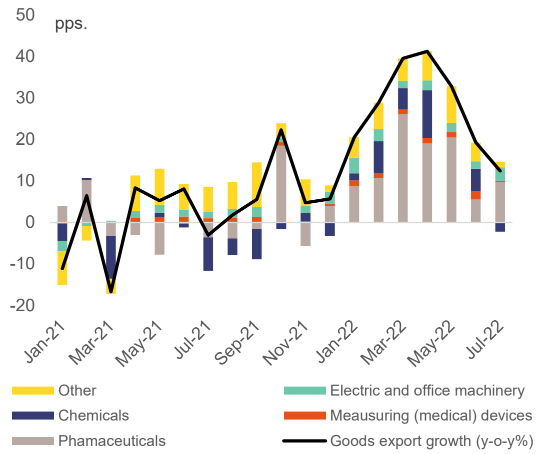
Graph 2.3: **Unemployment and participation rates**



Six-month moving average.
Source: CSO.

Exports, notably by multinational corporations, remain the driving force behind Ireland's very high economic growth. Medical and pharmaceutical products dominate the export of goods, followed by chemical products (see Graph 2.4). In services exports, ICT services lead the field. These sectors are generally expected to remain resilient at the current juncture, and to take a growing share of gross value added, although there have been some signs of a potential slowdown in the global ICT sector. The US dollar's appreciation against the euro is set to benefit Irish exports, as pharmaceutical and ICT exports are priced in US dollars. Supply chain difficulties have reportedly diminished, easing constraints on production and exports. Notwithstanding these positive developments, Ireland's high concentration of exports in a few fields and companies may lead to growth volatility and increases the risk to the outlook.

Graph 2.4: **Drivers of export growth**

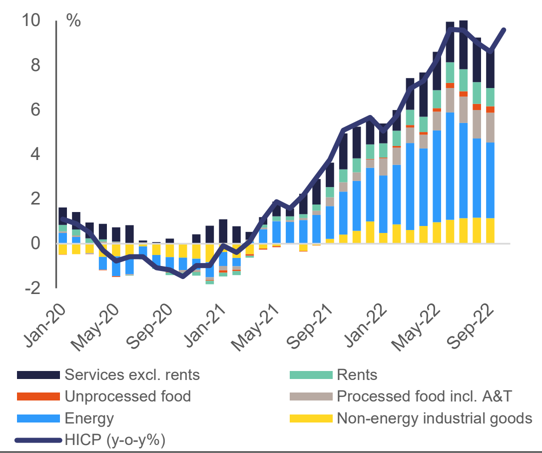


Source: CSO.

Inflation based on the harmonised index of consumer prices (HICP) remains at very elevated levels. Energy prices still dominate the price increases (see Graph 2.5). Inflationary pressures look set to persist for longer than previously thought, as the estimated transmission lag from wholesale to retail gas and electricity prices has been revised upwards – to around 12 months or more[4]. Substantial rises are now also recorded across most goods and services in the HICP basket. This suggests that second round effects of the high energy prices are developing at a time when supply bottlenecks are not yet fully solved, and both contribute to higher inflation. Furthermore, the tight labour market might fuel wage increases in Ireland, and the risk of a wage-price spiral is increasing. At the same time, shortages of some products, such as food, are diminishing. The HICP inflation forecast has hence been revised upwards and is set to peak around late 2022 and early 2023. Risks are tilted to the upside as Russia's war on Ukraine drags on, with potential repercussions for energy shortages, while China maintains its zero-Covid policy, adding further trade frictions.

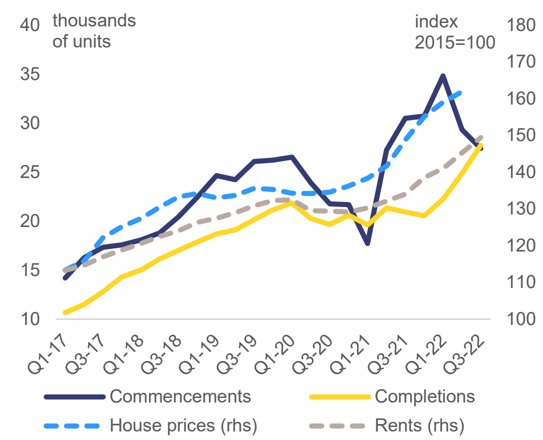
([4]) Central Bank of Ireland (2022) Q4 2022 Quarterly Bulletin.

Graph 2.5: **HICP inflation components**



Source: Eurostat.

Graph 2.6: **Housing developments**



Source: CSO, Eurostat, Department of Housing.

The pace of housing construction is expanding but is still subject to supply bottlenecks. After 2 years of relatively unchanged annual housing output, housing completions started to pick up in the first three quarters of 2022 to almost 28 000 units annually (see Graph 2.6). However, a decrease in housing commencements in Q2 and Q3 suggests that completions will not increase much further in the short term and will remain far below estimated demand. Supply bottlenecks, particularly in the labour force, as well as stringent planning processes and the rising cost of construction materials continue to strain the affordability and delivery of new projects.

House prices in Ireland continued to increase in of 2022. Price rises reflect high demand from excess savings and the continued supply shortfall. In nominal terms, house price growth was 12.2% in August, with price increases slightly higher outside Dublin (14.2%) than in the capital (9.7%). The Commission and ECB assessments find no signs of house price overvaluation, although analysis from the Economic and Social Research Institute did find some overvaluation ([5]). House price growth is expected to moderate in the second half of 2022 as real incomes decrease and mortgage interest rates increase.

Rental prices showed strong growth in the first half of 2022 as the market remained very tight. According to rental platform data, the number of properties available for rent reached new record lows at the end of Q2 2022 and less than a quarter of pre-pandemic levels ([6]). Limited supply was further strained by strong inward migration and efforts to house Ukrainian refugees. In addition, many small-scale landlords have reportedly been exiting the rental market in recent years. This has partly been in response to rent controls in rent pressure zones but also in order to achieve high sale prices.

The outlook for commercial real estate has been stable overall even as construction costs and macro-financial uncertainties have rapidly increased. The industrial and logistics segments have been performing best with high levels of investment and low vacancy rates. This is mainly due to re-shoring of activities following Brexit and a structural shift to e-commerce ([7]). Office sector investment continued to grow as demand from new companies arriving in Ireland has outpaced the shift to home-working. Retail sector investments slowed down following a long-term structural trend ([8]).

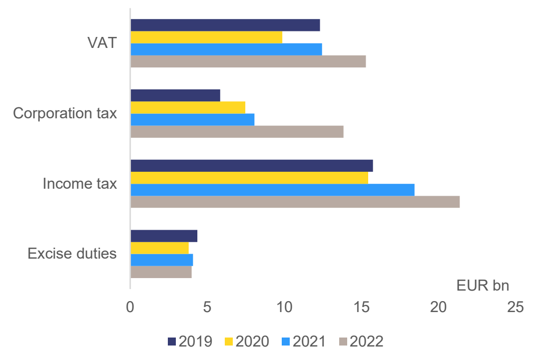
([5]) Economic and Social Research Institute (2022) Quarterly Economic Commentary, Autumn 2022.

([6]) Daft.ie (2022) Q3 Rental Price Report.
([7]) CBRE (2022) Dublin Industrial & Logistics Market Overview Q3 2022.
([8]) CBRE (2022) Dublin Retail Market Overview Q3 2022.

3. PUBLIC FINANCE

The Irish Exchequer's position is strong, as confirmed by a surplus on a twelve-month rolling basis of about EUR 7 billion as of September 2022. Tax revenues increased by 26% year-on-year in the first 9 months of 2022. Part of this increase is due to a low base as pandemic restrictions were still strict in the first half of 2021. The tax heading with the strongest annual increase was corporation tax at about 70% (see Graph 3.1). Income tax receipts for the first 9 months of 2022 were up by 16% compared to the same period in the previous year amid the labour market's continued strong performance. Value added tax receipts grew by more than 20% in the first 9 months of 2022. Total expenditure decreased by 1.8% year-on-year in the first 9 months of 2022, with a 23% fall in social protection spending, reflecting significantly lower Covid-19-related spending lower than in 2021 (see Graph 3.2).

Graph 3.1: **Main Exchequer tax receipts cumulative till end-September**

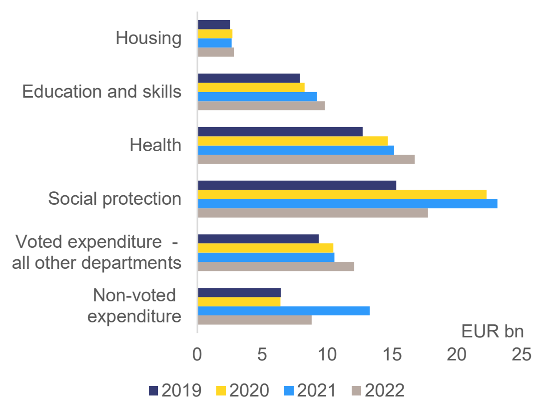


Source: Department of Finance.

The general government deficit turned into a surplus as of the last quarter of 2021. In the first half of 2022, the government recorded a small deficit, which could be considered as a surplus on a seasonally-adjusted basis. In accrual terms, general government revenue in the first half of 2022 increased by 20% compared to the previous year, amid resilient levels of personal consumption and double-digit wage increases. While government expenditure had increased by 5.8% between the first half of 2020 and the first half of 2021, the growth slowed down to 2.0% in the first half of 2022 compared with the first half of the previous year, with subsidies and social benefits falling by about 48% and 11% respectively, while compensation of public employees increased by 7.4%. According to the Commission 2022 autumn forecast, Ireland's general government balance is projected to improve to a surplus of 0.2% in 2022, 0.8% in 2023 and 1.2% in 2024. This broadly matches surpluses of 0.2% of GDP in 2022; 1.1% in 2023, and 1.9% in 2024 projected by the authorities in the Draft Budgetary Plan.

While government debt was already on a declining trend as a percentage of GDP, in the first quarter of 2022 it also decreased in nominal terms. The debt outlook appears benign over the next couple of years. In the Commission 2022 autumn forecast, Ireland's gross general government debt-to-GDP ratio is projected to fall to 44.7% in 2022, 41.2% in 2023; and 39.3% in 2024. According to the Irish authorities, in GNI* ([9]) terms – a metric that shows the debt burden in relation to the size of the purely domestic economy – the government debt ratio is projected to fall to 81.5% in 2022; 78.3% in 2023; and 73.3% in 2024.

Graph 3.2: **Exchequer expenditure by department cumulative till end-September**



Source: Department of Finance.

Ireland continues to face fiscal-structural challenges. The fiscal sustainability challenges of the pension system are largely unresolved. Despite a wide consensus among international institutions and analysis from Ireland's Department of

([9]) Modified gross national income (GNI*) reflects the income standards of Irish residents more accurately than GDP. It differs from actual GNI in that it excludes, for example, the depreciation of foreign-owned, but Irish-resident, capital assets (notably intellectual property and assets associated with aircraft for leasing) and the undistributed profits of firms that have re-domiciled to Ireland.

Finance ([10]) that 'policy reforms such as linking the state pension age to life expectancy could significantly reduce the cost burden' of an ageing population, the Irish government maintained the state pension age at 66. However, from 2024, people will be given the option to continue working up until the age of 70 in return for a higher pension ([11]). Moreover, as of January 2024 and phased in over 10 years, Ireland will move to a 'total contributions' approach – linking people's pension rates to the number of years they have worked and paid contributions.

In planning their expenditure for 2023, the Irish government showed a broad adherence to fiscal responsibility. In a temporary deviation from the '5 per cent' expenditure rule, core spending growth has been allowed to rise to 6.3% which still falls within the range of prudence. The tax base is still narrow — for more details please refer to previous PPS reports ([12]) — and the uprating of tax bands in response to inflation, while not fully protecting real wages, is expected to cost in the order of EUR 1 billion in lost revenues. In response to high inflation, the Irish government announced a 'cost of living' focused package of EUR 11 billion as part of Budget 2023 – consisting of both tax reductions and additional public spending. Most of the 'cost of living' measures in 2022 appear targeted to vulnerable households or firms, and most of them preserve the price signal to reduce energy demand and increase energy efficiency. Moreover, Budget 2023 provides for a EUR 2 billion 'Ukraine contingency' in 2023, after estimating a EUR 1 billion expenditure in 2022 for the cost of welcoming refugees fleeing the Russian aggression in Ukraine.

Risks to the fiscal outlook are arguably tilted to the downside. According to the Irish authorities, if inflationary pressures were to accelerate in 2023, additional measures to address the cost of living would negatively affect public finances. The very high intake of corporate taxes is becoming the main short- to medium-term challenge for Irish public finances. Corporation tax (CT) receipts in Ireland have outperformed the economy for 7 years. In 2022, CT receipts are projected by the Irish government to edge just above EUR 21 billion, overtaking VAT as the second tax biggest source of tax revenue by about EUR 3 billion. The Department of Finance estimates that the surplus of 0.4% of GNI* projected for 2022 would become a deficit of 3.1% of GNI* if an estimated windfall corporation tax of EUR 9 billion were removed. Going forward, corporation taxes windfalls are projected by the Irish authorities in the order of 2% of GDP each year between 2022 and 2025. It is thus welcome that as of Budget 2023, the Irish authorities will publish the underlying general government balance (GGB*), a measure that strips out windfall corporate taxes from the GGB. Moreover, the commitment to set aside EUR 2 billion in 2022 and EUR 4 billion in 2023 in a 'national reserve fund' is a positive development, as it signals the importance of avoiding using CT windfalls to fund increases in current expenditure. The Irish authorities continue to work on the assumption that the implementation of international tax reforms, will lead to a permanent loss of EUR 2 billion in CT receipts, relative to baseline, by 2025, phased in from 2024. Fiscal sustainability challenges for Ireland appear low over the short and medium term, and medium over the long term (see Annex 1).

([10]) Submission to Commission on pensions.
([11]) Reform of state pension system.
([12]) For instance, PPS Spring 2022.

4. FINANCIAL SECTOR DEVELOPMENTS

Irish retail banks have maintained adequate capital buffers since the start of the pandemic ([13]). The common equity tier 1 (CET1) ratio of Irish retail banks stood at 16.3% in June 2022, down from 18.1% in December 2021, as the level of CET1 declined and risk-weighted assets increased. These developments were driven by the transfer of assets from banks leaving the Irish market and from the acquisition of other businesses. Also contributing were one-off items related to consolidation in the banking sector and the phasing-out of transitional items as we migrate towards a fully loaded capital landscape. The leverage ratio dropped to 7.0% in June 2022, from 7.5% in December 2021, amid an increase in the overall amount of assets.

Irish retail banks' assets have relatively high risk-weight densities, which increases the cost of capital and may push up lending rates. The relatively high risk weights on Irish mortgages and non-financial corporation (NFC) loans compared to European peers are partly a consequence of the financial crisis and the underlying credit quality of the stock of lending, but more recent factors also play a role. Since the financial crisis, estimates of the probability of default have been higher and more cyclical for Irish banks than for their European peers. ([14]) This is mainly due to the high default rate for mortgage loans that were originated before the global financial crisis when lending standards were looser. Loss given default estimates have also been higher than the EU average, leading to higher overall loss assumptions for loans on the banks' books and thus to higher risk weights. While average risk weights on loans have declined over recent years, they are still significantly above European averages. Higher average risk weights will directly improve a bank's capacity to absorb losses, proportionate to the higher risk of losses that they face. However, the resulting higher capital charges are a cost factor for Irish banks and, along with higher operating costs and other factors such as lower levels of competition, provide a potential, partial explanation for overall higher interest rates in the Irish retail market. ([15])

Irish banks continue to show high liquidity levels as they head into more uncertain waters. Since the onset of the pandemic, banks have seen their liquidity buffers grow in line with household saving activity. Between end-2021 and June 2022 customer deposits rose further, from EUR 203.7 billion to EUR 208.9 billion. As in June 2022, the three Irish retail banks reported high liquidity ratios, with liquidity coverage ratios above 200% and net stable funding ratios above 145% in all three banks (the minimum requirement for both indicators is 100%). The increase in interest rates since spring 2022 also means somewhat higher funding costs for banks, which have already stopped applying negative rates on large customer deposit accounts. In this context, the liquidity positions of Irish banks could be significantly impacted by a possible decline in household savings and deposit rates, coupled with higher funding costs and lower flows of deposits from central banks. Such developments require close monitoring at institutional level.

Irish retail banks recorded positive returns in the first half (H1) of 2022, but profitability and cost-efficiency remain low compared to European peers. In H1 2022, their return on equity and return on assets (respectively 5.30% and 0.50%) were higher than in 2019 (3.24% and 0.38%), albeit slightly lower than in 2021 ([16]). Improvements in profitability were driven in particular by the reversal of some of the impairments booked in 2020, as credit quality proved more resilient than anticipated and banks released part of the provisions booked from model overlays. Increases in net fee and commission income also contributed. Retail banks continued their efforts to diversify income streams, but in

([13]) The three Irish retail banks are Bank of Ireland, Allied Irish Banks Group and Permanent TSB, together comprising about 45% of bank capital allocated in Ireland. Given the significance of the retail banking sector for the Irish domestic economy, in particular lending to households and SMEs, they are the main focus of this analysis. Ulster Bank Ireland and KBC Ireland are no longer included in this group as they are winding down their Irish businesses.

([14]) The key requirement for banks (under EU legislation) is that the probability of default must be estimated from long-run, one-year default rates and that the historical series must include both good and bad years.

([15]) For a detailed discussion of the topic, see Paul Lyons and Jonathan Rice, *Risk Weights on Irish Mortgages*, Central Bank of Ireland, Financial Stability Notes, Vol. 2022, No 01, regarding mortgages. For loans to NFCs, see Paul Lyons and Jonathan Rice, *Risk Weights on Non-Financial Corporate Lending by Irish Retail Banks*' Central Bank of Ireland, Financial Stability Notes, Vol. 2022, No 4.

([16]) Half year results are annualised, to allow for comparison with full year figures.

Table 4.1: **Financial soundness indicators, all domestic and foreign banks in Ireland**

	Ireland										Euro area	EU
in %	Q4-2016	Q4-2017	Q4-2018	Q4-2019	Q4-2020	Q1-2021	Q2-2021	Q3-2021	Q4-2021	Q1-2022	Q1-2022	Q1-2022
Non-performing loans	13.1	9.9	5.5	3.4	3.4	3.1	2.8	2.4	2.4	2.1	1.9	1.9
o/w NFC sector	15.3	11.8	5.7	3.2	6.2	6.3	6.2	5.9	6.1	5.1	3.7	3.6
o/w HH sector	17.4	15.5	10.1	7.2	6.8	6.3	5.8	5.0	4.7	4.7	2.3	2.3
Coverage ratio	35.5	29.9	28.5	27.5	30.2	28.3	29.1	28.5	30.6	31.4	46.5	46.3
Return on equity(1)	6.3	5.0	4.9	3.7	-2.2	3.8	4.4	4.2	4.5	1.9	4.9	5.2
Return on assets(1)	0.9	0.7	0.7	0.5	-0.3	0.4	0.5	0.4	0.5	0.2	0.3	0.3
Total capital ratio	25.0	25.2	25.4	24.9	25.4	25.6	26.0	25.7	25.5	24.8	18.6	18.8
CET 1 ratio	22.2	22.9	22.9	22.3	22.3	22.4	22.6	22.3	22.2	21.5	15.3	15.5
Tier 1 ratio	23.0	23.4	23.4	23.0	23.3	23.5	23.7	23.4	23.3	22.6	16.3	16.5
Loan to deposit ratio	93.2	95.3	90.2	91.5	83.9	81.2	76.9	75.7	72.7	75.5	84.0	87.1

(1) For comparability reasons, annualised values are presented.
Source: ECB - Consolidated banking data; own calculations.

June 2022 interest income still accounted for 72% of their operating revenues. Two foreign-owned banks are withdrawing from the Irish market, which may provide incumbent retail banks with profitable opportunities, as they see their market shares increase. On the cost side, banks' restructuring has not yet led to a reduction in operational expenses, with cost-to-income ratios remaining high (73.1%) compared with the EU average (61.4%).

The higher interest rate environment is expected to have a positive impact on retail banks' profitability levels in the short and medium term. Historically, Irish retail banks have mainly provided credit at variable rates. However, as interest rates have declined in recent years, the share of new non-financial private-sector loans with a variable rate or with an initial fixation period of up to 1 year, has dropped – from 73.4% in December 2019 to 57.7% in July 2022. For new mortgages, the Central Bank of Ireland (CBI) estimated the share of variable rate loans at around 12%. The current increase in official interest rates should benefit banks' net interest income. However, these effects are not yet visible in the banks' profit-and-loss accounts as increased rates had not yet been fully passed on to all customer cohorts at end H1 2022. In the first half of 2022 annualised net interest income was 7.9% lower than at end-2019, while net interest margins sank to their lowest value on record (1.56%), dragged down by banks' excess liquidity. A further caveat to this assessment is the uncertain outlook for loan impairments and provisioning in the higher interest rate environment.

The pandemic saw a deterioration in asset quality in the NFC sector, while the profile of household loans continued to improve as banks made progress in working out their mortgage non-performing loans (NPLs). The amount of NPLs has come down in recent years but is still significant. Although the pandemic has not caused an increase in the NPL ratio, a larger share of performing loans is now in the stage 2 (riskier) category. Household loans, backed by extensive fiscal support and a marked rise in house prices, saw less of an inflow into the stage 2 category than corporate loans. Going forward, high inflation and the economic slowdown may impact the weakest borrowers in Ireland. However, so far inflationary pressures and rising interest rates have not translated into a clear credit deterioration in banks' portfolios.

The overall amount of NPLs held by Irish retail banks stood at EUR 7.4 billion in June 2022, corresponding to an NPL ratio of 3.2%, down from EUR 7.9 billion (5.4%) in December 2019. NPLs had risen in 2020, due to the introduction of the new European Banking Authority definition of default, peaking at EUR 10.0 billion in December 2020. NPLs subsequently declined, as banks made progress in working out their NPLs through portfolio sales and securitisations, while also benefiting from improvements in asset quality. The speed and size of deals have moderated compared to previous years, but the value of deals was still EUR 3.0 billion in 2021 and EUR 0.55 billion in the first half of 2022. The coverage ratio ([17]) for NPLs was 29.9% in June 2022, down from 31.9% in December 2021. These figures are low in the European context but may be partly justified by the high share of collateralised

([17]) Excluding the two retail credit institutions which are exiting the Irish market.

assets in Irish loan portfolios, which typically require lower provision coverages.

NPL reductions were concentrated in the mortgage sector, whereas in the NFC segment the volume of NPLs is now higher than immediately before the pandemic (end-2019). NPLs in the NFC segment rose by EUR 1.5 billion to EUR 3.7 billion (ratio of 6.7%) between December 2019 and June 2022, while over the same period NPLs on mortgages declined by EUR 2.2 billion to EUR 3.0 billion (ratio of 3.6%). The inflow into NPLs was concentrated in the small and medium-sized enterprise (SME) segment, in those sectors that were severely impacted by the pandemic. The pandemic also saw an inflow into the stage 2 category of more risky loans, especially for NFC loans, and, in June 2022, 24.1% of NFC loans were classified at stage 2, up from 9.9% at end 2019.

Payment breaks granted by Irish banks to their customers at the onset of the pandemic have expired, and the credit quality of loans affected has worsened. Among Irish non-financial private-sector borrowers, 15% took a payment break, deferring payment of EUR 23.5 billion in total. These breaks had almost all ended by end-2020. The worst outcome was seen in the commercial real estate (CRE) sector where 59% of loans exiting a moratorium were in stage 2 and 11% in stage 3, while 48% were under forbearance measures. The outcome was better for households, especially mortgages, with 17% of this segment in stage 2 in June 2022.

A strong housing market buoyed mortgage lending in 2022. Mortgage lending saw a brisk rebound after the pandemic, as in other EU countries. While the outstanding amount of mortgage lending slightly exceeded its pre-pandemic level in June 2022, an increasing share of this new lending has come from non-bank lenders. Looking at mortgages from retail banks only, the outstanding volume was EUR 83.7 billion in June 2022, 9.8% below the amount in December 2019 ([18]). Banks' disposal of large amounts of mortgage NPLs over this timeframe contributed to such decrease in outstanding volumes. Interest rates on new mortgages have not yet reacted to the rise in market interest rates. Since banks keep paying low interest on deposits, their main source of funding, they have not felt pressure to increase their lending rates. In fact, rates on new mortgages in Ireland dropped slightly over the year to July 2022, while rising in most other euro area countries.

Lending to the SME sector recovered from pandemic lows but remains subdued. Lending to SMEs strengthened in the first half of 2021 but remained below its pre-pandemic levels. Total new lending to Irish-resident SMEs grew by 3.8% year-on-year in the first half of 2022, to a total of EUR 2.2 billion, partly reflecting the strengthening business environment, but also the phasing-out of government support schemes. ([19]) New lending has not yet reached pre-pandemic levels, as EUR 2.6 billion had been provided to SMEs in the first half of 2019. In the September 2022 SME credit demand survey, most Irish SMEs (76%) claimed to have sufficient internal funds.

The size of the Irish-domiciled market-based financial sector is approximately 24 times the size of the national economy, as measured by GNI*. According to CBI estimates, overall the sector holds assets worth over EUR 5.3 trillion, mostly allocated to the US (around 30%), other EU Member States (close to 20%) and the UK (18%). Equity and bond funds remain the largest asset holders. Property funds, though limited in size compared to other fund classes, are the most interlinked to the Irish economy. As at September 2021, they held assets worth EUR 21.5 billion in Irish property and land, accounting for approximately 44% of the investable Irish CRE market. Across the market-based financial sector, the weakening economic outlook, high market volatility and tightening monetary policy could lead to a build-up and materialisation of risks on accumulated vulnerabilities and deserve careful monitoring.

Non-bank lenders play an important role in the Irish retail market, but increasing funding costs are curbing their competitiveness. Loans from non-banks still make up a significant share of the Irish credit market, especially in segments such as SME loans, for which in 2021 non-banks provided

([18]) Figures on outstanding mortgage volumes include securitised loans.

([19]) Figures in this paragraph are sourced from statistics published by the Central Bank of Ireland and refer to all credit institutions resident in Ireland, not only retail banks.

36% of new credit (up from 28% in 2019-2020). The share of mortgage loans from non-banks has also increased in recent years, and in 2021 accounted for 14% of the total. Non-bank lenders are subject to different, and generally less strict, regulations to banks. They rely predominantly on wholesale funding, in contrast to deposit funding for banks. During the period of low interest rates, non-bank mortgage lenders increased lending and reduced their average lending rates, which, from 2018 onward, were even lower than retail banks' rates. However, over the past few quarters, funding costs have increased significantly and, as many of these operators finance themselves through wholesale markets, these costs have translated into higher credit pricing, reducing their attractiveness. While these developments may have reduced their loan origination capacity, credit from non-bank lenders remains key in several market segments.

The size and complexity of market-based entities puts a premium on sound regulation. Although market-based financial entities have only a limited exposure to the domestic economy, the size and volatility of the sector has financial stability implications at both national and international level. The CBI's macroprudential mortgage measures apply to these entities' business in the Irish residential property sector. Looking to investment funds investing in the Irish property market, the CBI is currently considering new leverage requirements and liquidity guidelines for funds with over 50% of total assets directly or indirectly in Irish property. A decision, following a public consultation, is expected in November 2022. Concerning non-bank loan originators, the CBI is enhancing its analysis of entities that lend to households and businesses, to deepen its understanding of the underlying dynamics in this market segment.

The deteriorating global macroeconomic environment poses some risks for the Irish financial sector, but its impact will likely remain contained compared with other European countries. Ireland is shielded to some extent given the strong presence of international technology companies and its comparatively low dependence on energy imports, as well as by a comparatively resilient economic outlook (see Ch. 2). However, as in other countries, wages are not keeping up with inflation and real incomes are being eroded. The most vulnerable borrowers may come under pressure and face difficulties servicing their debt. Covid support schemes for businesses are generally closed for applications but are still providing active support. Examples include the credit guarantee scheme and the tax warehousing scheme.

Risks are increasing in the housing market, but loan to value (LTV) and loan to income (LTI) ceilings have been conservative. Over the past few years, house price growth has been outpacing incomes, raising the risk of imbalances. To contain risks building up in the mortgage market, in 2015 the CBI introduced mortgage measures, setting LTV and LTI ceilings. Mortgage lenders may exceed these ceilings for a set proportion of their lending. This allowance is granted over a calendar year and, since 2021, it may be carried over to the next year if not fully used. Looking at actual lending, over the past years, LTVs have trended down slightly while LTI values have increased, aligning with rising residential property prices that have outstripped income growth. Limited housing supply, exacerbated by the ongoing increases in construction costs, makes a downward price correction less likely. In October 2022, the CBI finalised a review of its mortgage measures, which will be valid from 1 January 2023 and which includes an increase in the LTI threshold for first-time buyers from 3.5x to 4x, a higher LTV threshold for second-time buyers, up from 80% to 90%, and increased flexibility in the use of allowances.

The CBI has decided to use the countercyclical capital buffer (CCyB) and the other systemically important institutions (O-SII) buffer as its main macroprudential capital tools. The Central Bank published its framework for macroprudential capital in June 2022, after drawing lessons from developments over the last decade, including the pandemic. It decided to use the CCyB as the primary macroprudential buffer against macro-financial risks, while the systemic risk buffer will not be activated. The CCyB will target a 1.5% rate when risks are neither elevated nor subdued and will be used in combination with the O-SII for all systemically important institutions. In June 2022, the CBI announced an increase in the CCyB from 0% to 0.5% taking effect from June 2023, as pandemic risks have reduced and the economy has experienced a strong recovery. Given the comfortable capital buffers currently observed in the Irish banking system, the CBI does not expect the introduction of the CCyB to have a material impact on the supply of credit.

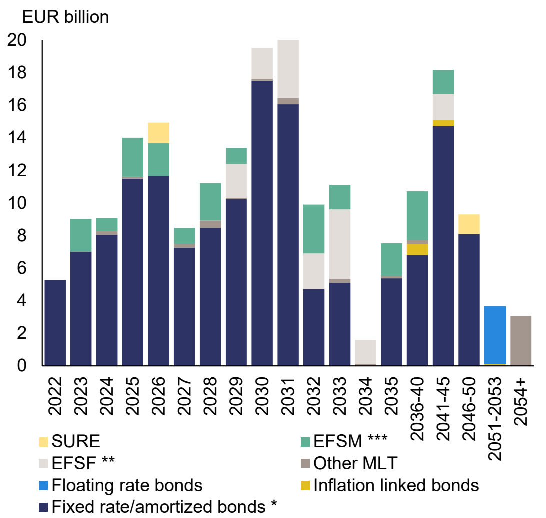
5. SOVEREIGN FINANCING AND THE CAPACITY TO REPAY

Ireland holds large cash balances, on the back of a strong fiscal position and a funding strategy focused on maintaining stability and predictability. The National Treasury Management Agency (NTMA) issued EUR 7 billion nominal in long-term bonds in 2022 ([20]), at an average maturity of almost 15 years and a weighted average yield about 1.1%. Cash balances are projected at EUR 19 billion at the end of 2022 and a broadly similar level at the end of 2023. There is one bond redemption planned in 2023, for EUR 7 billion in the first quarter of the year.

Ireland enjoys favourable market access amid increasing interest rates. Following a period of accommodative monetary policy – including the set of monetary policy actions undertaken by the ECB in response to the COVID-19 crisis – since December 2021, the ECB started a path of monetary policy normalisation ([21]). It should be recalled, however, that the ECB has announced its intention to reinvest the principal payments from maturing securities under the Pandemic Emergency Purchase Programme and Asset Purchase Programme. The tightening of financing conditions is also reflected in the raising of yields for the 10-year Irish government bond (to 2.4% at the end of September 2022), while spreads against the German benchmark have remained stable at around 55 basis points.

The Irish sovereign credit-rating outlook is stable. As of September 2022, Standard & Poor's gave Ireland a 'stable' outlook and ratings of AA- in the long term and A-1+ in the short term; Moody's gave a 'positive' outlook (P-1 short term; A1 long term) and Fitch Ratings gave a 'stable' outlook (F1+ short term; AA- long term). Although its funding needs are small and generally well-covered by a large cash balance, Ireland plans to announce its funding range for 2023 later in 2022. Interest expenditure on government debt is projected to remain stable at 1.3% to 1.4% of GNI* up to 2024. Going forward the main risk factors are a potential drop in corporate tax revenues and the persistence of high inflation.

Graph 5.1: **Maturity profile of medium- and long-term debt (end-September 2022)**



The Irish programme was the second euro-area assistance programme, and the first financed by two new financial assistance instruments established in 2010, the EFSF and the EFSM.
* Includes NTMA repo activity.
** EFSF loans reflect the maturity extensions agreed in June 2013.
*** EFSM loans are also subject to extension, such that their original aggregated weighted average maturity will be a maximum of 19.5 years. The table and graph above reflects both original and revised maturity dates of individual EFSM loans.

Source: NTMA.

Ireland's retains the capacity to service its debt. The next EFSM maturity of EUR 2 billion is scheduled for 2023. Ireland does not have to repay any of its EFSF loans before 2029, by which time it is scheduled to have repaid a further EUR 8.5 billion in EFSM loans. Funding requirements for 2023 are driven primarily by bond and EFSM loan maturities, mitigated somewhat by a projected Exchequer surplus. As of the end of 2021, 'sticky' sources – such as official loans, Eurosystem bond holdings, and domestic retail holdings – accounted for about 60% of Irish government debt, and the investor base was wide

([20]) EUR 7.1 billion including funds raised in non-competitive bond auctions.
([21]) The announcement that net purchases under the pandemic emergency programme would conclude in March 2022 was followed by the curtailment and the eventual cessation of net purchases under the asset purchase programme by the start of the third quarter of 2022, as well as the ECB's communication on the likely timing of interest rate lift-off, in line with its forward guidance. In July 2022. the ECB then raised the three key rates for the euro area (interest rates on the main refinancing operations, on the marginal lending facility and on the deposit facility) by 50 basis points and approved the Transmission Protection Instrument (TPI). Subsequently, the ECB increased the three key rates by 75 basis points in September 2022, and by a further 75 basis points in October 2022.

and varied. The Recovery and Resilience Facility will also support growth and its potential by providing Ireland with a total of €915 million in grants to finance high-quality investment and productivity-enhancing reforms without a direct impact on the general government deficit and debt.

Table 5.1: **Government financing plans**

EUR billion	2021	2022
Funding requirement		
Exchequer borrowing requirement (EBR) (1)	7.4	-0.3
Bond maturities	0.0	11.8
Net short-term paper	4.2	0.0
UK bilateral loan	0.5	0.0
Other (2)	3.6	5.5
Total requirement	***15.7***	***17.0***
Funding sources		
Government bonds (3)	20.4	6.9
SURE Programme	2.5	0.0
Other (4)	2.9	1.9
Use of cash (- represents an increase)	-10.1	8.3
Total sources	***15.7***	***17.0***
Financial buffer (5)	**27.5**	**19.2**

Rounding may affect totals. 2022 figures are estimates, as of September 2022.
(1) 2022 estimate as per Department of Finance, Budget 2023.
(2) Includes FRN purchases, and for 2022 general contingencies, including for potential bond purchases.
(3) 2021 reflects cash proceeds from syndications and auctions, including non-competitive auctions and inflation linked issue. On 28 September 2022, the NTMA announced there would be no bond issuance in Q4 2022 meaning total nominal issuance for the year is EUR 7bn; the cash proceeds, including from the non-competitive auctions, are shown in the table.
(4) This category is mostly comprised of net state savings (retail), and other medium/long-term borrowing.
(5) Exchequer cash and liquid assets; excludes other non-liquid Exchequer financial assets.

Source: NTMA.

ANNEX 1
Debt sustainability analysis

This annex assesses fiscal sustainability risks for Ireland over the short, medium and long term. It follows the same multi-dimensional approach as the 2021 Fiscal Sustainability Report, updated based on the Commission 2022 autumn forecast. ([22])

A1.1. SHORT-TERM RISKS

Ireland is assessed to face low fiscal sustainability risks in the short term. The Commission's early-detection indicator (S0) does not signal major short-term fiscal risks. Government gross financing needs are expected to remain limited at about 4.5% of GDP in 2023-2024, compared to a peak of 12% in 2020 (Table 1). Financial markets' perceptions of sovereign risk are investment grade, as confirmed by the main rating agencies.

A1.2. MEDIUM-TERM RISKS

Medium-term fiscal sustainability risks for Ireland appear low overall. According to the Commission DSA for Ireland, under the baseline, the government debt-to-GDP ratio is expected to decline over the medium term, falling to 26% of the GDP in 2033) (Graph 1). ([23]) These baseline projections rest on a 'no-fiscal policy change' assumption where no additional fiscal measures are incorporated beyond the end of the Commission forecast in 2024. The assumed structural primary balance appears broadly in line with past fiscal performance. Moreover, the baseline projections benefit from a favourable nominal interest-growth rate differential, thanks also to the favourable impact of Next Generation EU, with real GDP growth at around 3% of GDP over 2025-2033. Government gross financing needs are expected to remain relatively low over the projection period, at about 4% of GDP in 2033, slightly below the level forecast for 2024.

These baseline projections are stress-tested against alternative assumptions. Four alternative scenarios around the baseline illustrate the impact of changes in key assumptions (Graph 1). ([24])

Reverting to historical fiscal trajectories under the 'historical structural primary balance' scenario would entail a smaller reduction of the government debt ratio. If the structural primary balance (SPB) gradually converged to a deficit of 1.8% of GDP (its 15-year historical average), thus worsening the SPB with respect to the baseline, the projected debt-to-GDP ratio would be about 17 pps higher than in the baseline in 2033. The debt ratio would increase as of 2028 under such scenario. Similarly, the 'lower structural primary balance' scenario results in a 11 pps higher government debt-to-GDP ratio by 2033 compared with the baseline.

The impact of the other scenarios on the medium-term debt projections is limited. A permanent worsening of the macro-financial conditions, as reflected under the 'adverse interest-growth rate differential' scenario, is estimated to result in 2 pps higher government debt-to-GDP ratio by 2033, as compared with the baseline. A temporary worsening of financial conditions, as reflected in the 'financial stress 'scenario, is not expected to have a significant impact on the debt-to-GDP ratio by 2033.

([22]) The assumptions underlying the Commission's 'no-fiscal policy change' baseline notably comprise: (i) a structural primary surplus, before ageing costs, of 1% of GDP as of 2024; (ii) inflation converging linearly towards the 10-year forward inflation-linked swap rate 10 years ahead (which refers to the 10-year inflation expectations 10 years from now); (iii) the nominal short- and long-term interest rates on new and rolled over debt converging linearly from current values to market-based forward nominal rates by T+10 (as for all Member States); (iv) real GDP growth rates from the Commission 2022 autumn forecast until 2024, followed by EPC/OGWG T+10 methodology projections between T+3 and T+10, i.e. for 2025-2032 (on average 3.2%); (v) ageing costs in line with the 2021 Ageing Report (European Commission, Institutional Paper 148, May 2021). For information on the methodology, see the Fiscal Sustainability Report 2021 (European Commission, Institutional Paper 171, April 2022).

([23]) The baseline debt projections show the projected government debt and its breakdown into the primary balance, the snowball effect (the combined impact of interest payments and nominal GDP growth on the debt dynamics) and the stock-flow adjustment.

([24]) The 'historical SPB' scenario assumes that the structural primary balance (SPB) gradually returns to its past (15 years, i.e. 2007-2021) average level. In the 'lower SPB' scenario, the SPB level is permanently reduced by half of the cumulative forecast change (i.e. over 2022-2024) in the Commission 2022 autumn forecast. The 'adverse interest-growth rate' scenario assumes a less favourable snowball effect than in the baseline (i.e. the differential between market interest rates and nominal GDP growth is permanently 1 pp. higher). In the 'financial stress' scenario, the country temporarily (one year) faces higher market interest rates in 2023 (i.e. market interest rates are assumed to increase temporarily by 1 pp. in 2023).

Stochastic simulations show a moderate sensitivity of these projections against plausible unforeseen events. ([25]) The stochastic simulations point to a 12% probability of the debt ratio in 2027 being greater than in 2022, entailing low risks given that debt currently stands at about 45% of GDP. Though, such shocks point to some uncertainty surrounding the baseline debt projections (Graph 2). ([26])

The negative fiscal effort associated with bringing the debt ratio to 60% of GDP within 15 years, confirms the low medium-term risk classification. The S1 indicator shows that a deterioration of the SPB by 2.7 pps of GDP, in cumulated terms over 5 years, is compatible with government debt increasing to the reference value of 60% of GDP by 2039. ([27]) This result is mainly driven by the structural primary balance being 2.6 pps above the debt-stabilising SPB and the substantial gap to the 60% of GDP target allowing the SPB to deteriorate by 1.6 pps of GDP. At the same time, a projected increase in ageing-related public spending reduces the headroom measured by S1 by 1.4 pps of GDP. (Tables 2 and 3).

A1.3. LONG-TERM RISKS

Long-term fiscal sustainability risks for Ireland appear medium overall. The S2 indicator points to medium fiscal sustainability risks. ([28]) The indicator shows that, relative to the baseline, the SPB would need to improve by 4 pps of GDP to ensure debt stabilisation over the long term. This result is fully determined by the projected increase in ageing costs (contribution of 4.9 pps of GDP), which is somewhat offset by the favourable initial budgetary position (-0.9 pps of GDP). The projected rise in ageing costs is driven by spending on public pension (contribution of 2.3 pps of GDP), long-term care (1.6 pps) and health care (1.2 pps) (Tables 2 and 3). Combined with the results from the DSA discussed above, long-term risks are assessed as medium.

Finally, several additional risk factors need to be considered in the assessment. On the one hand, risk-increasing factors are related to the current very high intake of corporate taxes that might prove only temporary. Moreover, alternative metrics to GDP and the general government balance – such as GNI* ([29]) and GGB* ([30]) – indicate higher fiscal sustainability risks. On the other hand, risk-mitigating factors include a long maturity of government debt.

([25]) The stochastic projections show the joint impact on debt of 2000 different shocks affecting the government's budgetary position, economic growth, interest rates and exchange rates. The cone covers 80% of all the simulated debt paths, therefore excluding tail events.

([26]) The level of uncertainty is measured by the difference between the 10th and 90th debt distribution percentiles.

([27]) S1 measures the consolidation effort, in terms of the 5-year cumulative change in the structural primary balance compared to the baseline, needed to bring debt to 60% of GDP in 15 years. The risk classification based on S1 depends on the amount of consolidation required. If the S1 value (in pps of GDP) is negative, the country is deemed at 'low risk'; if S1 value is between 0 and 2.5, the country is assigned 'medium risk'; and if S1 value is above 2.5, the country is assigned 'high risk'.

([28]) S2 measures the consolidation effort required to stabilise debt over an infinite horizon. If the S2 value (in pps of GDP) is lower than 2, the country is assigned 'low risk'; if S2 is between 2 and 6, the country is assigned 'medium risk'; and if S2 is above 6, the country is assigned 'high risk'.

([29]) Modified gross national income (GNI*) reflects the income standards of Irish residents more accurately than GDP. It differs from actual GNI in that it excludes, for example, the depreciation of foreign-owned, but Irish-resident, capital assets (notably intellectual property and assets associated with aircraft for leasing) and the undistributed profits of firms that have re-domiciled to Ireland.

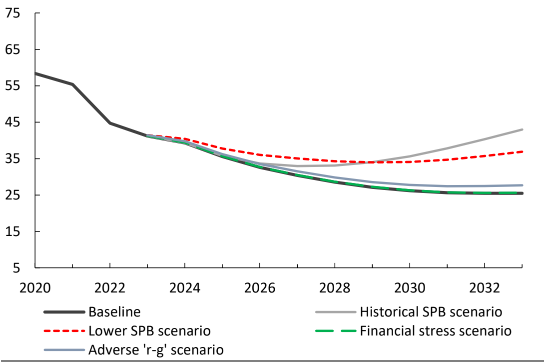
([30]) Underlying general government balance (GGB*) is the fiscal position excluding estimated windfall corporation tax receipts.

Table A1.1: **Baseline debt projections**

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Gross debt ratio (% of GDP)	**58.4**	**55.4**	**44.7**	**41.2**	**39.3**	**35.5**	**32.6**	**30.4**	**28.5**	**27.1**	**26.2**	**25.6**	**25.5**	**25.5**
Change in debt	1.4	-3.0	-10.6	-3.5	-1.9	-3.8	-2.9	-2.2	-1.9	-1.4	-1.0	-0.6	-0.2	0.0
of which														
Primary deficit	*4.0*	*0.9*	*-0.9*	*-1.5*	*-1.9*	*-1.4*	*-1.0*	*-0.5*	*-0.3*	*-0.1*	*0.0*	*0.2*	*0.4*	*0.5*
Snowball effect	*-1.4*	*-6.6*	*-7.9*	*-2.9*	*-2.2*	*-2.3*	*-2.0*	*-1.7*	*-1.6*	*-1.3*	*-1.0*	*-0.8*	*-0.5*	*-0.5*
Stock-flow adjustment	*-1.2*	*2.6*	*-1.9*	*0.9*	*2.3*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Gross financing needs (% of GDP)	12.1	5.9	3.6	4.3	4.8	3.4	3.3	3.0	3.1	3.2	3.1	3.5	3.7	3.8

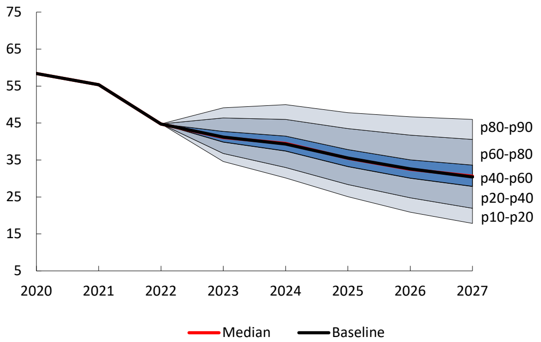
Source: European Commission.

Graph A1.1: **Deterministic debt projections (% of GDP)**



Source: European Commission.

Graph A1.2: **Stocastic debt projections (% of GDP)**



Source: European Commission.

Table A1.2: **Breakdown of the S1 and S2 sustainability gap indicators**

		S1	S2
Overall index (pps. of GDP)		**-2.7**	**4.0**
of which			
Initial budgetary position		-2.6	-0.9
Debt requirement		-1.6	
Ageing costs		1.4	4.9
of which	*Pensions*	*0.9*	*2.3*
	Health care	*0.3*	*1.2*
	Long-term care	*0.3*	*1.6*
	Others	*-0.1*	*-0.1*

Source: European Commission.

Table A1.3: **Heat map of fiscal sustainability risks for Ireland (31)**

Short term	Medium term										Long term	
			Debt sustainability analysis (DSA)									
					Deterministic scenarios							
Overall (S0)	Overall (S1+DSA)	S1	Overall		Baseline	Historical SPB	Lower SPB	Adverse 'r-g'	Financial stress	Stochastic projections	S2	Overall (S2+DSA)
LOW	LOW	LOW	LOW	Overall	LOW	LOW	LOW	LOW	LOW	LOW	MEDIUM	MEDIUM
				Debt level (2033), % GDP	26	43	37	28	26			
				Debt peak year	2022	2022	2022	2022	2022			
				Fiscal consolidation space	58%	79%	71%	58%	58%			
				Probability of debt ratio exceeding in 2027 its 2022 level						12%		
				Difference between 90th and 10th percentiles (pps. GDP)						28		

(1) Debt level in 2033. Green: below 60% of GDP. Yellow: between 60% and 90%. Red: above 90%. (2) The debt peak year indicates wether debt is projected to increase overall over the next decade. Green: debt peaks early. Yellow: peak towards the middle of the projection period. Red: late peak. (3) Fiscal consolidtation space measures the share of past fiscal positions in the country that were more stringent than the one assumed in the baseline. Green: high value, i.e. the assumed fiscal position is plausible by historical standards and leaves room for corrective measures if needed. Yellow: intermediate. Red: low. (4) Probability of debt ratio exceeding in 2027 its 2022 level. Green: low probability. Yellow: intermediate. Red: high (also reflecting the initial debt level). (5) the difference between the 90th and 10th percentiles measures uncertainty, based on the debt distribution under 2000 different shocks. Green, yellow and red cells indicate increasing uncertainty.

Source: European Commission (for further details on the Commission's multidimensional approach, see the 2021 Fiscal Sustainability Report)

(31) The heat map presents the overall fiscal sustainability risk classification. The *short-term risk category* is based on the S0 indicator, an early-detection indicator of fiscal stress in the upcoming year. The *medium-term risk category* is derived from the debt sustainability analysis and the S1 indicator. The DSA assesses risks to sustainability based on several criteria: the projected debt level in 10 years' time, the debt trajectory ('peak year'), the plausibility of fiscal assumptions and room for tighter positions if needed ('fiscal consolidation space'), the probability of debt not stabilising in the next 5 years and the size of uncertainty. The *long-term risk category* is based on the S2 indicator and the DSA.

ANNEX 2
Supplementary tables

Table A2.1: **Fiscal accounts (based on Commission 2022 autumn forecast)**

	2021	2022	2023	2024
	% of GDP			
Indirect taxes	6.9	6.7	6.2	6.1
Direct taxes	10.7	10.3	9.9	9.5
Social contributions	4.0	3.7	3.7	3.5
Sales	0.9	0.9	0.9	0.9
Other current revenue	0.4	0.4	0.4	0.4
Total current revenue	**22.9**	**22.0**	**21.1**	**20.3**
Capital transfers received	0.3	0.3	0.4	0.5
Total revenue	**23.2**	**22.3**	**21.5**	**20.8**
Compensation of employees	6.2	5.6	5.4	5.2
Intermediate consumption	3.8	3.7	3.3	3.1
Social transfers in kind via market producers	1.8	1.6	1.5	1.5
Social transfers other than in kind	7.0	6.2	6.1	5.3
Interest paid	0.8	0.7	0.7	0.7
Subsidies	1.6	0.7	0.4	0.4
Other current expenditure	1.1	0.8	0.8	0.7
Total current expenditure	**22.4**	**19.3**	**18.1**	**17.0**
Gross fixed capital formation	2.0	2.0	2.1	2.2
Other capital expenditure	0.4	0.9	0.4	0.4
Total expenditure	**24.8**	**22.2**	**20.7**	**19.6**
General government balance	**-1.7**	**0.2**	**0.8**	**1.2**
General government balance net of one-offs	**-1.7**	**0.2**	**0.8**	**1.2**
	EUR Billion			
Indirect taxes	29.3	33.8	34.3	35.8
Direct taxes	45.7	52.0	54.4	56.2
Social contributions	17.0	18.8	20.1	20.7
Sales	3.9	4.6	5.0	5.2
Other current revenue	1.5	1.9	2.2	2.3
Total current revenue	**97.4**	**111.1**	**116.0**	**120.3**
Capital transfers received	1.3	1.6	2.2	2.8
Total revenue	**98.7**	**112.7**	**118.2**	**123.1**
Compensation of employees	26.6	28.3	29.6	30.8
Intermediate consumption	16.2	18.4	17.9	18.5
Social transfers in kind via market producers	7.6	8.0	8.4	8.7
Social transfers other than in kind	29.9	31.5	33.4	31.4
Interest paid	3.3	3.6	3.8	4.1
Subsidies	6.9	3.5	2.3	2.4
Other current expenditure	4.8	4.1	4.2	4.4
Total current expenditure	**95.3**	**97.4**	**99.6**	**100.2**
Gross fixed capital formation	8.6	10.2	11.5	13.3
Other capital expenditure	1.8	4.4	2.4	2.3
Total expenditure	**105.7**	**111.9**	**113.5**	**115.8**
General government balance	**-7.1**	**0.9**	**4.6**	**7.2**
General government balance net of one-offs	**-7.1**	**0.9**	**4.6**	**7.2**

Source: Eurostat and European Commission.

Table A2.2: **General government debt projections (based on Commission 2022 autumn forecast)**

	2021	2022	2023	2024
Real GDP growth (% change)	**13.6**	**7.9**	**3.2**	**3.1**
	levels, EUR billion			
Government balance	**-7.1**	**0.9**	**4.6**	**7.2**
Gross debt	236.1	225.8	226.1	232.3
Change in gross debt	18.3	-10.3	0.3	6.2
Real GDP	403.6	435.4	449.2	463.0
	% of GDP			
Government balance	**-1.7**	**0.2**	**0.8**	**1.2**
Gross debt ratio	55.4	44.7	41.2	39.3
Change in gross debt	-3.0	-10.6	-3.5	-1.9
	Contribution to change in gross debt			
Primary balance	0.9	-0.9	-1.5	-1.9
'Snow-ball' effect*	-6.5	-7.5	-2.8	-2.2
of which				
Interest expenditure	0.8	0.7	0.7	0.7
Real growth effect	-6.9	-3.7	-1.3	-1.2
Inflation effect	-0.3	-4.6	-2.2	-1.7
Stock-flow adjustments	2.6	-1.9	0.9	2.3
Implicit interest rate	*1.5*	*1.5*	*1.7*	*1.8*

The projections assume no borrowing for precautionary contingencies envisaged in the programme's financing plan.
*The 'Snow-ball' effect, interest expenditure, real growth effect and inflation effect are derived from the Commission forecast analysis.'Snow-ball' effects refer to the net impact of the counteracting effects of interest rates, inflation and real GDP growth on changes in the debt ratio.

Source: Eurostat and European Commission.

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