Macro Assessment

Price pressures stunt the recovery

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1.1 The short-term economic outlook

Ireland's economic growth has slowed considerably in 2022, mainly as a result of high inflation. Despite ongoing growth in the value of aggregate demand, the rising cost of living has resulted in a weaker path for the volume of goods and services in the Irish economy this year and reduced real incomes.

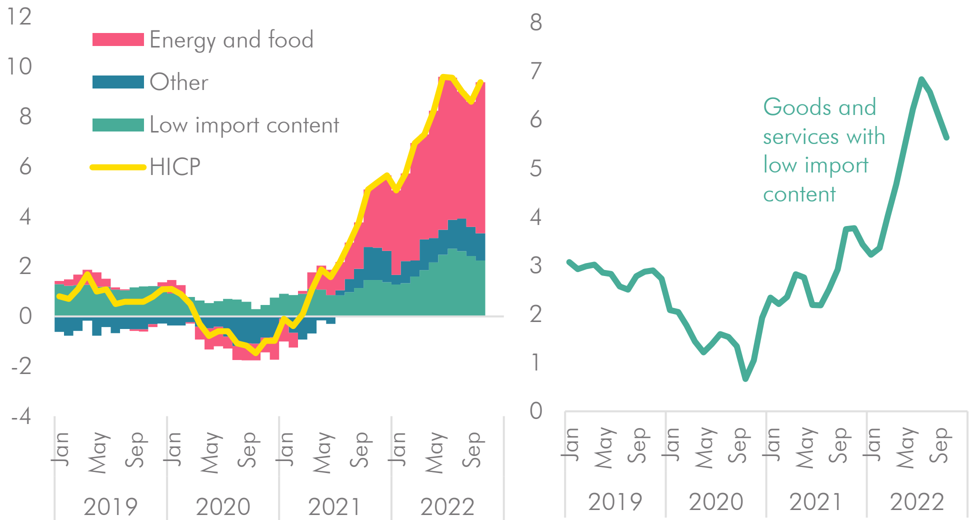
Energy and food prices have driven inflation higher, and domestic inflation has also been elevated

Most of the pick-up in inflation since mid-2021 and in recent months has been driven by energy and food (Figure 1.1a). However, domestically generated inflation is lower and softening. The inflation rate for goods and services with a low import content — of which, more than half of the consumption weights comprise restaurants/cafés and actual rentals for housing — increased by 5.6% in the 12 months to October 2022.[1]

Figure 1.1: Inflation has been mainly driven by energy and food

A. Inflation driven by energy and food
Year-on-year % change and p.p contributions

B. Domestic inflation has picked up
Year-on-year % change



Sources: Eurostat; Fröhling *et al.* (2022); and Fiscal Council workings.
Notes: The goods and services with low import are identified by Fröhling *et al.* (2022) for the Euro Area, and replicated here using Ireland's HICP data. "Rest" refers to non-energy and food goods and services with high import content. Get the data.

Unlike overall HICP, the low-import-content components of Figure 1.1 have had a consistently positive year-on-year inflation rate for the past decade, growing by an average of 2.8% since October 2012. For restaurants/cafés and actual rentals for housing, the last ten years has also seen a consistently positive year-

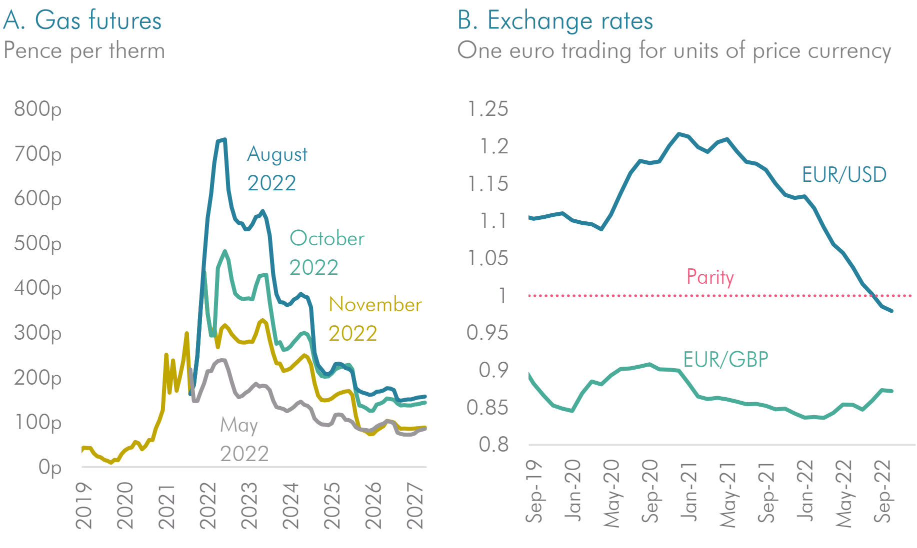
[1] This index of goods and services with low import content is based on work by Fröhling, *et al.* (2022). The authors identify Euro Area goods and services with low import content using input-output tables to account for direct and indirect import content (through intermediate consumption). HICP items with import content of less than 18% are classified as low-import-content items. This list of HICP items identified by Fröhling, *et al.* (2022) with low import content is then applied to Irish HICP data to derive the index shown above.

on-year inflation rate, rising by an average of 3.5%. The sharp pick-up in inflation for goods and services with a low import content seen during 2022 suggests the presence of second-round inflation effects due to the rapid increase in energy prices that has taken place this year.

Despite broad-based and rapid inflation in 2022, which is also expected in the early part of 2023, price momentum slowed considerably between June and September: the month-on-month change in HICP was just 0.2% on average. However, October's reading indicates that energy prices increased sharply again, rising by 13.6% compared to September. The preceding slowdown was largely as a result of lower energy prices, which reflected lower oil prices, and favourable developments for gas storage in Europe. While gas price futures have reduced substantially since *Budget 2023* forecasts were made, they are still expected to remain elevated (Figure 1.2a). Furthermore, the US dollar has appreciated relative to the euro this year (Figure 1.2b); this implies higher euro prices of dollar-denominated goods and services (including oil). Recent depreciation of the British pound is unlikely to significantly reduce inflation in Ireland, though it presents challenges to Ireland's exporters selling to the UK, and year-on-year inflation is expected to remain high in 2023.

Gas futures have fallen back from August peaks, and the euro has weakened against the dollar

Figure 1.2: Gas futures have fallen since the summer, while the US dollar has strengthened to more than parity with the euro



Sources: Refinitiv; Macrobond; and Fiscal Council workings. Get the data.

Box A identifies a risk of higher measured inflation in 2023 by adjusting the weight of the energy component, assuming the projections of energy price changes in the Council's Benchmarks are correct. Nonetheless, it is important to note that there is a considerable degree of uncertainty surrounding the path for market energy prices and those paid by consumers and businesses over the coming years.

Box A: Changing consumer habits pose risks to forecasts of inflation

Both the Covid-19 pandemic and the cost-of-living crisis have dramatically changed the composition of consumer spending in Ireland. This box looks at the impact that the changing composition of the basket of goods and services that consumers buy can have on forecasts of inflation.

The Harmonised Index of Consumer Prices (HICP) is an index of the level of prices in the economy. Price changes are weighted by expenditure. This means that the weight attached to changes in prices of certain goods or services in the index depends on the proportion of expenditure that consumers spend on that good or service. Eurostat updates these expenditure weights annually based on the proportion spent on each consumer product in the previous year. For instance, the expenditure weights used to calculate HICP in 2022 are based on the weights for the consumption basket in 2021.

Despite the constantly changing consumption basket, forecasters of inflation generally assume that the consumption basket is fixed for their entire forecast horizon. This means that the expenditure weights used to calculate HICP do not change in the years being forecast.

In normal times, this is a reasonable assumption: the consumption basket does not change drastically from year to year, so the impact that this assumption has on inflation forecasts is relatively small.

However, both the Covid-19 pandemic and the current cost-of-living crisis have seen large shifts in the composition of consumer spending and large price changes. During the acute phase of the pandemic, consumers switched from spending on services to goods. This reflected the lockdown measures that curtailed access to bars, restaurants and hospitality. This resulted in the weight attached to services in HICP falling from 55% in 2020 to 48% in 2021. During the current cost-of-living crisis, consumers have had to spend much more on electricity, heating and transport, at the expense of other items.

Illustration of impact of increased energy expenditure on inflation forecasts

When prices of certain goods and services increase relative to other goods and services, consumers often reduce their consumption of that item and potentially substitute away from it. This would limit the impact that a price increase would have on the HICP index as it would be offset by a lower expenditure weight. However, as energy is a necessity it is difficult to reduce consumption of energy in the short term, despite the rising prices.

In producing its inflation forecasts for *Budget 2023*, the Department of Finance, like many forecasters (including central banks), has kept the HICP consumption basket weights constant at 2022 levels for each year from 2022 to 2025.

To illustrate the potential impact that the relative increase in the expenditure on energy — both this year and next year — can have on the inflation forecasts, we undertake an exercise using the Council's Benchmark projections of the price changes of the subcomponents of HICP.[2]

We assume that these projections of the price changes of the subcomponents are correct, but when combining these components to arrive at a HICP forecast, we adjust the weights attached to these price changes to account for this relative increase in energy expenditure.

In this scenario, we assume that the weight attached to the energy component is larger next year and the following year — reflecting higher nominal energy consumption this year and even higher nominal energy consumption next year — before reverting back towards 2022 levels.[3] To simplify the illustration, we assume that the higher energy consumption is at the expense of "core services" consumption. That is, the weight attached to "core services" falls as the energy weight increases.[4] Figure A1.B shows the energy weights assumed, with the energy weight peaking in 2024 at 15%.

Figure A1.A shows the impact that the changing consumption basket has on the baseline inflation forecasts. As energy prices are expected to increase relatively more next year than other prices, the higher weight attached to energy prices in 2023 now results in a higher forecast for inflation next year. Under

[2] The Department only forecast the subcomponents of HICP for six quarters, 2022Q3–2023Q4. Thereafter, they forecast on the basis of headline and core HICP. As they do not have individual forecasts of energy and "core services" after 2023Q4, the Council's Benchmark projections of HICP components are used here as an illustration instead. The conclusions for headline HICP remain the same.

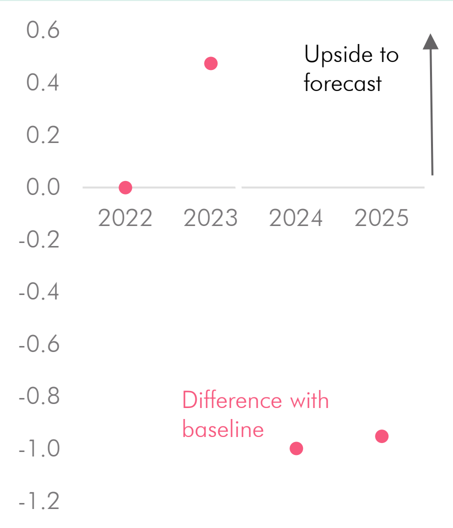
[3] As outlined above, the weights used to calculate HICP for next year would be based on the consumption basket this year, while the weights used to calculate HICP for 2024 would be based on the consumption basket next year. This higher share of energy in the consumption basket can arise from consuming the same volume of energy, but at relatively higher prices.

[4] The "core services" component is services excluding rental prices.

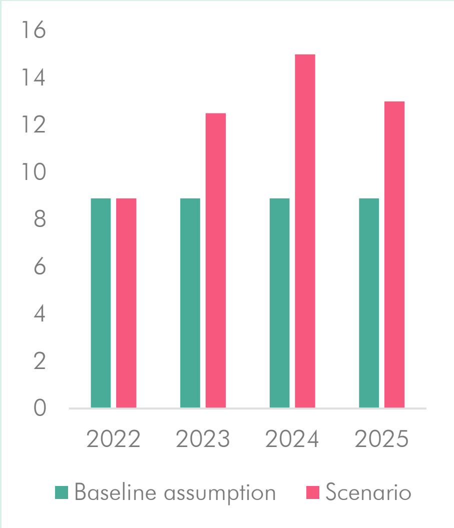
the alternative scenario, the inflation forecast is 0.5 percentage points higher in 2023. As energy prices are expected to fall in 2024, this higher weight on energy leads to a lower inflation rate in 2024, with inflation in the alternative scenario approximately 1 percentage point lower in 2024 than forecast. Similarly in 2025, inflation would be 1 percentage point lower than forecast under the alternative scenario.

Figure A1: The changing consumption basket presents risks to inflation forecasts

A. Risks to baseline HICP forecast
p.p difference with baseline



B. Energy weights assumed
% of consumption basket



Sources: Eurostat; Department of Finance; and Fiscal Council workings. Get the data.

This illustration shows that there are potential upsides to the Department of Finance's HICP inflation forecast for next year, and there are potential downsides to the forecast for inflation in 2024 and 2025 if the changing energy consumption were to be factored into the forecasts. This illustration also shows that, all else equal, as energy prices fall, headline inflation may fall more rapidly than forecast.

As Ireland is a net importer of energy, the rise in energy prices implies lower national income in Ireland and higher national income in energy-exporting countries. As energy is an important input to all parts of the economy, it can have a significant bearing on potential output and higher steady-state prices will put the economy on a permanently lower output path.

As a net importer of energy, Ireland has suffered a terms of trade loss from higher global energy prices

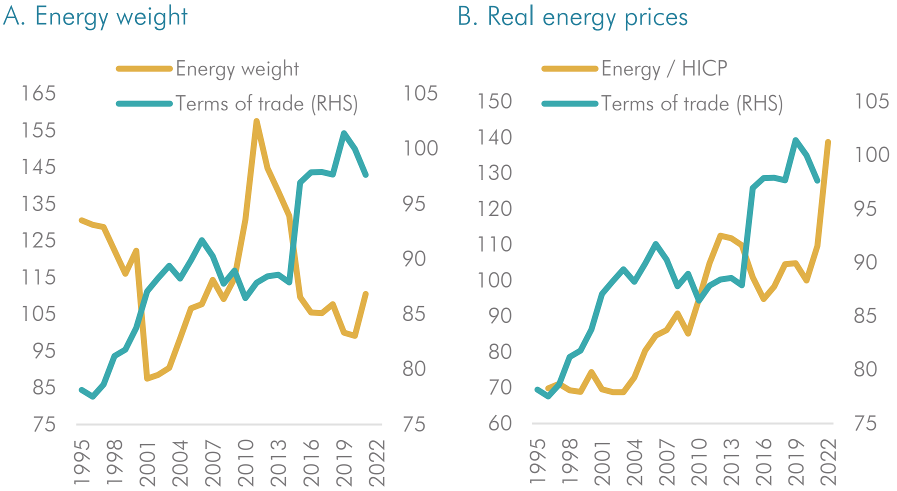
Figure 1.3a, which replicates European Central Bank analysis for the Euro Area by Battistini *et al.* (2022), shows the broadly inverse relationship between the energy weight in the HICP consumption basket and the terms of trade (shown as the ratio between the GNI* deflator and the personal consumption deflator).[5] Figure 1.3b uses real energy prices (scaled with HICP, available up to October 2022) to illustrate that the terms-of-trade index is likely to decline for 2022, meaning a relative weakening of consumers' purchasing power. The period between 2015 and 2021 was broadly characterised by a lower real price of energy and this boosted Ireland's terms of trade and living standards. This

[5] The correlation coefficient for the two series in Figure 1.3a is -0.44.

included a period of strong economic growth in the lead-up to the Covid-19 pandemic in early 2020. If energy prices moved lower, this would limit the damage from energy prices on the Irish economy. Conversely, higher energy prices imply further terms-of-trade losses and weaker consumer prospects.

Figure 1.3 Energy shocks weaken Ireland's terms of trade

2020 = 100



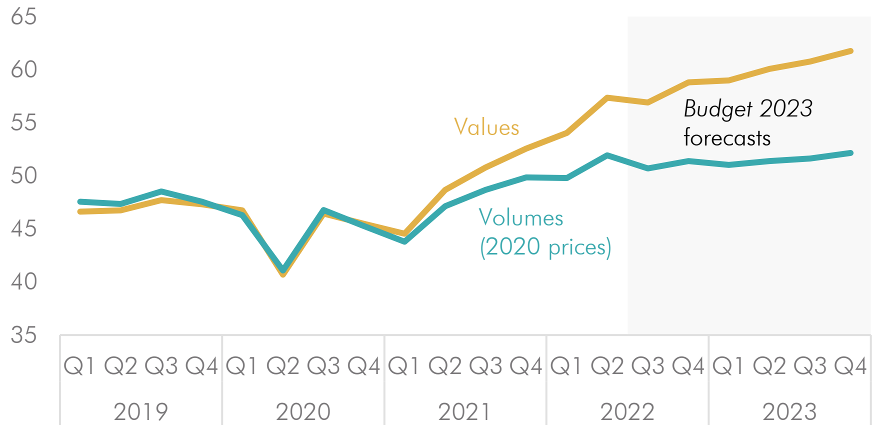
Sources: ECB; CSO; and Fiscal Council workings.
Note: This comparison replicates analysis by Battistini *et al.* (2022) for the Euro Area. For the energy weight in HICP, the 1996 weight refers to 1995 data. The terms of trade is calculated as the GNI* deflator divided by the personal consumption expenditure deflator, to capture instances where energy prices have risen as a share of the consumption basket, and how this implies a higher price level for consumers relative to GNI*, as higher import prices partially offset higher prices in final demand, including for the consumption deflator. Get the data.

Figure 1.4 shows how the terms-of-trade shock are impacting on the value and volume of modified domestic demand. *Budget 2023* short-term projections foresee a broadly flat profile for the volume of demand in the year ahead, while the value is expected to continue to grow albeit at a slower rate.

Modified domestic demand has stagnated due to inflation, which erodes the cash value of spending in the Irish economy

Figure 1.4: Modified domestic demand has stagnated due to inflation

€ billion, seasonally adjusted



Sources: CSO; Department of Finance; and Fiscal Council workings. Get the data.

The main cause of the pick-up in modified domestic demand in Q2 2022 was firm-specific modified investment. The largest component of domestic demand is consumer spending, which is projected in *Budget 2023* to remain subdued until late 2023. The official estimate of the level of personal consumption expenditure from the CSO has not yet recovered to its pre-pandemic level in 2019.

New research shows official estimates of household spending are lower than what alternative indicators suggest

However, as discussed in a new analytical note published by the Council (Timoney, 2022b), the recent historical data for household consumption do not align well with other high-frequency indicators of consumer spending. A stronger performance is evident in value-added tax receipts and in card spending and ATM withdrawals. As well, Central Bank data are consistent with lower levels of household saving compared to the CSO figures. While these sources point to a higher level of consumption than reported, the indicators show a broadly consistent pattern in recent quarters: a slowing upward trajectory for consumer spending.

Falling real disposable incomes imply slower consumer spending, but savings built up by richer households can mitigate the slowdown

Overall real consumer spending has continued to grow in 2022, and a number of factors with offsetting effects are contributing to this. The unexpected increase in inflation, which was not factored in by wage agreements, means that many households are experiencing a decline in real disposable income this year and next: *Budget 2023* forecasts a decline in real incomes of 2.8% in 2022 and 2% in 2023. The increase in energy and food prices affects lower-income households more and this could reduce their discretionary spending if savings are not available to bridge the gap. However, within groups there are exceptions, including those with high pay growth and few savings.

Still, some households have increased their earnings this year, especially employees of high-wage sectors (see Timoney, 2022a). Also, wealthier households in Ireland account for considerably more consumption per household.[6] The savings buffers built up by wealthier households during the pandemic imply a lower marginal propensity to consume (see Byrne *et al.*, 2020), but it is also likely that these households have a lower sensitivity to higher prices. As well, consumption has been boosted by a large flow of net inward migration, which has added to real consumer spending growth in 2022.

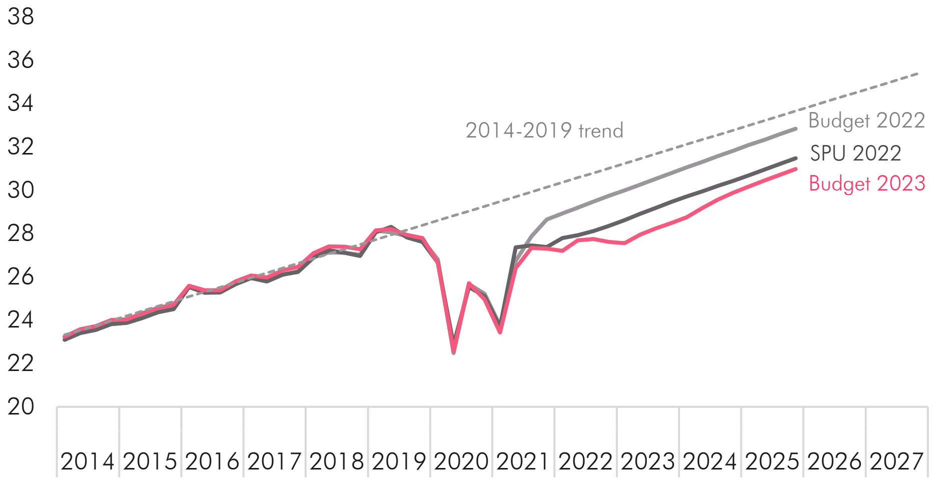
***Budget 2023* forecasts a weaker path for personal consumption**

Figure 1.5 presents the Department's quarterly projections for real personal consumption expenditure until 2025. Forecasts made in October 2021 anticipated further increases in consumption in the latter half of 2021 and into 2022. However, the current estimates of consumption have been considerably weaker than last year's projections. This is largely as a result of rising inflation, but a possible underestimation of the strength of the recovery in personal

[6] Coffey (2022) shows that the upper two-fifths of households (by income) in 2016 accounted for 57% of final national consumption expenditure. This implies an average of 43% more consumption by these households compared to an average household in the lower three-fifths of the distribution.

consumption last year could also be a factor (Timoney, 2022b). Over the forecast horizon, *Budget 2023* projects a gradual recovery starting in 2023.

Figure 1.5: *Budget 2023* projects a weaker path for personal consumption
€ billion, 2020 constant prices, seasonally adjusted



Sources: CSO, Department of Finance, and Fiscal Council workings. Get the data.
Notes: The profiles shown use adjusted historical data to ensure seasonally adjusted levels sum exactly to the annual level. Projections are similarly adjusted with respect to the Department's annual level projections.

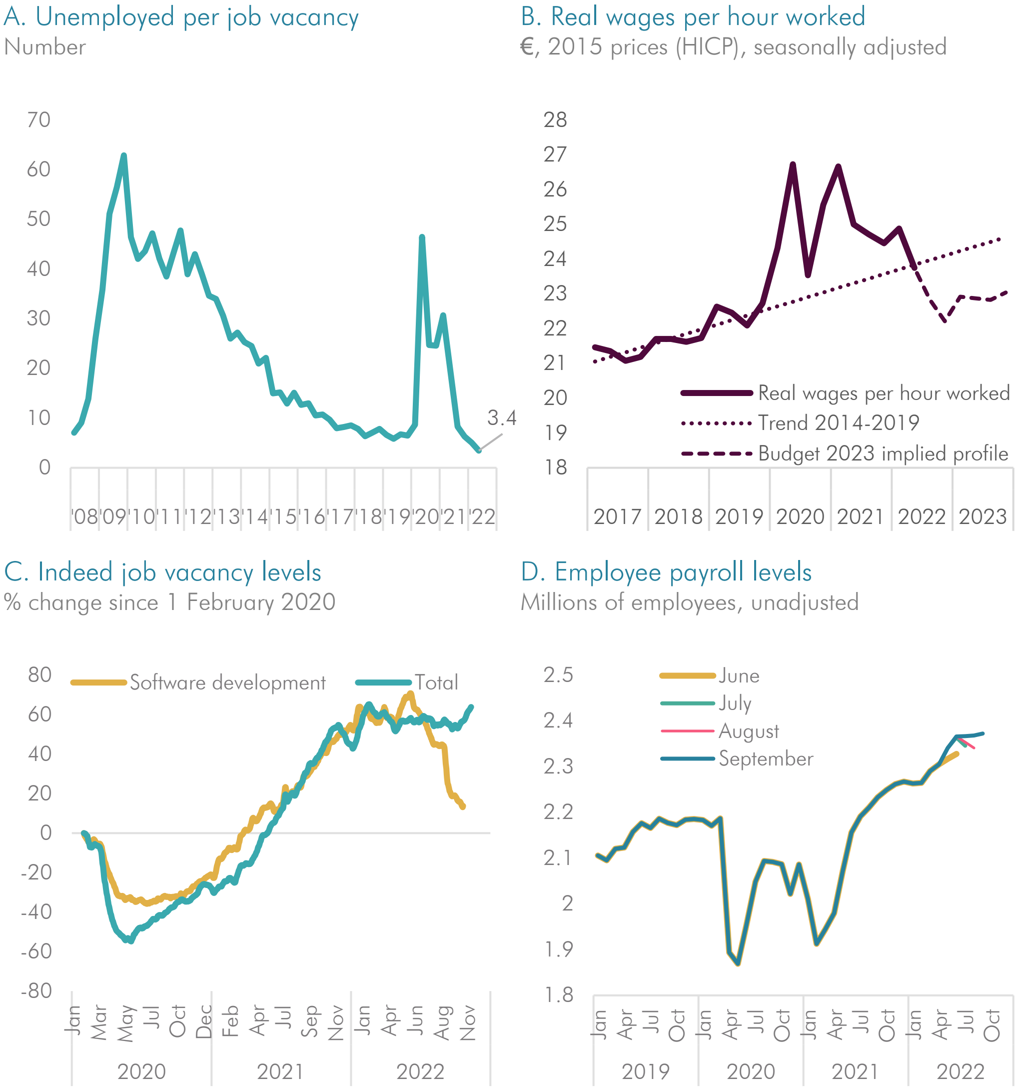
As with many advanced economies in 2022, the labour market in Ireland has been exceptionally tight this year. The number of unemployed people per job vacancy fell to a series low of 3.4 in Q2 2022 (Figure 1.6a). Although substantial variation exists in nominal hourly wages across sectors (see Figure 7 in Timoney, 2022a), average real hourly wages were close to pre-pandemic trend in Q2 2022, despite rapid increases in inflation in the first half the year (Figure 1.6b).[7] For the second half of 2022, *Budget 2023* forecasts imply a sharp decline in average real hourly wages, and little or no recovery is expected in 2023. Figure 1.6c shows Indeed job postings data (see Kennedy, 2022) have remained elevated relative to February 2020 levels, although there has been a considerable decline in postings in software development — which is the key series in labour demand for information and communication technology. Furthermore, there have been recent announcements of job cuts by large firms in the technology sector, many of whom with significant employment in Ireland.[8] In Figure 1.6d, administrative data had shown signs of a possible slowdown in employment in Q3 2022, but the latest figures for September 2022 show a more stable level of payrolls since June.

The labour market is exceptionally tight, and despite some signs of softening, payrolls data for recent months have been revised upwards

[7] The spikes seen during the pandemic resulted from an upward shift in average nominal hourly wages, as the falls in hours worked during successive lockdowns were concentrated in low-earning sectors. At the same time, earnings increased in high-wage sectors, providing significant resilience to income taxes (Timoney, 2022a).

[8] For example, in early November 2022, Stripe, Twitter, and Meta announced intentions to reduce employment levels. Combined, these firms employ a total of about 4,000 staff in Dublin, with a further 6,000 contractors in Meta.

Figure 1.6: The labour market is exceptionally tight, despite some signs of softening



Sources: CSO; Department of Finance; Indeed; and Fiscal Council workings.
Notes: For panel B, hours worked are derived using *Budget 2023* forecasts for total employment and average weekly hours worked. The historical data are based on actual hours worked (manually seasonally adjusted for Q1 1998 – Q2 2022). HICP has also been seasonally adjusted (for a sample period of Q1 1990 – Q4 2025), and wages are implied using the CSO's seasonally adjusted wages series in the Institutional Sector Accounts, Non-Financial for Q2 2022. The data for software development in panel C, available up to 14 October 2022, was kindly provided by Indeed. Get the data.

1.2 The medium-term economic outlook

Budget 2023 projects that the Irish economy will slow next year, and then grow close to trend growth rates of 3% per annum in 2024 and 2025 under the assumption that energy prices fall back from their current level as demand and supply adjust and as uncertainty wanes.

Budget 2023 forecasts a sharp slowdown in economic growth in 2023, but a return to about 3% growth in 2024 and 2025

Table 1.1 presents key *Budget 2023* macroeconomic forecasts for the Irish economy. Inflation is forecast to remain elevated in 2023, largely as a result of a large carry-over effect from the middle of 2022, when inflation picked up sharply. Employee wages, which did not grow in 2020 as a result of the pandemic, partly caught up in 2021 with close to 10% growth, and a further rapid annual growth of 12% is forecast in 2022. A small and positive output gap is expected to emerge in 2025, signalling strong growth but not significant overheating. Growth in compensation of employees and inflation pressures are expected to ease, with a return towards normal trend rates from 2024.

Table 1.1: *Budget 2023* key macroeconomic forecasts

Year-on-year percentage change in volumes, unless otherwise stated

	2019	2020	2021	2022	2023	2024	2025
Modified gross national income (GNI*)	2.8	-4.6	15.4	5.1	0.4	2.7	3.1
Modified domestic demand	2.4	-6.1	5.8	7.6	1.2	3.2	3.6
Personal consumption	2.7	-10.9	4.6	5.5	1.8	4.6	4.2
Modified investment	-1.6	-8.6	8.2	17.7	2.2	3.8	4.1
Compensation of employees (nominal)	7.6	0.2	9.8	12.3	7.2	6.6	6.7
Employment[a]	2.9	-16.8	11.0	18.3	1.2	1.6	1.8
Unemployment rate[a] (% labour force)	5.0	19.2	15.9	5.2	5.1	5.0	4.7
Inflation (HICP)	0.9	-0.5	2.5	8.5	7.1	2.4	1.8
Savings ratio (% disposable income)	10.6	25.7	24.3	18.6	16.1	13.2	11.8
Modified current account (% GNI*)	7.1	6.6	11.1	8.4	7.7	7.0	6.3
Output gap (% potential GDP)	3.3	-2.7	-1.6	0.3	-0.4	-0.1	0.1

Sources: Department of Finance, and Fiscal Council workings.
Note: [a] The unemployment rate and employment growth shown for 2020–2022 inclusive are based on the CSO's "upper bound" Covid-19 unemployment data.

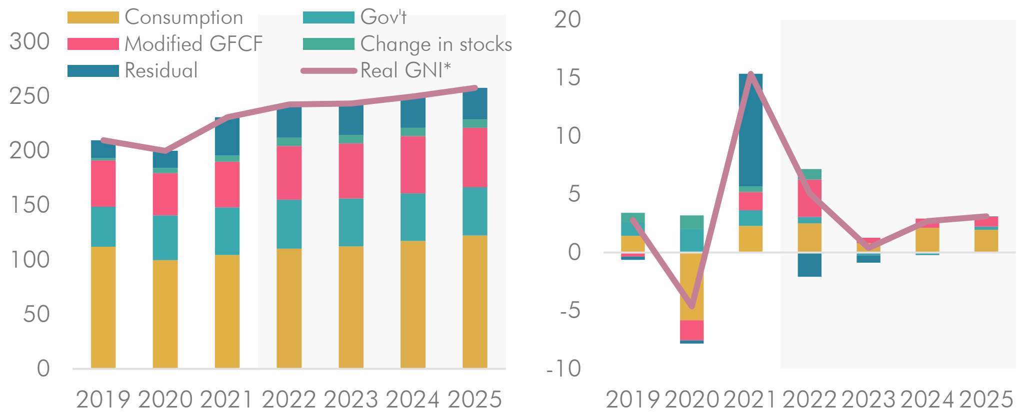
Real GNI* increased sharply in 2021, driven by the residual component (as shown Figure 1.7 and Section 1.4), and it is projected to slow sharply in 2023, before growing close to potential at about 3% a year in 2024 and 2025. Figure 1.7 presents *Budget 2023* forecasts for levels (panel A) and growth rates (panel B) of real GNI*. The slowdown in 2023 is expected to reflect a sharp slowdown in modified domestic demand.

Real GNI* increased sharply in 2021, driven by net external trade (i.e. the modified current account)

Figure 1.7: Real GNI* growth is forecast to slow sharply in 2023, before reverting to the economy's potential growth rate of about 3%

A. Real GNI* levels
€ billion, 2020 prices

B. Real GNI* growth
Year-on-year % change and p.p. contributions

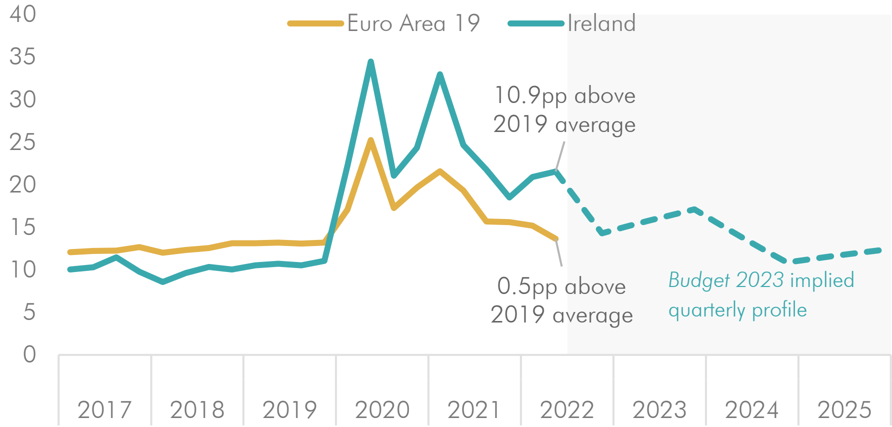


Sources: CSO; Department of Finance; and Fiscal Council workings. Get the data.

The household savings ratio has increased in the first half of 2022, as shown in Figure 1.8. However, if the level of household consumption expenditure in 2020 and 2021 were higher, as discussed in Timoney (2022b), this could imply a lower level of household savings, closer to pre-pandemic levels. Eurostat data show that the euro are savings rate has already returned close to its 2019 average, whereas it is almost double the 2019 average in Ireland's official data.

Figure 1.8: The household savings rate in Ireland has increased in 2022 after falling last year, unlike in the Euro Area

Household gross savings as % of total disposable income, seasonally adjusted



Sources: CSO; Eurostat; Department of Finance; and Fiscal Council workings. Get the data.

Budget 2023 forecasts imply that the household savings rate will decline sharply in the second half of 2022, before remaining elevated in 2023 at 16%, and later declining to 11.8% in 2025. For the full period until end-2025, the savings rate is forecast to remain above its 2019 average level of 10.6%. *Budget 2023* projections therefore do not anticipate that household consumption will be funded with savings built up over the pandemic.

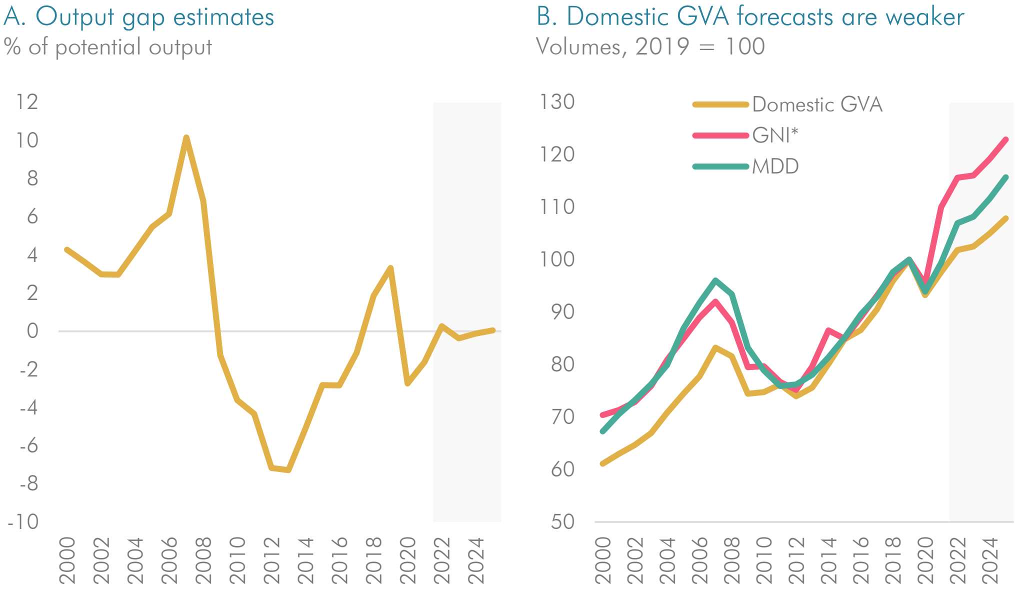
Ireland's household savings ratio rose back above 20% this year, but *Budget 2023* forecasts a swift fall to about 12% in 2025

The Department of Finance's preferred methodology now estimates the output gap based on gross value added of sectors whose turnover is not dominated by foreign-owned multinational firms (domestic GVA). This a very small negative output gap opening up in 2023 before reverting to small and positive output gap in 2025 (Figure 1.9a).

***Budget 2023* does not foresee significant overheating in the Irish economy by 2025**

Domestic GVA excludes all activities in the information and communication sector and in some parts of manufacturing, including pharmaceuticals. These are sectors that have been expanding rapidly in recent years, including for compensation of employees, but domestic GVA does not capture this growth. While domestic GVA has historically moved quite closely with modified domestic demand and GNI*, it did not fully recover to 2019 levels by 2021; this gap in its recovery is forecast by the Department to persist over the forecast horizon (Figure 1.9b). A higher trajectory for actual output, such as the path shown for real GNI*, increases the likelihood of a larger positive output gap emerging over the medium term and may provide a more realistic picture of the state of the economy.

Figure 1.9: *Budget 2023* projects a slightly positive output gap by 2025, and domestic GVA is expected to remain on a weaker trajectory compared to MDD and GNI*



Sources: CSO; Department of Finance; and Fiscal Council workings. Get the data.

The medium-term path for the Irish economy is likely to be negatively affected by higher interest rates, both globally and domestically. Higher mortgage interest costs will increase mortgage payments and reduce consumption for some households. However, recent analysis by the Central Bank of Ireland (Arrigoni, Boyd and McIndoe-Calder, 2022) shows that owner-occupier households with mortgages are significantly more concentrated in the upper quintiles of the income distribution, suggesting a greater capacity to absorb higher interest costs.

House prices in Ireland have grown continuously on a month-on-month basis for the past two years, reflecting a combination of higher incomes and ongoing shortages of new dwellings relative to various estimates of medium-term requirements. Although higher interest rates could negatively affect house prices, household incomes and supply constraints/pent-up demand are likely to remain positive contributors to the path for Ireland's house prices. Furthermore, the recent decision by the Central Bank of Ireland to amend its macroprudential policies in favour of higher borrowing by households seeking a mortgage is also consistent with higher rather than lower house prices over the medium term.[9]

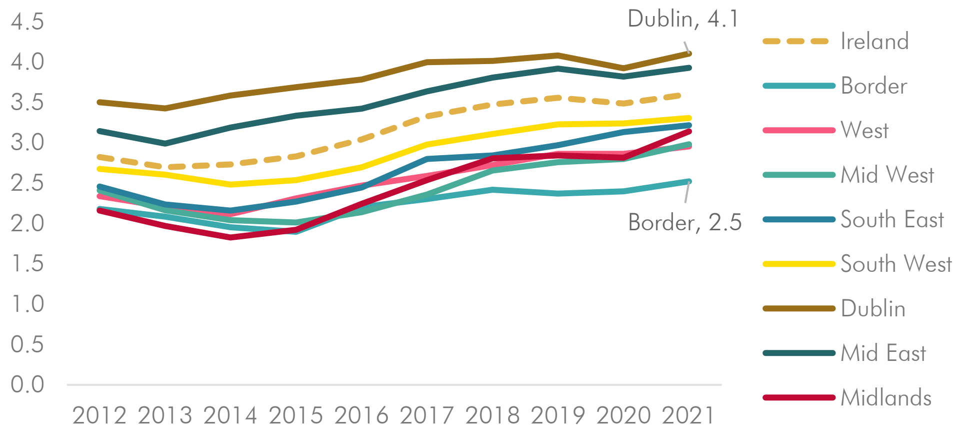
Higher interest rates could reduce house prices, but domestic factors including a higher limit on mortgage borrowing could mitigate the extent of any falls

While residential property prices in Ireland have increased relative to incomes of purchasers over the past decade, recent CSO data reveal that there is a wide regional variation in terms of median prices compared to median incomes. Figure 1.10 shows that for joint applications, which represent the majority of house purchases, the 2021 median house price in Dublin was 4.1 times purchasers' median income, while in the Border region this ratio was 2.5 times. Across all regions of Ireland, it was 3.6 times, broadly unchanged compared to the previous four years.

Relative to median joint-purchasing incomes, median house prices in Ireland have been broadly stable in recent years for most regions

Figure 1.10: House prices have increased relative to joint purchasers' incomes, but the increases have moderated in recent years

House prices relative to incomes for joint purchases



Sources: CSO; and Fiscal Council workings.
Note: The data are for filings and show joint applications' median house prices divided by median incomes. Get the data.

Higher interest rates can affect the medium-term path for the economy through a number of channels. Investment plans could be scaled back as higher interest rates affect net-present-value calculations for project viability, and this could result in fewer new dwelling completions over the coming years. Labour demand is also likely to decline as firms fill vacancies, while others may cut back on activities and reduce their staffing levels at various stages over the coming years.

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[9] https://www.centralbank.ie/financial-system/financial-stability/macro-prudential-policy/mortgage-measures/mortgage-measures-framework-review-public-engagement

1.3 Risks to the outlook

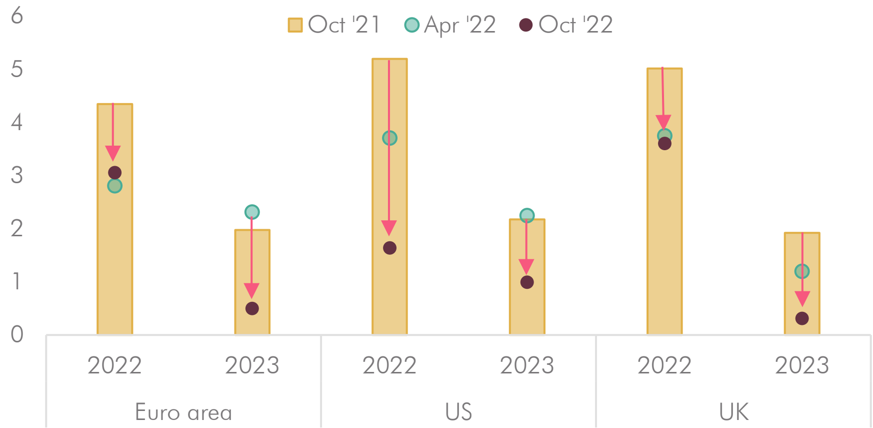
Downside risks have intensified during 2022, including the possibility of prolonged higher inflation, and a global recession

Risks to the outlook in *Budget 2023* are described as being "two-sided but judged to be firmly tilted to the downside", whereas risks to the inflation projection are "also two-sided and assessed to be skewed to the upside".

Rather than domestic in nature, global risks, such as war and geopolitical instability, have been the predominant factors affecting Ireland's economic performance in 2022. Forecast reductions in global growth, particularly in Ireland's main trading partners, have been a consistent feature of 2022. Figure 1.11 presents IMF forecasts over the past year for the Euro Area, US, and UK, which have seen large downward revisions for 2022 and 2023.

Figure 1.11: Risks to the outlook are highlighted by downward revisions to output growth in Ireland's main trading partners

Year-on-year % change in real GDP



Source: IMF. Get the data.

The possibility of energy shortages may have declined for the coming winter, but risks remain. Both this winter and next winter could prove very expensive for the Euro Area in terms of securing gas supplies. The risk of a prolonged global slowdown is therefore increasing, or indeed of a more significant global recession. As this would be taking place very soon after the pandemic, there are risks that compounding stress placed on firms could result in a large wave of business failures.

Price inflation has broadened in 2022, as shown in Figure 1.1, with year-on-year price growth in low-import-content items rising to a 20-year high. This suggests that risks of some second-round effects of inflation, noted in the Council's last *Fiscal Assessment Report* for May 2022, may be materialising. Demands for higher wages may reduce Ireland's competitiveness and exports depending on relative changes in Ireland's trading partners. A key risk relates to the potential for inflation expectations to become engrained, resulting in persistently higher inflation over coming years. However, median inflation expectations for the Euro Area remain quite well-anchored, despite the rapid increase in inflation this year.[10] A more favourable scenario would see inflation receding more rapidly than expected in market-based projections and official forecasts. More rapid increases in renewable energy capacity could mitigate the terms-of-trade loss Ireland and the Euro Area have experienced since mid-2021. However, the near-term likelihood of such a benign scenario remains remote given Russia's ongoing war with Ukraine.

The likelihood of lower foreign direct investment from the multinational sector has risen substantially in recent months, and announcements of job losses in some well-known technology companies has taken place since *Budget 2023* was published. It remains to be seen whether this will affect a significant share of Ireland's employment in the information and communication sector, where jobs and earnings growth rates have been especially rapid over the past decade. Ireland's national income has been boosted considerably by corporation taxes, and the risk of a fall in these receipts would have potentially significant macroeconomic as well as fiscal ramifications.

On the positive side, short- and medium-term growth could still prove higher than assumed. Ireland's relatively resilient performance during the large shock represented by the Covid-19 pandemic suggests it could be relatively well-placed to withstand the predominately global challenges. Furthermore, the extent of scarring from the pandemic appears to have been considerably less than many forecasters feared. The presence of high-skill jobs in many of the sectors most likely to drive economic growth remains a significant benefit to the Irish economy over the medium term.

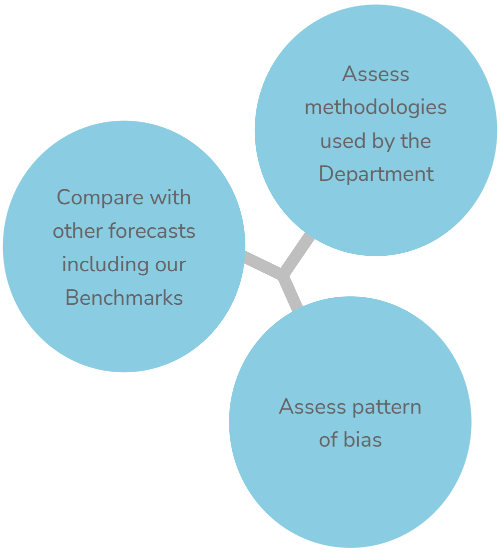
Upside risks to the outlook in *Budget 2023* include if inflation undershoots forecasts, continued high-skill job creation, and the possibility of faster net inward migration

The unexpectedly large rise in net inward migration evident in *Census 2022* suggests that Ireland's population could grow faster than expected over coming years. Notwithstanding numerous domestic challenges, particularly relating to the availability of housing, Ireland continues to attract inward migration well in excess of the number of emigrating Irish nationals, which have been relatively stable in recent years. A rise in housing output would improve Ireland's attractiveness to foreign direct investment. An increased prevalence of remote working could also help to address excess demand for housing in some cases, since the need for living close to city centres where many jobs have been located could be lower as a result. Nonetheless, the expansion of construction activity will require careful monitoring however, as Ireland's construction activity has been especially cyclical.

[10] For example, see: https://www.ecb.europa.eu/stats/ecb_surveys/consumer_exp_survey/results/html/ecb.ces_results_november_2022_inflation.en.html#_Inflation_expectations_three

1.4 Endorsement of the Department of Finance's macroeconomic projections

The Council's most recent endorsement exercise of the Department of Finance's macroeconomic forecasts was undertaken in September 2022.



The Council assessed that the Department's short-term macroeconomic forecasts were within an endorsable range, taking into account the methodology and plausibility of the judgements made. This section explores the key issues that arose in this latest endorsement exercise.

The Council's assessment of the Department's macroeconomic forecasts was broadly favourable regarding the processes and methodologies used. The main queries in the endorsement discussions related to the path for energy prices, the outlook for personal consumption, and projections for the deflator on the net external trade component of GNI*. The issue of only a three-year-ahead forecast horizon used by the Department remains a concern.

Background

The Department's provisional macroeconomic forecasts were completed on 9 September 2022 (for details of the endorsement timeline, see table S1a in the Supporting information section). The Council and Secretariat discussed the forecasts with Department staff on 16 September.

In a welcome development, the Department has expanded its use of underlying economic measures that focus on the domestic economy, including GNI*. This methodology closely follows the Council's approach, as described in Box E of the May 2020 *Fiscal Assessment Report* (Fiscal Council, 2020a). The Council's view remains that a wider move across other forecasting agencies towards underlying measures would provide more meaningful and relevant projections.

Personal consumption

In recent years, the short-term outlook for personal consumption had been greatly affected by developments relating to the pandemic, as lockdowns constrained citizens from engaging in a broad range of activities and spending. Further ahead, medium-term projections had been based on an expectation that the pandemic would result in "scarring", or a permanent loss of activity as a result of behavioural changes or damage to productive capacity. Rather than scarring due to the pandemic, *Budget 2023* projections for personal consumption expenditure have been revised down as a result of the impact of higher prices on purchasing power. However, as discussed in Section 1.2 and in Timoney (2022b), official estimates of household consumption that underpin the Budget projections may be understating the level of spending, and conversely, overstating the level of savings.

Personal consumption has been negatively impacted by higher prices, though it may have recovered more fully from the pandemic than official estimates show

Net external trade in GNI*

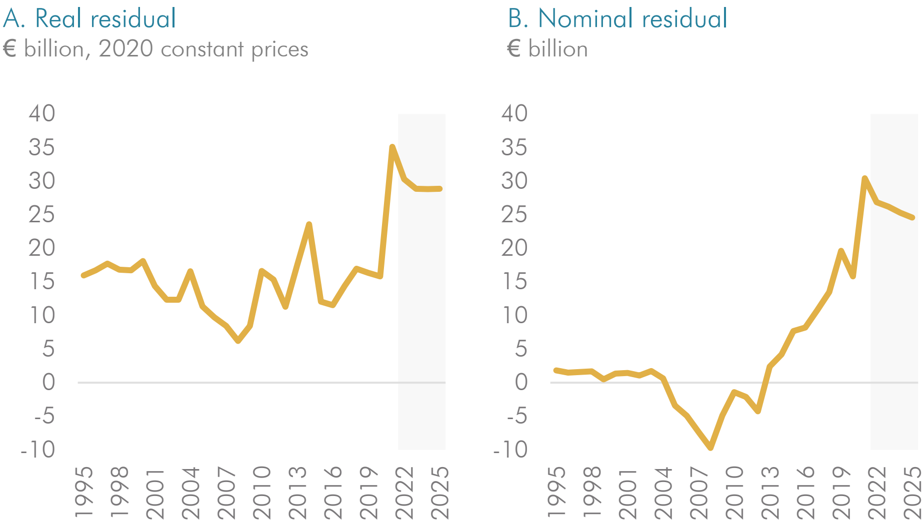
The Department projected GNI* in line with the methodology described in Lennon and Power (2021), which closely follows the Council's approach to forecasting GNI*.[11] The methodology implicitly assumes that the residual component of GNI*, which is not explained by modified total domestic demand, can be projected according to the estimated change in domestic exports less the change in domestic imports. This methodology is applied to projecting both real and nominal GNI*.

However, a weakness of this approach is that a close mechanical following of the methodology can treat an unusually large movement in the real or nominal residual as permanent. Figure 1.12 presents the residual component of GNI* that is not explained by modified domestic demand in both real (panel A) and nominal (panel B) terms. This shows that the sharp rise in the level of the real residual in 2021 is largely retained over the projection horizon, whereas in nominal terms, it declines from a lower spike in 2021.

The Department of Finance forecasts an ongoing high level of net external trade in GNI* over the forecast horizon

[11] Final demand in GNI* comprises modified domestic demand and "domestic exports", which strips out components of exports of goods and services assumed to be dominated by sales of multinational entities, using detailed merchandise trade and balance-of-payments statistics. "Domestic imports" is derived (approximately) as a (negative) residual from GNI* less final demand. Historical data for the import content of final demand in GNI*, along with forecasts of "domestic exports", are used to project the change in the residual component.

Figure 1.12: *Budget 2023* projects a continued high level for the residual component of GNI* that is not explained by modified total domestic demand



Sources: CSO, Department of Finance, and Fiscal Council workings. Get the data.

The Department's view is that the large increase in the residual component captures an upwards shift in the value-add contribution of multinational entities to the economy in 2021, via corporation and income taxes. However, in nominal terms, the residual increased by €14.6 billion in 2021, whereas Revenue data (McCarthy, 2022) show that corporation taxes paid by foreign-owned multinationals increased by €2.7 billion. Furthermore, while income taxes increased by close to €4 billion in 2021, this increase was quite broad-based, implying a substantial contribution from a recovery in employment in domestic sectors.[12] This suggests the majority of the increase in the residual is not directly explained by corporation and income taxes paid by foreign-owned multinationals.

The Council's view is that the unusually strong growth rate for GNI* in 2021 — driven by the residual component — is not easily explained, and therefore warrants significant caution. Historical volatility in the residual component has been subject to rapid reversals; for example, the sharp reduction in 2015 correcting for the spike in 2014.[13] Furthermore, data revisions could change the interpretation of the drivers of GNI* growth. The size of the residual component in 2020 and 2021would be reduced if household consumption were higher, and savings lower, as indicated by Timoney (2022b).

However, it is possible that official data for 2020 and 2021 understate household consumption, and overstate the level of net external trade in GNI*

[12] Timoney (2022a) showed that PAYE and USC increased by €3.6 billion in 2021, of which €1.6 billion was from the 'High 5' sectors, €1.2 billion was from the 'Middle 6', and €0.9 billion was from the 'Lower 5' sectors (as described in Section 2 of the note).

[13] This relates to how real GNI* is calculated subject to the offsetting effects of deflators on large components in GDP, such as total exports, imports, and other large adjustments included in the calculation of GNI* (such as R&D service imports and trade in IP). Small measurement errors on these deflators can result in large divergence between measured real GNI* growth and real modified domestic demand growth, for example, and these differences are captured in an often volatile series for the deflator on the residual.

Forthcoming research by the Council investigates possible solutions to the problem of volatile historical real GNI* growth rates. One alternative would be to estimate real GNI* by a different methodology to the current top-down approach. A bottom-up approach not relying on the large offsetting components of GDP, but instead focusing on sectors with relevance to GNI* in net value-added terms, would be a preferable basis for calculating real GNI*.

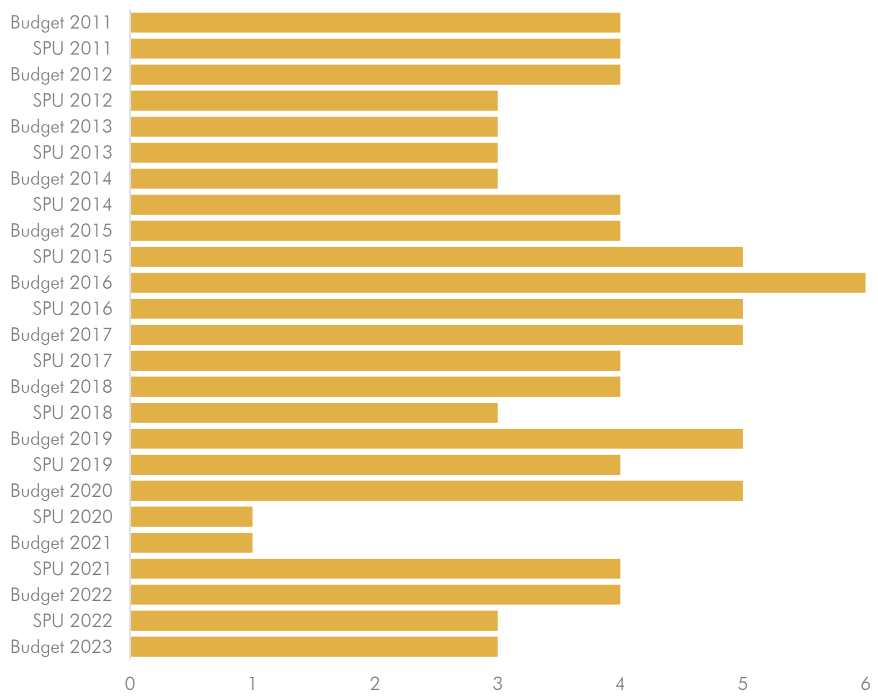
Forecast horizon

Budget 2023 forecast only three years ahead, less than in some previous forecasts and too short a horizon to provide a full picture of medium-term prospects. Figure 1.13 shows that the horizons in official forecasts have rarely stretched to five years or beyond, but the three-year horizon used in *Budget 2023* is nonetheless unusually short. The Department has in the past signalled to the Council its intention to forecast to five years ahead.

***Budget 2023* only forecasts to three years ahead**

Figure 1.13: *Budget 2023* only forecasts to three years ahead

Years



Sources: Department of Finance, and Fiscal Council workings. Get the data.
Note: Budgets are labelled as "Budget t+1", but published in year t; for example, *Budget 2023* will be published in October 2022, meaning its forecast for 2022 is an in-year forecast (for year t).

As well as undermining a medium-term approach to policy, the short forecast horizon limits the Council's ability to assess the consistency of the Department's forecasts between short-and medium-term developments — especially in respect of supply-side variables such as the output gap and potential output growth, and the return of key ratios such as the unemployment rate and savings rate towards medium-term norms. This problem has become increasingly acute given the large and persistent shocks the economy has been facing: a three-year horizon does not allow the forecasts to show how the economy returns to a more normal path

Medium-term forecasting by the Department of Finance should always be undertaken out to at least five years ahead

and this can undermine the realism of the short-term projections. The three-year horizon further obscures the role that ageing, climate change, implementation of international tax reforms and automatic enrolment for pensions could have on the economy.

The Council has previously underlined the importance of always using a five-year horizon at least (Fiscal Council, 2018b), and its concern that the current parliamentary term should not affect the horizon of official macroeconomic and fiscal forecasts. There is also a case for forecasts to stretch well into the next Parliamentary term if needed.[14] Medium-term forecasting should always be undertaken out to at least five years ahead.

[14] See, for example, the November 2018 *Fiscal Assessment Report* (Fiscal Council, 2018b): "The Council assesses that a horizon of at least five years ahead is appropriate to support a medium-term orientation for fiscal policy, and to ensure ongoing emphasis on identifying risks or potential economic imbalances in real time. The Department should not shorten the forecast horizon and should use realistic technical assumptions where needed, for example to forecast the public finances when the forecast horizon exceeds the length of the current parliamentary term."