

Macro Assessment

Continued growth despite global
challenges

1. MACRO ASSESSMENT

Continued growth despite global challenges

Between Brexit, the Covid-19 pandemic, and the ongoing war in Ukraine, the Irish economy has been hit by significant negative shocks in recent years. In each case, there has been a great deal of uncertainty about the magnitude of the impact and how long its effects would remain.

The economy has been hit by several large shocks in recent years, but growth has proved resilient

However, despite the challenges, outcomes have been consistently stronger than expected. Official projections show that Ireland's economy (real GNI*) will have expanded by 3 per cent a year on average between 2017 and 2022, despite the contraction of 3.5 per cent in 2020 due to Covid-19. A relatively healthy Irish economy in the lead-up to the 2020s and favourable developments in the high-skill sectors, including pharmaceuticals and information/communication technology, as well as domestic factors, have contributed to the resilience of growth.

The war in Ukraine has led to a rapid increase in the costs of imported energy. This has caused a sharp increase in prices, and inflation has reached its highest rates in a generation. Projections for net inward migration have increased substantially due to continued expected arrivals of refugees from Ukraine. Uncertainty around future developments for growth and inflation remains high, and high energy prices are likely to drag on growth if they persist.

The *Stability Programme Update (SPU) 2022* only projects three years ahead, contrary to previous Council recommendations and intentions expressed by the Department, and confirmed by the Minister, that it would lengthen the forecasting period to five years ahead. As discussed in Section 1.4, this limits the Council's ability to assess the consistency of the Department's forecasts between short-and medium-term developments and to develop a medium-term picture of the public finances. The Council believes that the parliamentary term should not affect the horizon of official macroeconomic and fiscal forecasts. Medium-term forecasting should always be undertaken to five years ahead.

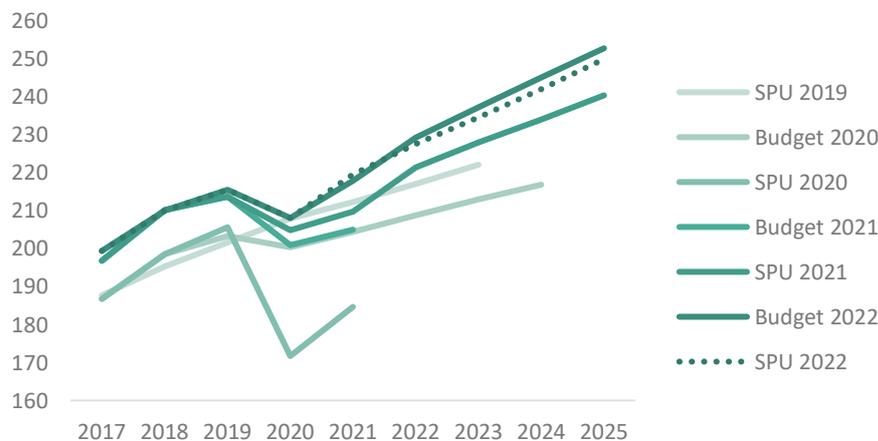
1.1 The short-term outlook

SPU 2022 shows a continued recovery from the Covid-19 pandemic and sustained growth in the medium-term, driven primarily by continued employment and wage growth and domestic factors.

Figure 1.1 presents successive forecasts for real modified gross national income (real GNI*) from successive Budgets and SPUs. Projections have been revised up strongly since 2020, as the economy-wide impact of Covid-19 has turned out less severe than anticipated. However, the latest projection in SPU 2022 is somewhat lower than forecast in Budget 2022, reflecting the impact of the higher energy prices and increased uncertainty.

Figure 1.1: SPU 2022 forecasts for the Irish economy remain more positive than a year ago, but somewhat lower than in Budget 2022

€ billion, real GNI* in 2019 constant prices



Sources: Department of Finance, Central Statistics Office (CSO), and Fiscal Council workings. Notes: For SPU 2019, Budget 2020, and SPU 2020, the Department of Finance's forecasts for nominal GNI* are deflated with the GNP deflator to estimate real GNI*. Following SPU 2020, the CSO revised historical data for the level of GNI* upwards in its *National Income and Expenditure 2019* release, hence the upward shift in the level of historical real GNI* from Budget 2021 onwards (a forecast for real GNI* has also been separately published since then). [Get the data.](#)

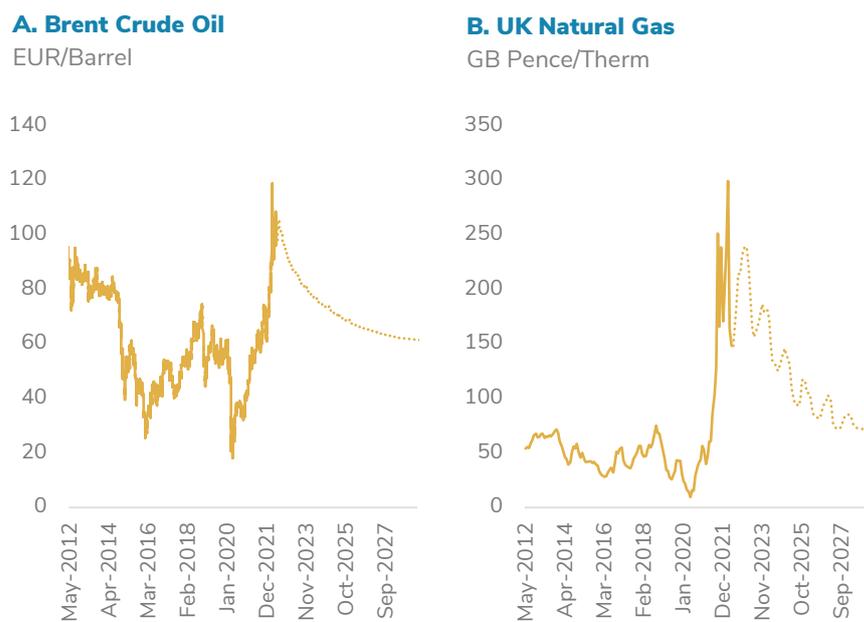
Since Budget 2022, there has been a major increase in prices and inflation. Higher inflation initially reflected a rebound in some prices as economies reopened, driven by rising demand in goods market and labour shortages emerged in some activities. Higher rents have also continued to contribute to inflationary pressures in Ireland.

Price inflation has risen sharply

In February, Russia's invasion of Ukraine resulted in a further sharp rise in energy (Figure 1.2) and food prices. While the exposure of Irish exporters to the shock is generally limited, Ireland does rely on substantial imports of gas and oil. Higher prices internationally have raised the cost of living for households and the costs of production in some sectors, including

agriculture and transport. The SPU 2022 forecasts assume that prices of these goods will remain high and fall back only gradually, based on the assumption that the current sanctions regime remains in place and that alternatives to Russian oil and gas come on stream in the years ahead. With nominal wages already set in the near term based on much lower expectations of inflation, higher energy costs will capture an increasing share of household budgets, constraining consumer spending on other goods and services. Over the longer term, continued higher prices for imported energy would tend to reduce consumption and output.

Figure 1.2: Energy prices have increased and are forecast to remain high



Source: Macrobond. [Get the data.](#)

The immediate effects of higher inflation for Ireland’s economy are reflected in the SPU 2022 projections for annual price inflation of 6.2 per cent for 2022 and 3 per cent in 2023 (Figure 1.3A). Higher inflation this year results in an expected reduction in real household disposable income (Figure 1.3C), and slower growth in modified domestic demand (Figure 1.3D). While the average inflation projection in SPU 2022 until 2025 is 3.6 per cent, this follows a generally low-inflation decade (2012–2021) where price increases averaged just 0.6 per cent per annum.

Higher inflation has reduced forecasts of economic growth

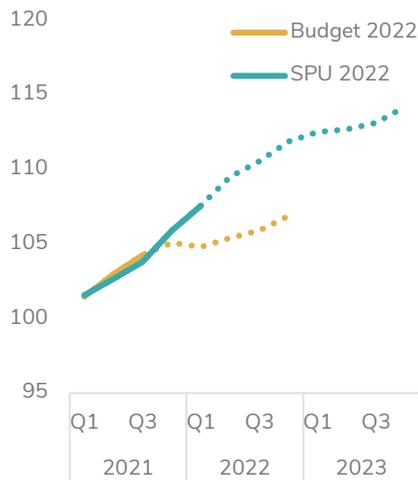
The SPU 2022 forecasts assume that much of the increase in prices has already taken place through higher energy prices (Figure 1.3B). Still, prices are forecast to continue to rise more rapidly than usual during the coming months of 2022. Some price increases feed through gradually, notably

under household fuel prices, while other goods will require higher input prices through the supply chain in areas where energy is an input, such as a food and metals. Prices increases in the SPU are projected to slow to a more moderate pace from 2023 with only a modest acceleration in wage growth.

Figure 1.3: Inflation has accelerated mainly due to higher energy prices, and recent economic forecasts have been revised down

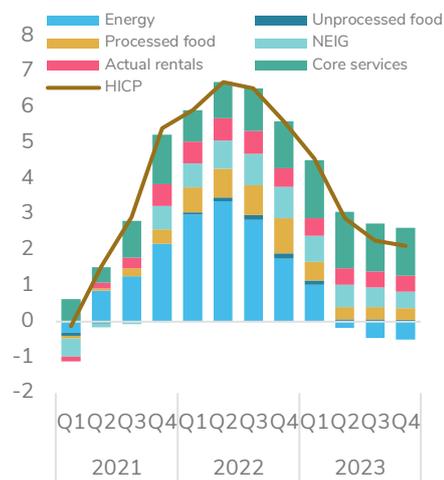
A. Prices have increased

2015 = 100, HICP



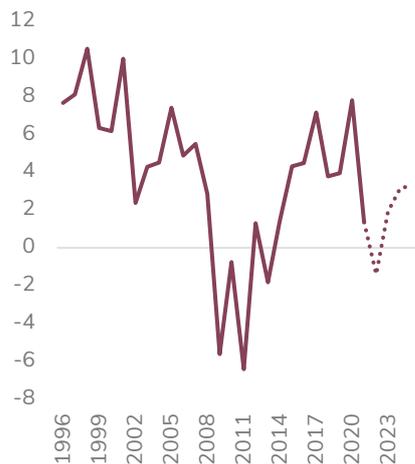
B. Driven by higher energy prices

Year-on-year % change; p.p. contributions



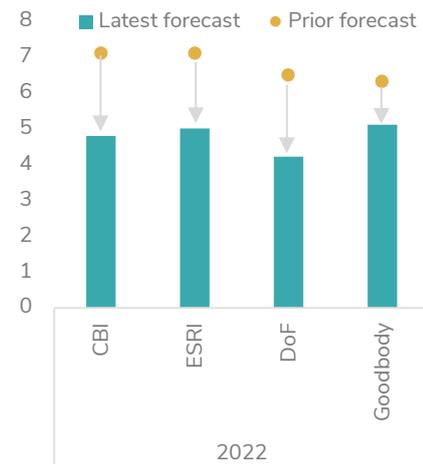
C. Real incomes forecast to fall in 2022

% change real household disposable income



D. Demand forecasts downgraded

% change in volume



Sources: Eurostat; CSO; Various forecasting bodies. [Get the data.](#)

Notes: Dotted lines show official forecasts. Panel C shows total disposable income deflated with the harmonised index of consumer prices (HICP). Panel D shows forecasts for volume growth rates in modified domestic demand. CBI prior and latest forecasts are the Q1 and Q2 2022 Quarterly Bulletins. ESRI prior and latest forecasts are the Winter 2021 and Spring 2022 Quarterly Economic Commentaries. DoF (Department of Finance) prior and latest forecasts are Budget 2022 and SPU 2022. Goodbody prior and latest forecasts are Q4 2021 and Q1 2022 Health Checks.

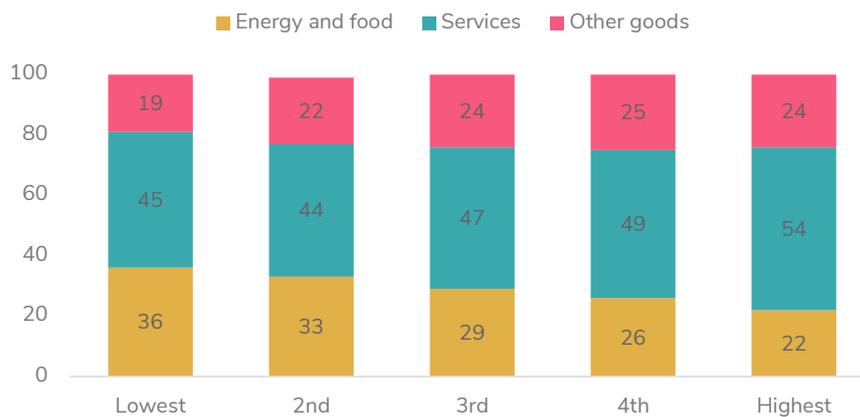
However, uncertainty is high around these projections. Firstly, energy prices could change significantly, for example if there are disruptions to the supply

of gas from Russia or if efforts to substitute away from Russian energy are more challenging than assumed. Low-income households spend more than a third of disposable income on energy and food (Figure 1.4), implying a greater degree of vulnerability to price increases. Second, workers and firms may look to raise wages and prices more than projected to maintain their purchasing power and margins. These second-round effects could in turn feed back into higher and more persistent inflation than *SPU 2022* assumes.

Low-income households are more vulnerable to energy and food price increases

Figure 1.4: Low-income households spend more than a third of disposable income on energy and food

Expenditure weights by quintile of net disposable household income



Sources: Lydon (2022), CSO, and Fiscal Council workings. [Get the data.](#)

If inflation remains high and feeds into higher wage growth internationally, there may be a faster pace of monetary policy tightening that could slow growth or even lead to recession in advanced economies. Slower momentum going into 2023 would result in weaker demand for Irish exports. As a small open economy, Ireland is particularly sensitive to investment decisions and trade spillovers from its main trading partners. However, Ireland currently has favourable exposures to high-skill sectors, including those with less cyclical tendencies such as information and communication technologies and pharmaceuticals, which have shown resilience during challenging periods for the global economy. As a result, it is possible that the Irish economy is relatively well placed to weather a downturn in economic activity abroad.

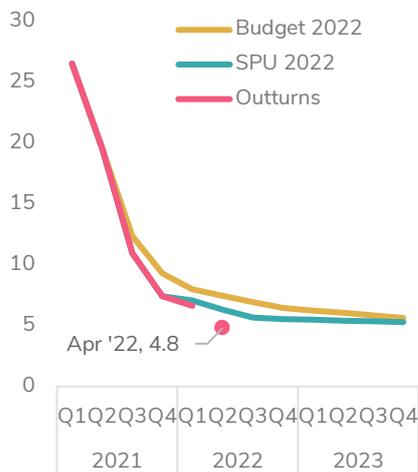
Despite the negative headwinds, recent short-term macroeconomic indicators point to a continued strong recovery from the pandemic. The unemployment rate has fallen faster than projected and was 4.8 per cent in April (Figure 1.5A) — well below the *SPU 2022* projection for this year of 6.2 per cent. These trends have positively impacted government revenues,

and reflect a stronger employment outcome.¹ Labour income for the second half of 2021 was €0.8 billion (1.5 per cent) stronger than forecast, and income taxes for Q4 2021 came in €0.65 billion (8.6 per cent) ahead of last October's Budget (Figure 1.5B).

Figure 1.5: The recovery in the labour market has been faster than expected

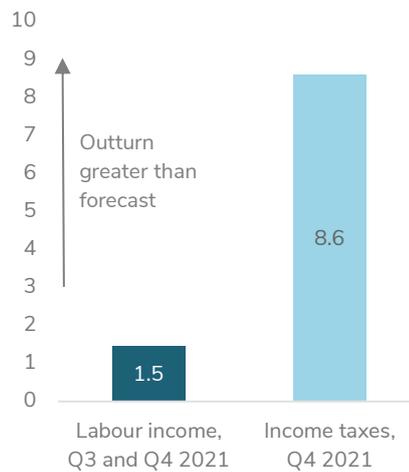
A. Unemployment rate

% of labour force



B. Labour income and income taxes

% difference from Budget 2022 projections



Yet the economy has continued to perform well in recent months

Sources: CSO; Department of Finance (SPU 2022) projections. [Get the data.](#)

Note: Panel A shows Covid-adjusted unemployment rates. The Q1 2022 outturn is the average of the CSO's monthly Covid-19 adjusted unemployment rates for January and February, and the March monthly unemployment rate, since the ending of pandemic unemployment payments from 25th March onwards.

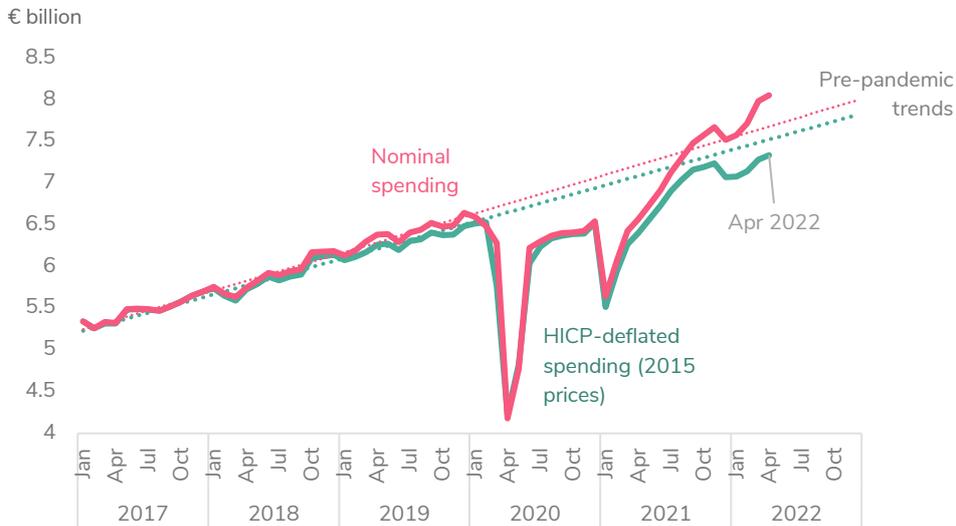
In 2021, personal consumption grew by 6 per cent, but somewhat underperformed the Department's Budget 2022 forecasts, due in part to additional Covid-19 restrictions at the end of the year. However, underlying investment in machinery and equipment excluding aircraft grew by over 40 per cent. This reflects a combination of stronger investment by domestic firms in software and equipment for employees working from home, but also activity of multinational firms — including new equipment for data centres, whose electricity usage increased dramatically last year.²

¹ In terms of actual hours worked, this recovery was reflected broadly across sectors, but especially by high-earning sectors: information and communication, financial and insurance, real estate activities, education, and professional, scientific, and technical activities. These are the 'High 5' sectors described in Timoney (2022), and in the second half of 2021, actual hours worked increased by 10.6 per cent. This was a faster increase than for the 'Middle 6' (6.1 per cent) or for the 'Low 5' (7.4 per cent), despite the minor impact of the pandemic on the 'High 5'.

² For details, see: <https://www.cso.ie/en/releasesandpublications/ep/p-mec/meteredelectricityconsumption2021/>

Indicators of consumption including monthly data for card spending and ATM withdrawals have performed strongly in recent months, even when deflated by higher-than-expected consumer prices. Figure 1.6 shows that, relative to pre-pandemic trend, a small gap remained by April 2022 for HICP-deflated spending (in green), whereas nominal spending had again exceeded its trend level.

Figure 1.6: Cards spending and ATM withdrawals remain close to trend



High-frequency indicators of real consumer spending remain strong, despite rising prices

Sources: Central Bank of Ireland, and Fiscal Council workings.

Notes: Monthly spending on cards and ATM withdrawals are deflated with HICP and seasonally adjusted with Tramo-Seats. The linear trend is based on a sample period of 2015–2019. April 2022 is based on daily card spending and ATM withdrawals, and subject to revision when full-month data become available. [Get the data.](#)

The inflow of refugees from the Ukraine could have a significant impact on the Irish economy. The official projections now anticipate over 100,000 net migrants to Ireland in 2022 and 2023 combined, compared to just 40,000 expected in Budget 2022. The difference amounts to an increase of around 1 per cent of Ireland’s population. This will lead to additional government spending and demand for services, including housing. Over time, it may also increase the supply of labour. However, by late May, just over 33,000 Ukrainian refugees had arrived in Ireland, close to 7,000 higher than by late April.³ The expected number of Ukrainian refugees arriving in Ireland is very hard to evaluate as it depends on developments in Ukraine and the choices refugees make. However, the official projections may overestimate the outcome.

³ <https://www.cso.ie/en/releasesandpublications/fp/p-aii/arrivalsfromukraineinirelandseries1/>

1.2 The medium-term outlook

SPU 2022 projects that the Irish economy will expand slightly faster than trend growth rates of 3 per cent per annum until 2025 due to export growth, rising consumption, and construction. The central scenario is that a small positive output gap will emerge, signalling strong growth but not significant overheating. Given the assumptions that energy prices will tend to ease gradually rather than increase, growth in compensation of employees and inflation pressures are expected to ease with a return towards normal trend rates from 2024. Table 1.1 presents key SPU 2022 macroeconomic forecasts for the Irish economy.

Table 1.1: SPU 2022 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*)	2.6	-3.5	5.5	3.7	3.1	3.2	3.3
Underlying domestic demand (UDD)	3.3	-4.9	5.9	4.2	3.9	3.5	3.6
Personal consumption	3.3	-10.4	5.7	6.0	3.6	3.5	3.4
Underlying investment	-0.4	-3.6	7.3	5.5	6.8	5.1	5.6
Compensation of employees (nominal)	7.1	0.5	8.2	9.8	7.5	6.8	6.6
Employment ^a	2.9	-16.8	11.0	14.9	2.1	1.7	1.7
Unemployment rate ^a (% labour force)	5.0	19.2	15.9	6.2	5.4	5.2	4.9
Inflation (HICP)	0.9	-0.5	2.5	6.2	3.0	2.2	2.1
Savings ratio (% disposable income)	10.2	25.2	19.9	13.6	11.7	11.0	10.7
Modified current account (% GNI*)	9.4	11.5	9.8	8.5	7.3	6.7	6.2
Output gap (% potential GDP)	2.1	-1.8	-1.0	-0.5	-0.1	0.0	0.2

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.

While the Department of Finance has previously signalled to the Council its intention to forecast to five years ahead, the SPU projections are only to three years ahead. This limits the Council's ability to assess the consistency of the Department's forecasts between short- and medium-term developments.

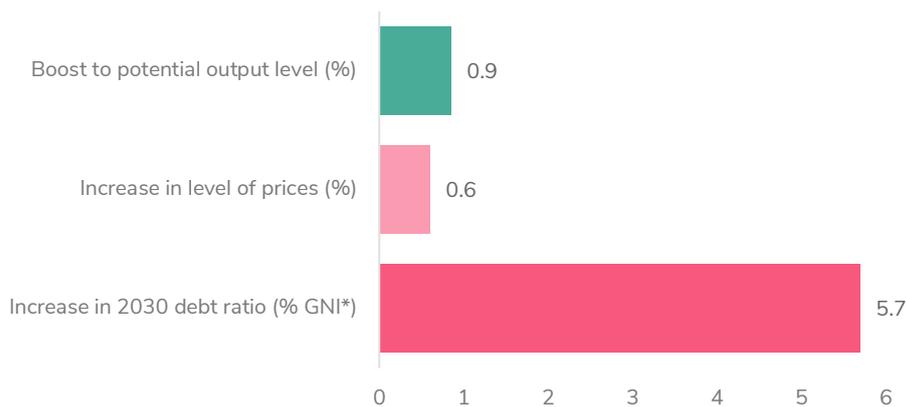
Although SPU 2022 includes downward revisions to public expenditure on gross fixed capital formation, the Government still plans a substantial increase in public investment in the coming years. This will drive up short-term activity and increase the total size of Ireland's capital stock, raising the potential for economic activity over the long term. Analysis by Conroy, Casey and Jordan-Doak (2021) shows that the additional public investment outlined in the *National Development Plan (2021–2030)* could boost the overall level of activity by around 1 per cent over the long run (Figure 1.7).

Higher public investment should boost economic activity

However, the additional activity would also add to inflation pressures — prices across the economy are expected to increase by an estimated 0.6 per cent. The research also shows that the National Development Plan would require 180,000 construction workers, which is some 21,000 workers above Q1 2022 levels. With limited numbers of unemployed construction workers domestically, and risks of a mismatch between the skill set of migration flows and the needs of the construction sector, it could prove challenging to achieve this increase in construction employment and meet the targets of the Plan.

Figure 1.7: Public investment ramp-up to lift output, prices, and debt

Estimated impacts of additional public investment by 2030



Sources: Conroy, Casey and Jordan-Doak (2021). [Get the data.](#)

Notes: The estimated boost to real potential output shown is the median estimate from a variety of approaches. The increase in prices is for HICP levels by 2030. All estimates are compared to a scenario where public investment is held constant at its 2021 rate of 4.1 per cent of GNI*.

The savings ratio remained elevated in 2021 at 21 per cent according to the most recent CSO estimates, as household incomes grew strongly during the pandemic (helped by the Government’s income supports) but opportunities to spend were restricted. The SPU projects that this will gradually reduce to around 11 per cent by 2025. This is close to the level in 2017–2018 but higher than in the preceding years.

The persistently high level of savings forecast in *SPU 2022* is somewhat puzzling. It is also possible that the 2021 level of consumption is understated by the current CSO estimates, or that consumption recovers more fully than projected by 2025. This could imply a stronger level of consumption over the forecast horizon than projected in *SPU 2022* and a lower savings rate all other things equal.

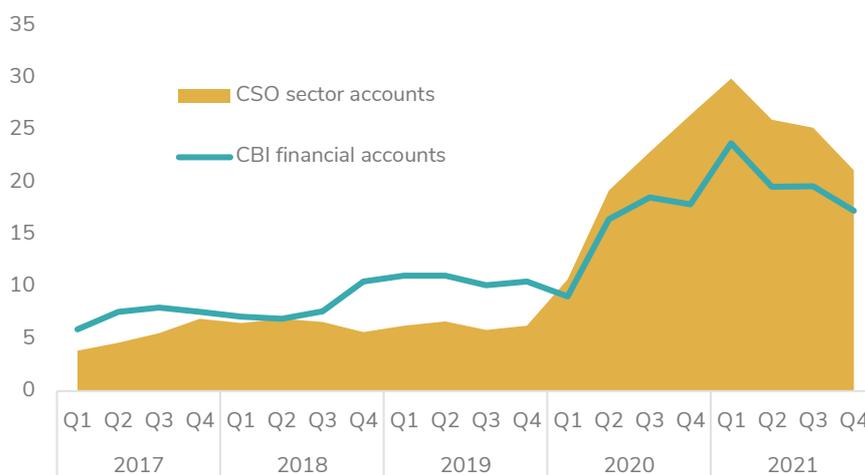
The relatively slow recovery to date in household consumption expenditure according to Ireland’s national accounts for 2020 and 2021 is not well

supported by a number of other data sources, including spending on cards and ATM withdrawals (Figure 1.6), value-added taxes, and the implied level of household net lending in the Central Bank of Ireland's *Quarterly Financial Accounts*.

As shown in Figure 1.8, the Central Bank's data on net lending has typically been higher than in the CSO's *Institutional Sector Accounts*. These series rely on different sources and approaches to estimation, but since the Covid-19 pandemic began in early 2020, this relationship between the two net lending sources has reversed.

Figure 1.8: The Quarterly Financial Accounts could imply higher household consumption than the CSO's national accounts show

€ billion, net lending by the household sector, four-quarter moving sum



Sources: Central Bank of Ireland, and Fiscal Council workings. [Get the data.](#)

Notes: Data shown for households and non-profit institutions serving households. Net lending captures leftover resources after paying for consumption and investment from income. Gross savings is the outcome of the current account, mainly relating to disposable income less consumption. Net lending in the sector accounts additionally accounts for transactions in the capital account, including gross capital formation and capital transfers, whereas net lending in the financial accounts is determined from all net financial transactions recorded in bank ledgers.

The gap in these series in Q4 2021 was close to €4 billion. If the pre-pandemic relationship held (with the CBI estimate above the CSO estimate of net lending), this would likely imply an upward revision beyond €4 billion to household consumption, since net lending is residually determined in the national accounts.⁴

In terms of the balance between domestic and foreign demand, Ireland's modified current account (CA*), which has registered a large surplus of

⁴ Gross capital formation by households could also explain smaller aspect of this difference, given it is less than one-tenth the size of household final consumption.

around 10 per cent of GNI* in recent years, is likely to narrow in response to the higher costs of imported energy and declining household savings rate.⁵ Weaker international economic activity will likely reduce Ireland's exports from sectors with greater relevance to GNI*. At the same time, a strong underlying rate of domestic growth, in combination with high energy prices and pressures on global supply, is likely to increase Ireland's nominal spending on imports. In terms of sectoral balances, the increase in savings due to an improving general government balance over the medium term (see Section 2) would be more than offset by higher consumption spending and investment.

⁵ In the absence of modified measures of exports and imports with relevance to Ireland's real economy, it remains challenging to assess Ireland's modified current account (CA*) from an expenditure perspective.

1.3 Risks to the outlook

Risks to the outlook in *SPU 2022* are described as being “firmly tilted to the downside”. There are significant and unusually large risks both to inflation and to economic activity, including those associated with the war in Ukraine. At the same time, there are some upside risks and Ireland’s recent economic performance has generally been better than anticipated in recent years, as discussed in Section 1.2.

Downside risks have increased, but recent performance has surprised to the upside

As a small open economy, global risks, such as energy shortages or a large financial shock, have significant capacity to adversely affect the Irish economy. Current developments regarding supply-chain disruptions in China as a result of Covid-19 restrictions, and potential energy shortages for EU Member States arising from both existing and prospective restrictions on imports from Russia, have greatly increased risks emanating from the global economy.

Price inflation has already proven considerably higher than previously expected (see Figure 1.3A) and remains high. Risks to the outlook due to second-round effects of inflation on further price and wage increases are central, but difficult to evaluate given the prolonged period of low inflation experienced in the recent past. Knock-on demands for higher wages may reduce Ireland’s competitiveness and exports depending on relative changes in Ireland’s trading partners. As noted in the December 2021 *Fiscal Assessment Report* (Fiscal Council, 2021b), domestic capacity constraints could be an issue in the coming years, with the risk that these could constrain growth and raise price pressures. There are continued signs of tightness in areas such as construction, which the expanded public investment programme will most likely add to (Conroy, Casey and Jordan-Doak, 2021). While Ireland has often relied on inward flows of migration to respond to tightening labour market conditions, migration flows could respond more slowly to higher post-pandemic demand, or migrants may lack the skill sets needed to meet short-term needs of the labour market. However, a more favourable scenario relates to the possibility that inflation recedes more rapidly than currently suggested in both market-based projections and official forecasts. Although the likelihood of this more benign scenario appears remote at present, energy prices have long been volatile, and they could revert to a lower level over coming years.

Given Ireland's reliance on foreign multinationals to drive labour demand and earnings growth, a key downside risk is the potential for lower foreign direct investment from the multinational national sector in response to international tax reforms or other factors. Besides the effect on future corporation taxes, this could reduce earnings in high-pay sectors of the economy with further effects to wider demand and the public finances.

An ongoing risk relates to the possible unwinding of Brexit's current trading agreement between the UK and the EU related to Northern Ireland, which would lead to disruptions to trade. Northern Ireland has remained within the EU's customs union and single market, but the free trade agreement's adverse effects could be larger than assumed.⁶ The UK has further postponed the introduction of checks on incoming goods, delaying the potential impact of some frictions on Irish trade. In addition, the risks of a disruptive change of trading conditions remains, particularly if UK access to the EU market were to change amid continued uncertainty over the Northern Ireland Protocol.

On the positive side, there continues to be a number of reasons why both short- and medium-term growth might be higher than assumed. Ireland's relatively resilient performance during the large shock represented by the Covid-19 pandemic is instructive for understanding its prospects over the coming years. Although vaccines, government supports, and adaptation by firms were crucial factors in the Irish economy's recovery from the pandemic, the relatively healthy economy in 2019, with favourable sectoral exposures to high-skill activities, was also very important. From a sectoral perspective, the drivers of growth in the Irish economy have been concentrated in sectors with the highest hourly wages, as discussed in a separate analytical note by Timoney (2022). If hourly wages or hours worked perform stronger than projected, the growth of earnings could again exceed official projections, as has been typical in recent forecasts (see Figure 1.13).

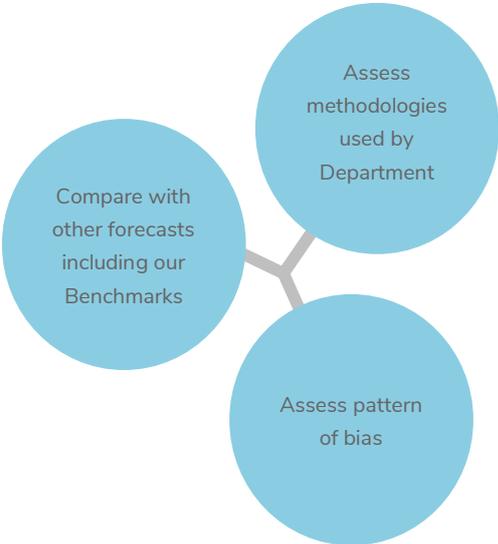
Furthermore, the recovery of sectors severely affected by the pandemic has already been strong, and the transition out of unemployment to employment

⁶ Various studies put estimates of the medium-term impacts on Ireland's real output of Brexit as 1.1 per cent to 2.8 per cent for a so-called "soft Brexit" and 3.1 per cent to 7 per cent for a "hard Brexit" (Fiscal Council, 2018a). However, the impacts of Brexit are likely to have been dampened by the transition period and are also, to an extent, masked by the coinciding effects of the pandemic.

in those sectors with high demand for labour has been rapid, suggesting limited scarring over the medium term at an aggregate level. Demand for services that had been restricted has been especially high, and firms in sectors such as hospitality have been facing shortages of labour supply and rising costs. As discussed in the June 2021 *Fiscal Assessment Report* (Fiscal Council, 2021a), these sectors tend to attract less imports and have higher domestic multiplier effects, so that increases in consumer spending in these areas could lead to larger-than-usual growth impacts.

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 March and April 2022.



The Council assessed that the Department's forecasts for 2022 to 2025 were within an endorseable range, taking into account the methodology and plausibility of the judgments made. This section explores the key issues that arose in this latest endorsement exercise.

The Council's assessment of the Department's macroeconomic forecasts resulted in particular scrutiny relating to the forecast horizon, the outlook for personal consumption, compensation of employees, and income taxes.

Background

The Department's provisional macroeconomic forecasts were completed on 24th March 2022 (see table S1a for details of the endorsement timeline). The Council and Secretariat discussed the forecasts with Department staff on 1st April.

The Department has expanded its use of underlying economic measures that focus on the domestic economy, including GNI* (see Lennon and

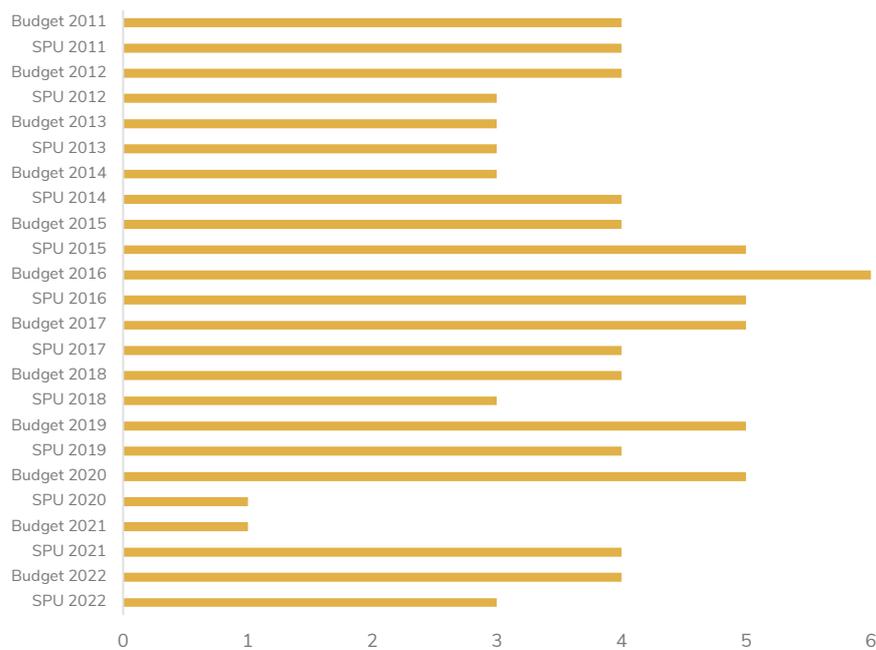
Power, 2021). This is a welcome development, given the distortions that affect many headline indicators in Ireland due to multinational enterprises.⁷

Forecast horizon

SPU 2022 only forecast three years ahead, less than in some previous forecasts and too short a horizon to provide a full picture of medium-term prospects. Figure 1.9 shows that the horizons in official forecasts have only rarely stretched to five years or beyond, but the three-year horizon used in SPU 2022 is nonetheless unusually short.

Figure 1.9: SPU 2022 only forecasts to three years ahead

Years



Sources: Department of Finance, and Fiscal Council workings. [Get the data.](#)

Notes: 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).

The Department has previously signalled to the Council its intention to forecast to five years ahead. This 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 also obscures the role that ageing, climate change, implementation of

⁷ Unfortunately, many agencies and private bodies forecasting the Irish economy continue to focus on GDP. The Council’s view is that a wider move towards forecasting underlying measures would provide more meaningful and relevant projections, and would help to strengthen the overall macroeconomic debate in Ireland.

international tax reforms and automatic enrolment could have on the economy.

The Council has previously noted this issue (Fiscal Council, 2018b), and its concern that the parliamentary term should not affect the horizon of official macroeconomic and fiscal forecasts.⁸ Medium-term forecasting should always be undertaken out to five years ahead.

Taxes, labour income, and personal consumption

A recurrent issue in recent Government forecasts has been the consistency between consumption, labour income and income taxes. These have been unusually difficult to forecast because of the impact of the pandemic and structural changes in the economy. Consistency checks between different elements of the forecast, such as the savings ratio that links spending and disposable incomes, or the effective tax rate, can be a useful help to evaluate the internal consistency and coherence of forecasts.

The Council endorses the macroeconomic rather than the budgetary projections, but some fiscal measures are nonetheless present in macroeconomic data. For example, taxes on income and wealth are a key determinant of households' disposable income, which feeds into consumption and savings.⁹

Box A highlights some inconsistencies between the macroeconomic forecasts for net social transfers to households and the corresponding fiscal forecasts for social transfers. Net social transfers, together with income taxes form a key component of household disposable income. Ensuring accurate macroeconomic forecasts of these variables is a pre-requisite for accurate fiscal forecasts, and it is important that there is a consistent picture between these fiscal quantities and the macroeconomic forecasts, given their relevance to understanding budgetary developments.

The Department's forecasts implied an elevated effective income tax rate until 2025

⁸ See, for example, the November 2018 FAR: "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."

⁹ Note that "taxes on income and wealth" is broader than income tax examined in Box B and Section 2. The measure examined here includes not just income tax, but also capital gains tax, motor tax (on household cars), and the TV licence.

Box A: Household income and Macro-Fiscal (in)consistency

The Department of Finance aims to have its macroeconomic forecasts, such as its household income forecasts, consistent with its fiscal forecasts. In practice however, there are challenges to achieving this. The fiscal forecasts typically do not assume social benefits (pension payments and unemployment benefits) are uprated as this requires a formal budgetary decision, even if history suggests this is likely. But for the Department's forecasts of consumer spending and household savings to be realistic, some recognition of these likely changes are needed. In practice, achieving realistic macroeconomic forecasts in this context can lead to inconsistencies with less realistic fiscal forecasts. The Council has highlighted credibility issues with the Government's expenditure forecasts on numerous occasions. This box examines the macro-fiscal consistency of the Department's *SPU 2022* forecasts.

Macroeconomic forecasts

As part of the Council's endorsing of the Department's macroeconomic forecasts, the Department sends the Council its projections of household income. These include "net transfers": mainly social benefits received less social contributions paid.

Households receive social benefits mostly from the government, but also from the financial sector (in the form of pensions for example) and from overseas. Households pay social contributions to both the government and the financial sector.

The bulk of social benefits households receive (82 per cent) and contributions they pay (68 per cent) are from/to the government. As a result, the social benefits households receive should move broadly in line with the social payments paid by the Government. Likewise, social contributions received by the Government should move broadly in line with social contributions paid by households.

Forecast revisions point to inconsistencies

The *SPU 2022* forecasts saw potentially significant inconsistencies between the macro and fiscal parts of the forecasts. The macroeconomic forecasts in *SPU 2022* signal large downward revisions to net transfers to households compared to at Budget time. By 2025, the SPU has net transfers received revised down by €5 billion (Table A1). In other words, households are now forecast to receive substantially less benefits than the contributions it would pay out. However, the fiscal forecasts show the opposite.¹⁰ Transfers from the government to households are revised up by €3.2 billion relative to *Budget 2022* forecasts.¹¹

These revisions do not appear consistent with each other. And the difference is large by 2025 at €8.2 billion (5.3 per cent of personal disposable income). For this to be consistent, it would have to imply that households pay substantially more net contributions to the financial sector by 2025, compared to the *Budget* forecasts. This seems implausible.^{12, 13}

What does this disparity mean? It means that either *Budget 2022* forecasts were inconsistent, *SPU 2022* forecasts are inconsistent, or both. Whether *Budget 2022* forecasts were inconsistent

¹⁰ Since the Department compiled their macroeconomic forecasts, which used the latest national account and institutional sector account data, there have been some revisions to the data based on the latest Government Financial Statistics release. However, these revisions do not meaningfully alter the analysis in this box.

¹¹ Social transfers in kind (via market producers) (D.632), does not form a part of household disposable income so is removed here to ensure a direct comparison with the figures from the macroeconomic forecasts. An example of a social transfer in kind (via market producers) would be a payment under the housing assistance payment scheme.

¹² The Department did not incorporate the impact of the proposed auto enrolment scheme into their macroeconomic forecasts.

¹³ Alternatively, a steep increase in "net" other current transfers paid would have to explain the difference. The largest component of other transfers is net non-life insurance premiums/claims. The extent of the increase necessary would be implausible.

is hard to say. The Department did not provide the Council with the gross flows that underly their "net transfers" figure in the macroeconomic forecasts from Budget 2022.

Table A1: How net transfers to households were revised in SPU 2022

€ million, SPU 2022 – Budget 2022

	2021	2022	2023	2024	2025
Macroeconomic forecast revisions	-2,449	-3,099	-4,057	-4,576	-4,992
Fiscal forecast revisions	672	3,111	3,893	2,845	3,177

Source: Department of Finance.

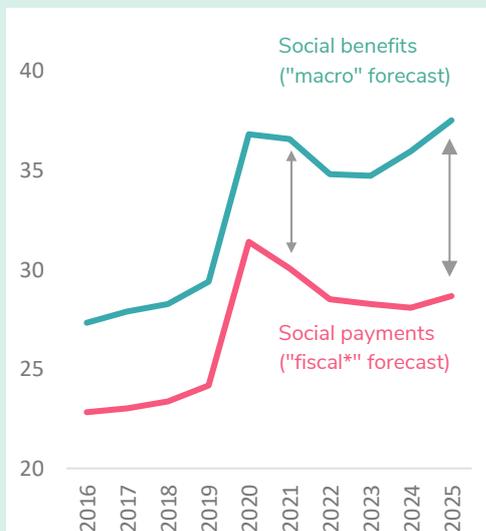
Notes: The fiscal forecasts show the net revisions of social contributions (D.61) and social payments (D.62 + D.632) from Table 12 in SPU 2022 relative to Table 10 of Budget 2022's Economic and Fiscal outlook, together with the revision to social transfers in kind (via market producers) (D.632). Social transfers in kind (via market producers) is derived from the Department's macroeconomic forecasts for Personal Consumption Expenditure and Final Consumption Expenditure of households, which the Department assume grow at the same rates.

However, the Department did provide the gross flows of their macroeconomic forecasts as part of their SPU 2022 forecasts. Figure A1 shows these gross flows alongside some of the SPU's corresponding fiscal forecasts.

Figure A1: Households social benefits and social contributions SPU forecasts

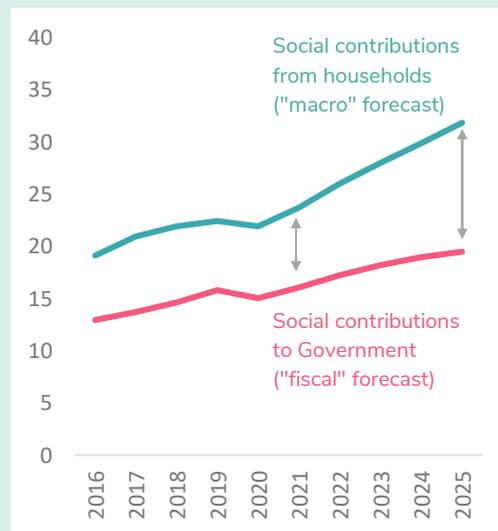
A. Social benefits households receive

€ billion



B. Social contributions households pay

€ billion



Sources: CSO; and Fiscal Council workings.

Notes: The green lines are from the macroeconomic forecasts. The pink lines are from the fiscal forecasts. *The pink line in panel A is constructed using both the fiscal forecasts for social payments and the macroeconomic forecasts for final consumption expenditure. It is derived from subtracting the social payments in kind (via market producers) (D.632). The forecasts of social payments in kind (via market producers) are obtained from the Department's macroeconomic forecasts for personal consumption expenditure and final consumption expenditure of households. Get the data.

Two things are apparent from comparing the SPU's macroeconomic and fiscal forecasts.

First, the forecasts suggest an increasing gap between the benefits households receive and the payments made by the Government to them (Figure A1.A). This implies that the share of benefits to households from the financial sector and overseas, is increasing rapidly. This could be a reasonable way to make the macroeconomic forecasts more realistic if the fiscal forecasts for social payments from government are unrealistically low. The social payments from government is falling in both 2023 and 2024 by close to €200 million, before rising by €580 million in 2025. The Council's Stand-Still scenario points to Social Protection demographic costs (including the effect of

the fall in unemployment) falling by only €65 million in 2023, then rising by €470 million in 2024 and €395 million in 2025. This is without factoring in likely increases to the rates of pay of these benefits.

Second, the comparison of contributions paid by households with contributions to the Government similarly shows a gap emerging over time. This, again, implies a much larger share of contributions going to the financial sector (Figure A1.B). Total social contributions paid by households, which includes contributions to government and the financial sector, are forecast to rise at a sharp rate over the forecast horizon: up 7.7 per cent on average over 2022–2025, whereas the contributions to government are growing by 5 per cent.^{14, 15}

How might inconsistencies be avoided?

In compiling the macro-fiscal forecasts, the first best outcome is that the macroeconomic and fiscal forecasts are both realistic and fully consistent with each other. However, in the absence of realistic fiscal forecasts that consider demographic pressures and the likely uprating of benefits and tax bands, some adjustments should be made to the macroeconomic forecasts. At a minimum, these adjustments would ensure that the macroeconomic forecasts are realistic. This can be done by compiling the macroeconomic forecasts on a “most likely” outcome basis, using Stand-Still-like spending pressures as an input. That is, recognising the likelihood that benefits would be uprated in line with historical precedent. This would prevent unrealistic fiscal forecasts impacting on the realism of other areas of the macroeconomic forecasts like the forecasts for consumer spending.¹⁶

In 2021, household taxes grew more than twice as fast as employees’ labour income, leading to a sharp increase in the ratio of taxes to labour income. This outcome reflected a combination of factors. Firstly, there was an ongoing weakness in incomes for sectors worst affected by the pandemic, which typically contribute less to income taxes — see Box D in the May 2021 *Fiscal Assessment Report* (Fiscal Council, 2021a). Secondly, tax receipts were unexpectedly strong from sectors less affected by the pandemic (see Box B).

While the tax-income ratio has typically been stable over time, the Council has noted that a number of previous forecasts have shown rising ratios. The average tax rate increased rapidly in 2021 and *SPU 2022* shows that this is

¹⁴ Of the contributions to government, PRSI receipts are forecast to grow by an average of 7.4 per cent over 2022–2025, broadly in line with Compensation of employees. This means that the social contributions from government employees and the government’s imputed pension contribution for these employees are forecast to fall by an average of 2.5 per cent over 2022–2025.

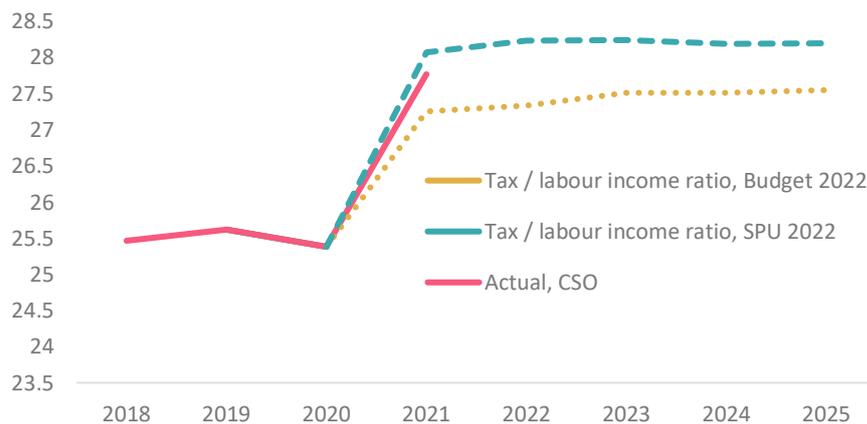
¹⁵ While PRSI may grow in line with compensation of employees (with an elasticity of 1, see Conroy, 2020), in the recent past total social contributions from households has grown at a slower rate than compensation of employees. For instance, over 2013–2021, compensation of employees grew by an average of 5.2 per cent, whereas total social contributions grew by 4 per cent.

¹⁶ If the realism of consumption forecasts are affected, this can impact on the accuracy of VAT receipts, and by extension the budget balance.

expected to persist, even as the economy recovers (Figure 1.10).¹⁷ This implies that taxes will remain well above the 2019 share of income. There are a few potential explanations for such a forecast. As wages rise, fewer workers may become exempt from income tax over time; more people might fall into the higher tax bracket; or a larger share of earnings could be taxed at the higher rate. However, it is also possible that a return to work of employees with lower hourly pay or part-time jobs, whose employment was most acutely affected by the pandemic, could lead to a return to a lower tax-income ratio.

Figure 1.10: SPU 2022 shows a level-shift projection for the ratio of household taxes to labour income

Taxes as a share of labour income



Sources: CSO, Department of Finance, and Fiscal Council workings. [Get the data.](#)

Notes: The dashed lines represent forecasts at the time of the Budget or SPU's publication. The measure of taxes on income and wealth is broader than just income tax, and also includes capital gains tax, motor tax (on household cars), and the TV licence. Actual (CSO) reflects the Q4 outturn for taxes, which was €0.3 billion weaker than expected in SPU 2022's macroeconomic projections.

Box B uses sectoral data for employee taxes, wages and salaries, and hours worked to assess the SPU 2022 forecasts for income tax. Based on a recent analytical note by Timoney (2022), the analysis suggests that a bottom-up projection of income taxes align with official forecasts, conditional on the composition of employee earnings in SPU 2022. The strength of hourly earnings in high-earning sectors is shown to be especially relevant to the prospects for employee taxes, which could prove even stronger over the medium term.

¹⁷ Although *Institutional Sector Accounts* for Q4 2021 had not yet been published by the time of the endorsement decision, compensation of employees by sector has recently been included in the CSO's *Quarterly National Accounts*. Figure 1.8 reflects the Q4 outturn for taxes, which was €0.3 billion weaker than expected in SPU 2022's macroeconomic projections.

Box B: A bottom-up assessment of income tax forecasts across sectors

Income tax receipts were exceptionally strong in 2021, despite significant restrictions on activity due to Covid-19. As a share of labour income, the effective tax rate (ETR) increased by two percentage points to 24 per cent between 2020 and 2021. This followed a stronger outturn for income tax receipts in 2020 compared to official forecasts.

The *Stability Programme Update (SPU) 2022* projects a higher ETR to remain for 2022–2025. To assess the plausibility of the aggregate income tax forecasts contained in *SPU 2022*, this box generates a bottom-up estimate of income tax forecasts across sectors, summarising the findings of a recent analytical note by Timoney (2022).

Three groups are used in presenting the bottom-up projections, based on the ranking of 16 sectors of the economy according to their hourly wages in 2019, and they are called ‘High 5’, ‘Middle 6’, and ‘Low 5’.¹⁸

The first section of the box presents background data on employee taxes and hourly wages across sectors. The second section uses decompositions of hours worked and hourly wages to forecast wages and salaries across sectors, consistently with total wages and salaries in *SPU 2022*. The final section forecasts ETRs and employee taxes by sector.

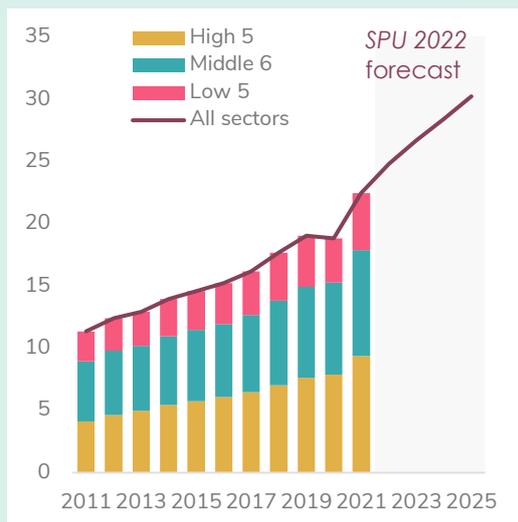
Employee taxes and hourly wages across sectors

The main components of income taxes are employee taxes — that is, “pay as you earn” (PAYE) and universal social charge (USC, which replaced the income levy in 2011) — and they are presented in Figure B1, with *SPU 2022* forecasts for 2022–2025 also included. In 2021, employee taxes recovered strongly for all sector groups following a weaker 2020 as a result of Covid-19.

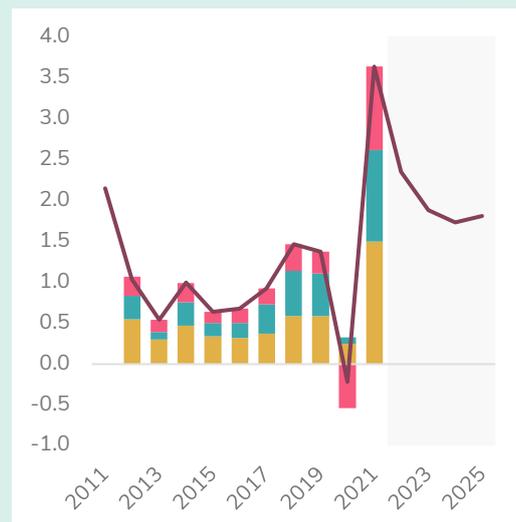
Figure B1: Employee taxes grew across all sector groups in 2021

€ billion

A. Levels



B. Year-on-year changes



Sources: Revenue Commissioners, Department of Finance, and Fiscal Council workings. [Get the data.](#)

Notes: Income tax mainly comprises “pay as you earn” (PAYE), universal social charge (USC, which replaced the income levy in 2011), and self-assessed income taxes. It also includes life assurance exit tax, deposit interest retention tax, professional services withholding tax, dividend withholding tax, and miscellaneous income tax.

¹⁸ ‘High 5’: information/communication (J), real estate (L), professional/scientific/technical (M), financial/insurance (K), and education (P). ‘Middle 6’: mining/utilities (B, D and E), human health/social work (Q), administrative/support (N), manufacturing (C), public administration/defence (O), and other activities (R–T). ‘Low 5’: wholesale/retail (G), transport/storage (H), construction (F), accommodation/food services (I), and agriculture/forestry/fishing (A)

Table B1 summarises the pre-pandemic shares of employee taxes, wages and salaries, and hours worked in 2019 for the three sector groupings introduced above. The differences among these shares illustrate the progressivity of employee taxes.

Table B1: Employee taxes, wages and salaries, and hours worked in 2019

Percentage of total for employees in all sectors

	High 5	Middle 6	Low 5
PAYE and USC	40	38	22
Wages and salaries	33	42	25
Hours worked	22	43	36

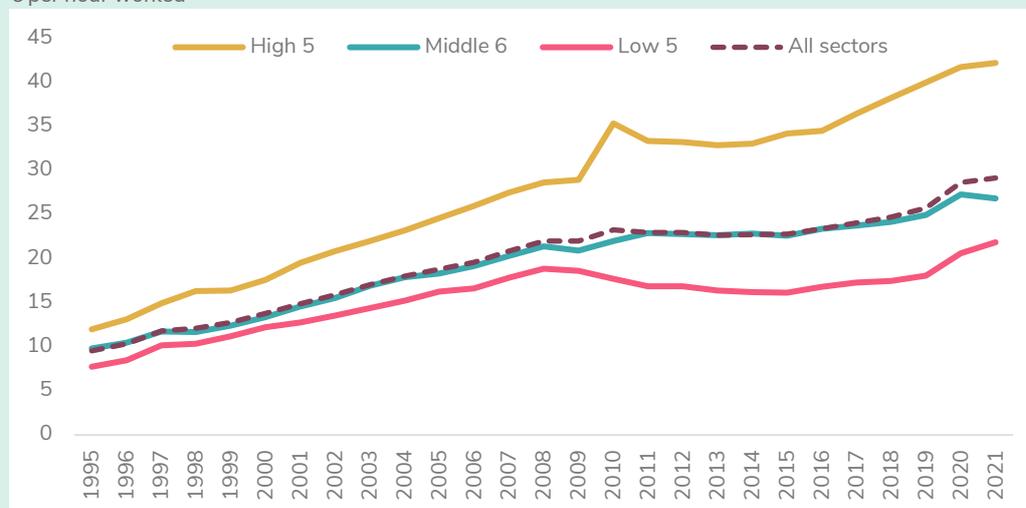
Sources: Eurostat; and Fiscal Council calculations.

Note: The sector groupings are based on a ranking of 2019 hourly employee wages for NACE Rev 2 sectors.

Figure B2 presents data for 1995–2021 for employees' hourly wages in the Irish economy. This shows that the 'High 5' sector grouping has seen considerably faster hourly wage growth over time compared to the 'Middle 6' and 'Low 5'. For the two groups with lower wages, the pandemic resulted in an increase in average hourly wages in 2020 and 2021, since job losses were concentrated among workers with the lowest wages.

Figure B2: Employee hourly wages have grown rapidly for the five sectors with the highest 2019 hourly wages

€ per hour worked



Sources: Eurostat, CSO, and Fiscal Council workings. [Get the data.](#)

Notes: The sector groupings are based on a ranking of 2019 employee wages per hour worked for NACE Rev 2 sectors.

This also shows that there has been a long-standing trend divergence between the higher-paid and other sectors in terms of the hourly wage. This reflects stronger productivity growth in the higher pay sectors. By contrast, average hourly wages have barely increased in cash terms since the Great Recession in the lowest paid sectors, implying a decline in real wages.

Forecasting wages and salaries by sector (consistent with SPU 2022 projections)

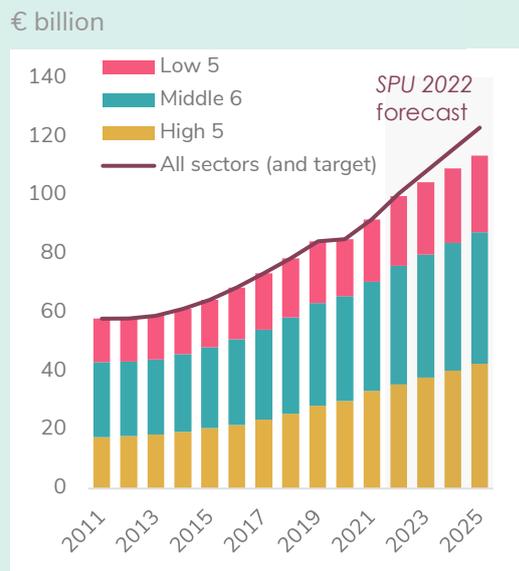
The slow-changing nature of hours worked shares across sectors provides a simple basis for forecasting the share of each sector using linear trend extensions. The sample period used is from

ten-year trends for sectoral shares (2012–2021).¹⁹ Multiplying the implied projections for hours worked with ten-year trends in hourly wages results in a preliminary, “uncalibrated” projection for employee wages and salaries. As shown in Figure B3.A, this approach is insufficient to explain the official forecasts for wages and salaries, falling short by €9.5 billion (7.7 per cent) in 2025.

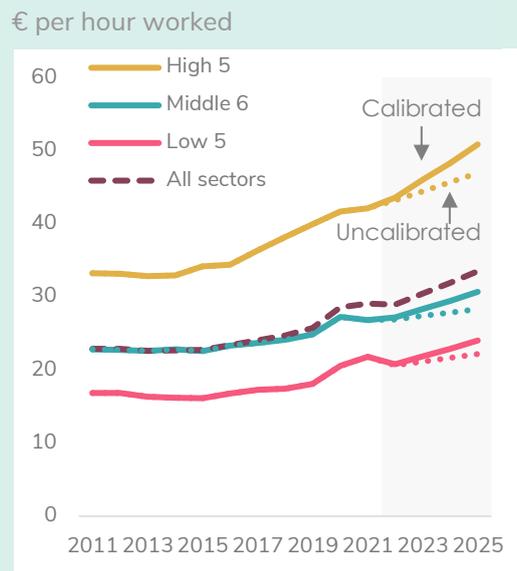
To match this, a “calibrated” version of the estimates is constructed by allocating the differences for the total each year in proportion to each sector’s share of total wages and salaries. This raises the level of the average hourly wage by about €2.50 (8 per cent) for 2025. Using these “calibrated” data for wages and salaries allows for the derivation of the implied employee hourly wage rates over the forecast horizon in terms of the bottom-up picture (Figure B3.B).

Figure B3: Calibrating hourly wages and salaries

A. Uncalibrated projection for employee wages, and target



B. Employee hourly wages



Sources: Revenue Commissioners; Eurostat; Department of Finance; and Fiscal Council workings. [Get the data.](#)

Notes: In panel A, the uncalibrated wages and salaries projections come from multiplying the hours worked decomposition by the ten-year linear trend extensions of employee hourly wages (dotted lines in panel B).

Forecasting effective tax rates and employee taxes by sector

To forecast income taxes across sectors, one approach is to use projected hourly wages derived in the previous section and to match them to expected sectoral effective tax rates (ETRs). The idea is that higher wage sectors will have higher ETRs and so a shift in income towards them will raise the economy-wide average tax rate.²⁰

Using available data, the average elasticity of tax revenue to income growth over 2011–2021 is calculated across sectors as 1.3 for ‘High 5’, 0.8 for ‘Middle 6’, 0.9 for ‘Low 5’, and 1.1 for all

¹⁹ Employee hours worked data from Eurostat are used up to 2019, but extended forward for 2020 and 2021 using actual hours worked data published by the CSO. This is to reflect the impact of the pandemic on hours worked more accurately, since standard ILO labour market data included many Pandemic Unemployment Payment recipients as employed. For 2022–2025, the series for employee hours worked is extended using the SPU 2022 forecasts for the growth rate in total hours worked.

²⁰ However, compositional effects can affect these results. For example, if a sector experiences a shift towards part-time workers instead of full-time workers, along with no change in its hours worked or employee wages, then the ETR for that sector is likely to decline — owing to a lower average tax burden on part-time workers relative to full-time workers. This scenario would not imply a positive elasticity of the sector’s ETR with respect to its hourly pay.

sectors. The elasticity of around 1 for total income suggests that the ETR is relatively constant, and in line with other estimates of the relationship between income tax and wages.²¹

This reflects the fact those the income gains of those in the 'High 5' sectors have been driven by wages taxed at the higher marginal tax rates and that starting salaries are high. By contrast, the elasticity is less than 1 in the other sectors, possibly reflecting the greater role of increases in the number of jobs in these sectors where people tend to start at a low marginal tax rate and more part-time work.

Using these elasticities, and the derived hourly wages by sector, estimated employee taxes paid by sector can be calculated with the following equation:

$$Income\ tax_t = Wages_t * ETR_{t-1} * (1 + \beta * \% \Delta hourly\ pay_t)$$

Figure B4.A presents these bottom-up projections compared to the SPU 2022 forecasts for employee taxes, building on the calibrated wages by sector from the previous section (Figure B3.A). In Figure B4.B, the derived ETRs are shown, including the implied SPU 2022 projection.

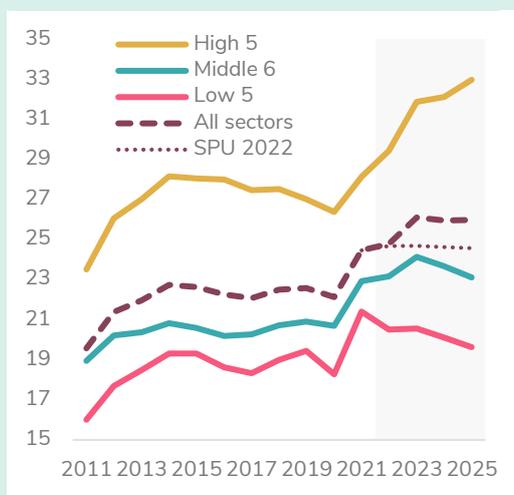
Figure B4: Bottom-up projections of employee taxes

A. Levels (and SPU 2022 forecast)



B. Estimated effective tax rates across sectors

Employee taxes / wages and salaries



Sources: Revenue Commissioners; Eurostat; Department of Finance; and Fiscal Council workings. [Get the data.](#)

Notes: In panel A, the bottom-up projections come from multiplying calibrated wages and salaries (see Figure 9A in Timoney, 2022) by the elasticity-based extensions of ETRs shown in panel B.

Over the forecast horizon, the bottom-up approach implies a higher level of income taxes than the official projections shown in SPU 2022 for the same aggregate pay increase. This suggests that the increase in the aggregate ETR can more than be explained by aggregate pay growth from a bottom-up perspective, and by 2025, the bottom-up sum of projected tax receipts is €1.7 billion (5.8 per cent) above SPU 2022 forecasts, implying a larger rise in the aggregate effective tax rate. This could partly reflect negative judgements applied by the Department of Finance to their PAYE and USC projections — see section S5 for further details on these judgements.

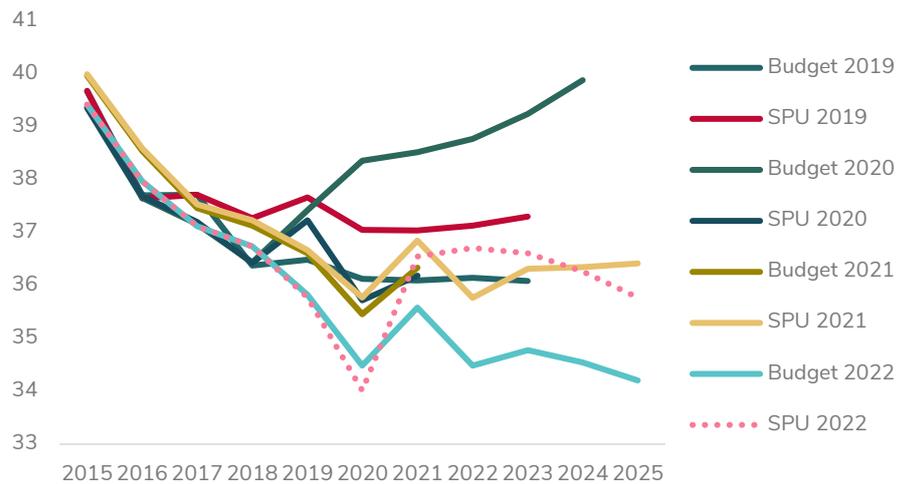
While this would appear encouraging in terms of supporting the idea that the upward shift in the average effective tax rate can be explained by sectoral factors, this conclusion should be treated with caution given the many assumptions required and the recent nature of this shift, at a time when the economy was subject to a number of sectoral shocks.

²¹ See Table 5 in Conroy (2020) for a summary of estimated income tax elasticities in Ireland. Conroy's estimated elasticity using policy-adjusted income tax is 1.4, considerably higher than 0.8 when using income tax not adjusted for policy changes.

Notwithstanding the conclusion in Box B — that a higher average effective tax rate on employee income is a plausible baseline forecast — it is important to note that there has been an apparent lack of consistency across recent official projections of macroeconomic and fiscal outcomes. Figure 1.11 shows recent ratios based on official forecasts of government revenues (excluding corporation tax) as a share of GNI*. The wide range of outcomes for this ratio over the forecast horizon across official forecast vintages suggests considerable uncertainty for the tax richness of the economy.

Figure 1.11: Recent projections suggest a wide range of uncertainty around relative macro-fiscal outcomes

General government revenues excluding corporation tax, as a percentage of GNI*

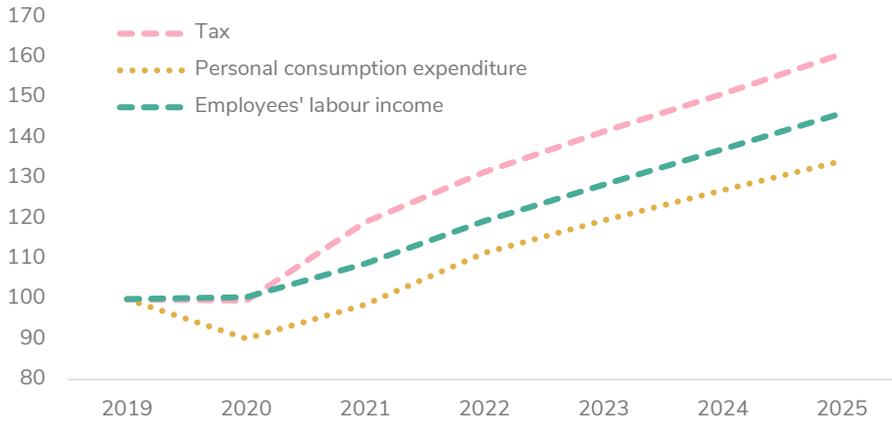


Sources: Central Bank of Ireland, and Fiscal Council workings. [Get the data.](#)

Furthermore, the projected strength of tax receipts and employees' labour income in *SPU 2022* — which have been revised up considerably since last October's *Budget 2022* — is in contrast to the unchanged and relatively weak recovery for nominal personal consumption (Figure 1.12).

Figure 1.12: SPU 2022 forecasts much weaker personal consumption relative to taxes and labour income

2019 = 100, annual values

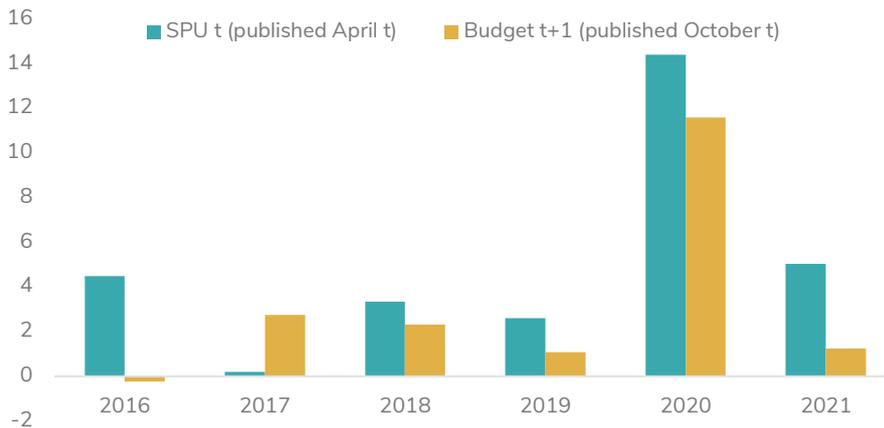


Sources: CSO, Department of Finance, and Fiscal Council workings. [Get the data.](#)

As shown in Figure 1.13, the Department's projections for labour income have often been significantly lower than outturns in the years prior to the pandemic. This indicates a systematic pattern of downwards bias in the gross income projections.

Figure 1.13: Official forecasts have tended to underestimate in-year labour income

€ billion (positive figure = income greater than forecast)



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

Notes: The chart shows the latest outturns for labour income of employees less the Department's in-year forecast. This does not correct for revisions to historical data that may have influenced the magnitude of forecast errors in some cases. [Get the data.](#)