Box D: Updated Macroeconomic Scenarios to 2025

This box describes three scenarios for the Irish economy, in an update to those explored in the Council's May 2020 *Fiscal Assessment Report* (Fiscal Council, 2020c). As before, the scenarios include an extension of the official forecasts to 2025 at quarterly frequency, with scenarios for a benign "Milder" projection and an adverse "Repeat Waves" outcome also developed.

Further granular detail of the projections is also presented, and the main outcome variable presented is now real GNI* — based on the Council's latest GNI* forecasting approach (see Box E in Fiscal Council, 2020c).

Comparing the latest macroeconomic scenarios with those published in May

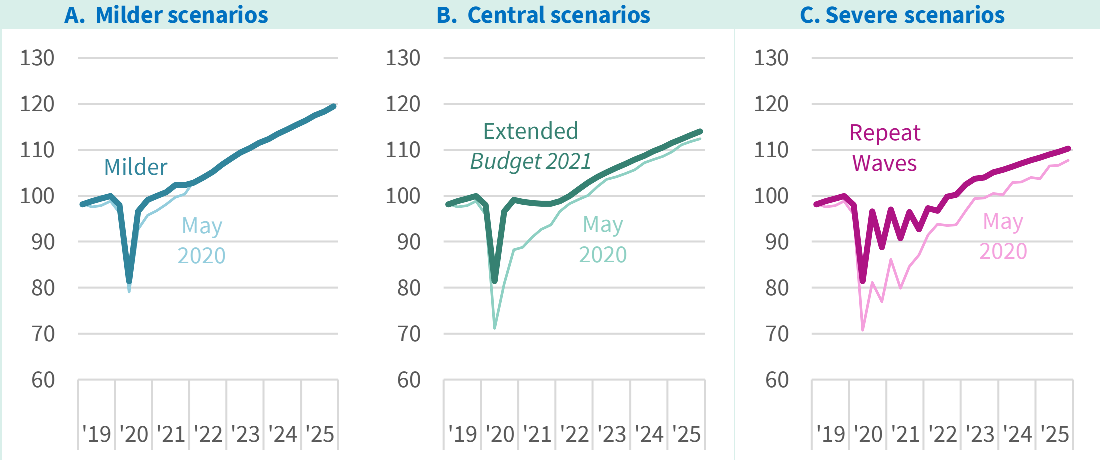
The short-term macroeconomic forecasts in *SPU 2020* were subject to huge uncertainty. To date, the domestic economy as a whole has performed stronger than forecast. Underlying domestic demand (UDD) in Q2 2020 was even stronger than projected in the Council's "Mild" scenario in May 2020 — although this is despite an even more adverse immediate impact on employment than projected in the Council's severe scenario.

While not exhaustive, the scenarios aim to capture the most likely trajectories for the economy subject to the outcome for several key assumptions, in particular those relating to Covid-19 and Brexit.

Figure D.1 compares the latest scenarios for UDD with those published by the Council in May 2020, showing an improved short-term projection in each case.

Figure D.1: Underlying domestic demand has outperformed in the short term

100 = Q4 2019 for the latest scenario



Sources: CSO; Department of Finance, *Budget 2021*; and Fiscal Council workings.
Notes: The volume of underlying domestic demand in 2019 was revised up by 0.8 per cent in *National Income and Expenditure 2019*, compared to the initial estimate re-based to 2018 prices. This revision is reflected in the May 2020 data shown above.

Assumptions behind the macroeconomic scenarios

The Milder scenario is now based on two upside risks compared to the central scenario. First, it assumes that a free-trade agreement (FTA) is reached between the UK and EU in advance of 2021. Second, a vaccine for Covid-19 becomes widely available by Q3 2021, sooner than is assumed in *Budget 2021*. Nonetheless, trading is expected to remain challenging for several sectors until next summer at least and employment does not recover as rapidly as previously expected, only reaching its pre-pandemic level by early 2023 (Figure D.1A).

The Extended *Budget 2021* scenario sees a rapid initial recovery in the second half of 2020 stagnate in 2021 on account of a disorderly Brexit and the absence of a widely available vaccine until 2022 at the earliest.

Compared to the Department of Finance's *SPU 2020* forecast in April and the Council's central scenario in May, a key difference for this scenario is that a relatively benign FTA outcome for Brexit is no longer assumed. This is expected to constrain activity next year and beyond. Nonetheless, the path for UDD remains higher, with the two paths converging by early 2022 (Figure D.1B).

The Repeat Waves scenario assumes no effective mass vaccination until 2023, and that fluctuations in virus transmission levels result in further periods of Level 5-type restrictions. The intermittent eight-week restrictions and gradual reopenings are assumed to occur in alternating cycles throughout 2021 and 2022, although with dissipating initial impacts for subsequent periods of restrictions over time. However, the economy remains on a shallower trajectory over the medium term, reflecting more lasting damage to growth prospects as a result of the protracted disruption (Figure D.1C). Table D.1 sets out the key assumptions for each scenario.

Table D.1: Key assumptions for the scenarios

	Milder	**Extended *Budget 2021***	**Repeat Waves**
Broad description	A vaccine by mid-2021 and a free-trade agreement between the UK and EU ensures a more rapid recovery can take hold.	The Government's *Budget 2021* forecasts assume a disorderly Brexit and no vaccine available by end-2021, delaying a full recovery until mid-2022.	With effectively no vaccine before 2023, repeated restrictions in response to cycles of higher infection are compounded by a disorderly Brexit.
Covid-19 containment measures	Social distancing and disruptions to certain sectors remain in place until summer 2021.	Social distancing and disruptions to certain sectors remain in place until end-2021.	Eight-week restrictions and gradual reopenings run on half-year cycles in 2021 and 2022, but with diminishing impacts.
Employment prospects	A gradual recovery in jobs takes three full years to reach pre-pandemic levels, and remaining 5 per cent below trend by 2025.	By end-2021, a quarter of overall jobs lost in Q2 2020 have not yet been recovered, and a complete recovery does not take place until late-2023.	Each eight-week disruption causes vast job losses concentrated in hospitality sectors; employment remains 17 per cent below trend by 2025.
Recovery	GNI* recovers to pre-crisis (Q4 2019) levels by Q2 2022, with UDD recovering by Q2 2021.	About a year beyond the Milder scenario: Q1 2023 for GNI*, Q2 2022 for UDD.	Economy does not recover to pre-pandemic (Q4 2019) GNI* levels until Q4 2023.
Potential output	Growth returns to previous projections of about 3 per cent per annum over the medium term.	Growth reverts to previous projections of about 3 per cent per annum over the medium term.	Permanent scarring on growth; remains closer to 2 per cent per annum over the medium term.

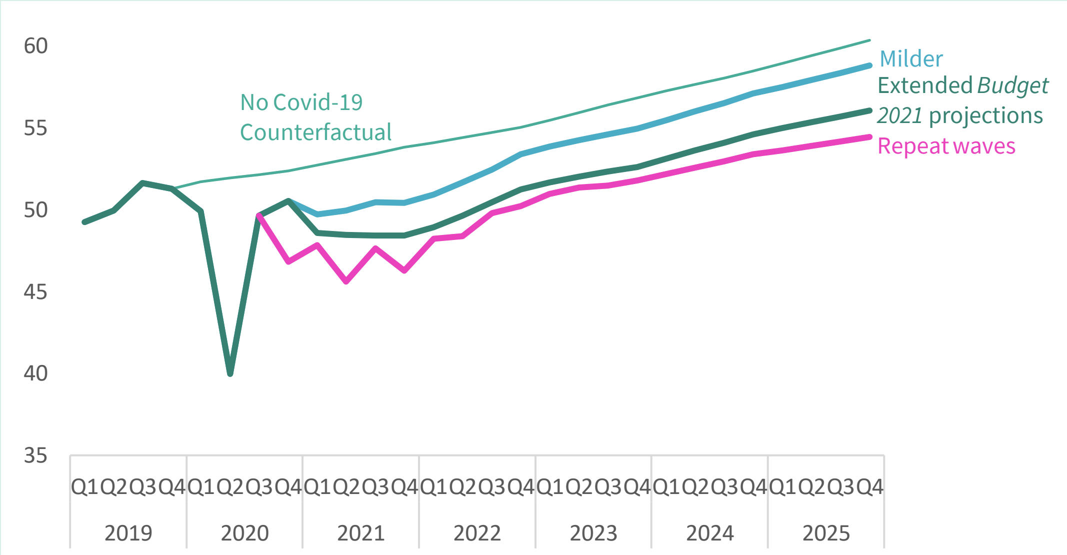
An approximation of seasonally adjusted quarterly real GNI*

The Council's approach to forecasting real GNI* using adjusted exports and adjusted imports can also be used to approximate seasonally adjusted quarterly real GNI*. This is constructed as the sum of UDD, the change in inventories, estimated quarterly subsidies less taxes, and estimated adjusted exports less adjusted imports. The latter items are broadly based on traded sectors with the most relevance to domestic-owned firms, since foreign-owned multinationals' profits included in measured net exports are largely excluded from GNI*.[26]

Figure D.2 presents the projections for each of the scenarios and a counterfactual, where Covid-19 did not occur and where an EU-UK FTA is agreed in advance of 2021.[27]

Figure D.2: Scenarios for real quarterly GNI*

€ billion, 2018 constant prices



Sources: CSO; Department of Finance, *Budget 2021*; and Fiscal Council workings.
Notes: Quarterly real GNI* is estimated as the sum of UDD, the change in inventories, subsidies less taxes, and adjusted exports less adjusted imports, where the latter items are constructed according to the method described in Box E of the May 2020 *Fiscal Assessment Report*.

The Milder and Extended *Budget 2021* projections diverge initially in Q1 2021 due to the more benign assumption in the Milder scenario regarding Brexit. Although the move to an EU-UK FTA still results in a modest initial fall in GNI*, this is followed by a pickup in activity in response to the widespread availability of a Covid-19 vaccine in Q3 2021. For the Extended *Budget 2021* and Repeat Waves projections, there is assumed to be no such vaccine available, and an assumed disorderly Brexit further compounds the challenges posed by Covid-19 for the economy.

For the Milder scenario, the Extended *Budget 2021* projections are first adjusted to exclude the estimated additional impact of a disorderly Brexit relative to an EU-

[26] Although a higher level of adjusted exports can be assumed based on which sectors of merchandise or services trade are excluded, the higher the level of adjusted exports, the higher the estimate of adjusted imports content of final demand. Ultimately, the implications of adjusted net exports for annual real GNI* growth remain limited given that UDD comprises the vast majority of GNI* — although it can contribute more prominently to quarter-on-quarter GNI* growth rates.

[27] The counterfactual in Figure D.2 is projected by first building a no-Covid and no-Brexit counterfactual for quarterly real GNI*, which is informed by the Government's expectations for UDD pre-*SPU 2020*, alongside IMF pre-Covid world demand growth rates. Shocks are then applied to each component of final demand in line with prior ESRI/Department of Finance analysis of the impact of an EU-UK FTA, using the Cosmo model (Bergin *et al.*, 2019). Employment forecasts are then generated as a function of the quarterly change in UDD.