

billion is applied in 2020. Policy changes (increases in the carbon tax and the rate of excise for tobacco) contribute positively in 2020 and 2021.

Receipts from the local property tax (LPT, €0.5 billion) are assumed to be unchanged in 2020 and 2021 in *SPU 2020*. Current policy suggests properties would be revalued in November 2020. Given the sharp rise in house prices since the previous valuation date (2013), one would have expected an increase in receipts to result from revaluation. Given the delays in government formation and administrative preparations for this revaluation exercise, *SPU 2020* forecasts LPT receipts for 2020 and 2021 based on the 2013 valuation level.⁴¹

SPU 2020 forecasts of non-tax revenue for 2020 are €0.7 billion higher than forecast in *Budget 2020*. The upward revision mainly reflects higher-than-projected payments to the Exchequer from the Central Bank, arising from its disposals of Floating Rate Notes. Most of this income does not impact on general government revenue, however. Payments from the Central Bank are expected to continue into 2021, albeit at a lower level.

Corporation tax receipts are projected to fall by €0.7 billion (6.5 per cent) in 2020. This reflects reduced profitability. No judgement is applied to *SPU 2020* forecasts of corporation tax. While the Department assesses that the OECD's BEPS process may reduce corporation tax receipts in the future, this impact is expected to arise from 2022 and is therefore beyond the forecast horizon in *SPU 2020*. These impacts are reflected in the scenario analysis (Section 3.4). *SPU 2020* forecasts renewed growth in corporation tax receipts in 2021, reaching almost 2019 levels.

Box H: Half of corporation tax receipts explained by domestic economy

Attracting large multinational enterprises to set up operations in Ireland has been a focus of economic policy for several decades. The scale and value-added of these firms' activities has generated substantial corporation tax receipts for the Exchequer. However, the presence of companies in Ireland could change as the result of company-specific decisions or changes in global circumstances and policy regimes (including the OECD's BEPS initiatives).

This Box revisits projections of corporation tax based on an extended set of forecasting models. Using models similar to those set out in Casey and Hannon (2016) and a set of error correction models like those used in McGuinness and Smyth (2019), we show that most of the performance in corporation tax in recent years is still unexplained by the domestic economy.

⁴¹ Given that the current policy is to revalue properties, deciding not to revalue properties would be a discretionary revenue reducing measure.

On average, model estimates indicate that only a half of corporation tax receipts currently taken in each year are explained by the performance of the domestic economy since 2012.

The models used

Broadly speaking, the models we use to project corporation tax rely on the historical relationship between changes in corporation tax and “domestic” economic output. By domestic, we mean measures of output that removes distortions caused by foreign-owned multinational enterprises. Specifically, we use nominal Domestic GVA and nominal modified GNI* as our output measures. We clean the corporation tax data of any policy changes made over the periods to avoid distortions in how we estimate the relationship (Conroy, 2019).

First, we model the log-difference in corporation tax on the log-difference of our domestic output measures (see equation 1). Second, we use two error correction models — models that allow variables to return to their long-run relationship from a position of short-run disequilibrium. Equation 2 sets out the long-run relationship that is to be returned to, while equation 3 sets out the short-run relationship. The γ term is the error correction parameter, which defines how fast any disequilibrium will be corrected by in the next period.

$$\Delta CT_t = \alpha + \beta \Delta output_t + \varepsilon_t \quad (1)$$

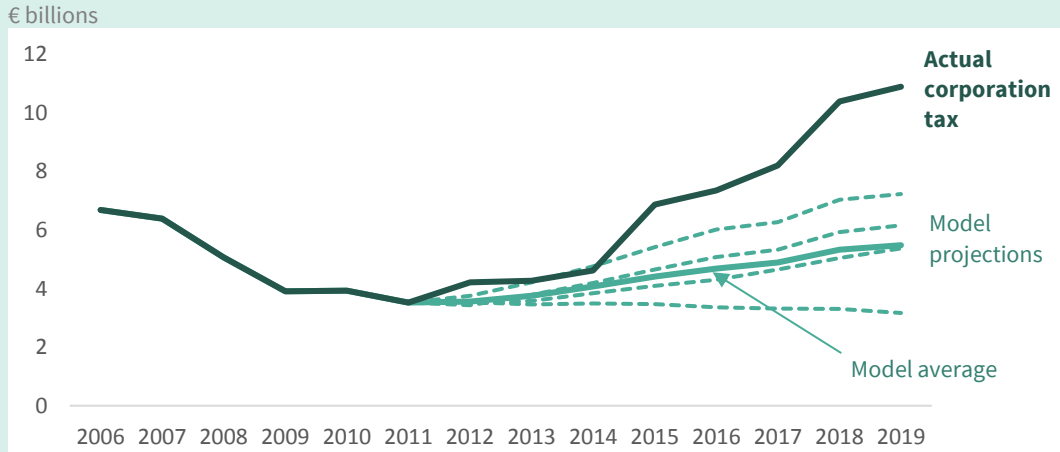
$$CT_t = \alpha_L + \beta_L output_t + \varepsilon_t \quad (2)$$

$$\Delta CT_t = \alpha_s + \beta_s \Delta output_t + \gamma (CT_{t-1} - (\alpha_L + \beta_L output_{t-1})) + \varepsilon_t \quad (3)$$

We estimate the models over the period 1987–2011 and forecast out-of-sample from 2012 on.

The projections from 2012 onwards are shown in Figure H.1.

Figure H.1: Corporation tax model projections from 2012 well below actual outturns



Sources: Fiscal Council workings.

Note: Model projections use a suite of models together with actual nominal GNI* and domestic GVA outturns to project forward expected corporation tax receipts from 2012.

As can be seen, the actual outturns for corporation tax in recent years have been far beyond what can be explained by the domestic economy. If we take the projections from the four models, then we can see that projected corporation tax receipts for 2019 would be between €3.2 to €7.2 billion, with the model average suggesting €5.5 billion as the likely level of receipts. The actual level of annual corporation tax receipts in 2019 was twice that at €10.9 billion.

The results suggest that the outperformance of corporation tax in recent years is possibly due to the outsized performance of foreign-owned multinational enterprises. It is likely that their relatively large profits are contributing to substantial increases in corporation tax receipts, but

their activities are largely removed from the domestic economy measures we use in our analysis. With four-fifths of corporation tax receipts accounted for by multinational enterprises and 45 per cent by just ten firms, it is not surprising to find that this sector might be responsible for recent surges (for an example of the concentration risks associated with corporation tax, see Box H of the *June 2019 Fiscal Assessment Report*).

The results suggest that there is an excess in corporation tax receipts in 2019 of about €5½ billion, unexplained by growth in the domestic economy. This central estimate—based on the model average—compares to upper and lower estimates of €7.7 to €3.7 billion (Table H.1). This could mean that the excess annual receipts are boosting the budget balance as a percentage of modified GNI* by some 1.8 to 3.8 percentage points (or by 2.6 percentage points for the central estimate).

Table H.1: Model-based estimates of excess corporation tax receipts

	2011	2012	2013	2014	2015	2016	2017	2018	2019
Central estimate €bn	0.0	0.7	0.5	0.5	2.5	2.7	3.3	5.1	5.4
Upper estimate €bn	0.0	0.8	0.8	1.1	3.4	4.0	4.9	7.1	7.7
Lower estimate €bn	0.0	0.5	0.1	-0.1	1.5	1.3	1.9	3.4	3.7
Central estimate % GNI*	0.0	0.5	0.4	0.4	1.5	1.5	1.8	2.6	2.6
Upper estimate % GNI*	0.0	0.6	0.6	0.8	2.1	2.3	2.7	3.6	3.8
Lower estimate % GNI*	0.0	0.4	0.0	-0.1	0.9	0.8	1.1	1.7	1.8

Sources: Fiscal Council workings.

Note: Model projections use a suite of models together with actual nominal GNI* and domestic GVA outturns to project forward expected corporation tax receipts from 2012.

Models that use GDP instead of measures of domestic economic activity

If we use GDP instead of measures that are more representative of the domestic economy, we can better capture the performance of corporation tax since 2012. This reflects the fact that GDP is similarly distorted by the inflated profits attributable to foreign-owned multinational enterprises.

Table H.2: Actual and GDP-based projections of corporation tax receipts

	2011	2012	2013	2014	2015	2016	2017	2018	2019
Actual receipts	3.5	4.2	4.3	4.6	6.9	7.4	8.2	10.4	10.9
GDP-based projections	3.5	3.7	3.6	4.0	6.9	6.8	7.6	8.6	9.2

Sources: Fiscal Council workings.

Note: The GDP-based projections use nominal GDP to project forward expected corporation tax receipts from 2012. The projections are a model average of two models: a regression model and an error-correction model of the form shown in equations (1)–(3).

The large impact of Covid-19 on exchequer revenue in 2020 is also reflected in general government revenue. General government revenue is forecast to decline by €14.9 billion (17 per cent) in 2020 to €72.5 billion (Table 3.4). Taxes on production and imports are forecast to fall most rapidly (€5.3 billion or 19.5 per cent). This mirrors the fall forecast for VAT and excise receipts in exchequer terms. Taxes on income and wealth (mainly income and corporation tax) are forecast to fall by €5.3