An Analysis of Medium-Term Risks to the Public Finances

Thomas Conefrey, Rónán Hickey and Graeme Walsh

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As the COVID-19 pandemic abates, pressure on the public finances in Ireland should ease but projected strong growth in public spending will see persistent deficits and high government debt through to 2025. At the same time, there is uncertainty as to the scale of future long-term spending pressures combined with the risk of lower government revenue from corporation tax. Against this backdrop, this Letter examines risks to the public finances from further debt-funded expenditure increases, lower tax revenue or a negative external growth shock. The analysis suggests that permanent increases in current spending should be balanced with revenue-raising measures elsewhere in the budget. A permanent loss of corporation tax combined with a negative external shock could increase government debt to over 115 per cent of modified national income (GNI*) by 2025.

1. Introduction

The COVID-19 pandemic led to a significant deterioration in the public finances. By the end of 2021, gross General Government debt is expected to increase by almost €40bn relative to its pre-pandemic level – from 95 per cent of modified national income (GNI*) to 112 per cent. The increase in government borrowing and debt during the pandemic has been warranted in mitigating the impact of the crisis on households and firms.2 The projections in the Summer Economic Statement 2021 (SES) signal an improvement in the public finances in the coming years but at a very gradual pace.3 The SES included upward revisions to current and capital spending without any new discretionary revenue-raising measures. As a result, the budget is projected to remain in deficit out to 2025 and the debt-to-income ratio will plateau at close to

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1 Irish Economic Analysis Division, Central Bank of Ireland. The views expressed in this paper are those of the authors only and do not necessarily reflect the views of the Central Bank of Ireland. We would like to thank the following people for comments on an earlier draft: Mark Cassidy, David Cronin, Sharon Donnery, Reamonn Lydon, Niall McInerney, Martin O’Brien, Gerard O’Reilly, Terry Quinn, Paul Reddan (Central Bank) and David Purdue (NTMA).

2 See Cahill and Lydon (2021) and Walsh et al. (2021).

3 See Department of Finance (2021).
its current level. Starting from this position, the risk arises that negative shocks could cause the deficit and debt to start rising again.

Such negative shocks could emerge from a variety of sources given the uncertain economic outlook. In this Letter, we focus on risks around the future path of government expenditure, tax revenue and economic activity. On the expenditure side, the medium-term consequences of the COVID-19 crisis for the public finances are unclear. In addition, the extent of future spending pressures related to climate change and population ageing are not fully determined. In terms of government revenue, the most significant uncertainty relates to how large any negative impact of international tax reforms on corporation tax revenues in Ireland will be. In terms of future growth prospects, the Irish economy is especially sensitive to developments in the global economy and financial system. In particular, the openness of the economy increases its vulnerability to negative external events such as a slowdown in global growth.

As well as directly affecting the deficit and debt, government decisions on expenditure and tax policy affect aggregate demand and economic growth. Current Department of Finance forecasts indicate that domestic demand is expected to grow at an annual average rate of 4.5 per cent from 2022 to 2025. In an economy growing at this pace, there is a risk that additional government spending without offsetting tax increases could generate excessive inflationary pressures leading to the emergence of imbalances in the economy.

This Economic Letter examines the implications for the public finances and the economy over the medium term of a number of possible fiscal and economic risks. On the fiscal side, we estimate the impact on the deficit, debt and economic activity of a further rise in government expenditure. We examine how the effect on the economy and public finances would vary depending on whether the additional expenditure is funded by raising revenue or by an increase in debt. Next, we examine the impact of a permanent loss of corporation tax combined with a permanent increase in expenditure. As a small open economy, the pace of growth in Ireland is influenced by economic conditions in key trading partners. In the final scenario, we examine the effect on the economy and the government finances of a negative external growth shock along with a loss of corporation tax revenues.

The key findings of this analysis are as follows:

- The SES fiscal projections contained significant upward revisions to public expenditure plans compared to the April 2021 SPU with no new offsetting discretionary revenue-raising measures. Two-thirds of the increase is in recurring day-to-day current spending while the remainder is public investment. As a result, the Government now forecasts continuing high deficits and debt until 2025. These

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4 While not a focus of the analysis in this Letter, another longer-term risk relates to the future path of interest rates. ECB policy actions during the COVID-19 crisis and in the preceding years have helped to maintain favourable financing conditions for households, firms and governments in the euro area. Although the timing is uncertain, interest rates will increase from their current exceptionally low levels at some point in the future.

projections increase the risks facing the public finances compared to possible alternative plans that targeted a faster pace of deficit and debt reduction.

- A scenario with additional permanent spending increases of €1.7 billion per annum – funded by borrowing – would further delay the improvement in the public finances as set out in the SES and could result in a deficit of over 3 per cent in 2025. The additional expenditure would stimulate the economy, increasing the level of output by around 2¼ per cent by 2025. The current outlook for the economy out to 2025 suggests there is no need for such additional demand stimulus in the short term.

- A permanent loss of corporation tax (CT) amounting to €4.7 billion by 2025 combined with a permanent increase in spending would add 2½ percentage points to the General Government deficit and almost 4 percentage points to the debt by the middle of this decade.

- As a small open economy, Ireland is exposed to potential negative shocks in its key trading partners. Our results show that a temporary negative external shock lasting one year combined with a permanent loss of CT would push the General Government deficit to over 5 per cent in 2025 and the debt ratio to close to just over 115 per cent of GNI*.

- Given the uncertainty about the long-term consequences of the COVID-19 crisis for public finances, other spending pressures from population ageing and climate change, and the risks to corporation tax, ensuring a prudent path for the public finances in the coming years is important in order to strengthen the resilience of the economy and public finances to these future challenges.

This Letter is organised as follows. Section 2 outlines key elements of the fiscal projections published in the SES and the implications for public finances over the medium term. Section 3 contains scenario analysis illustrating the impact on the economy and public finances of a number of potential negative shocks. Section 4 concludes.

2. The Public Finances – Medium Term Outlook and Risks

The General Government balance deteriorated sharply in 2020, recording a deficit of 9.0 per cent of GNI* (Figure 1). This primarily reflected the necessary counter-cyclical response to the pandemic, which mitigated the negative impact of the health crisis on households and firms. Direct fiscal supports are expected to cost €20bn and €16.3bn in 2020 and 2021 respectively (9.6 and 7.5 per cent of GNI*), driving an estimated increase in the debt ratio to 112 per cent this year. This compares to a rate of 95 per cent just prior to the pandemic.
In the recent Summer Economic Statement (SES), the Government estimated that the budget deficit would increase once again in 2021, to -9.4 per cent of GNI*. While the position is expected to improve in the coming years – largely reflecting the assumption that temporary pandemic-related spending will drop out of the expenditure base after 2022 – deficits are now expected to persist over the medium term. This represents a significant revision from April’s Stability Programme Update (SPU), which outlined a path back to a balanced budget by 2025 (Figure 2). The debt ratio is expected to record a gradual decline from next year onwards, as the favourable interest-growth differential becomes the dominant factor driving dynamics. Reflecting persistent primary deficits, however, the debt ratio is also expected to be higher than outlined in the SPU, remaining at 106 per cent of GNI* in 2025.
While detailed bottom-up fiscal projections were not included in the SES, around two-thirds of the projected higher deficit in 2025 appears to reflect additional current expenditure, with the remaining one-third due to larger capital spending (see Figure 3, which outlines the additional spending in nominal terms). This follows a very significant increase in ‘core’ or permanent spending introduced in Budget 2021.\(^6\) As part of a revised medium term budgetary strategy, the Government is adopting a new expenditure rule that will see expenditure ceilings incorporate permanent increases of 5 per cent per annum.\(^7\) This would still be lower than the growth of expenditure experienced in the years immediately prior to the pandemic, however; in 2018 and 2019, gross voted Exchequer spending increased by an average of 7 per cent per annum. If core expenditure increased at this pace in the period 2022 to 2025 – rather than the planned 5 per cent – spending would be €1.7bn higher per annum on average.

The additional capital spending planned in the SES, meanwhile, would support a significant increase in net government investment in the coming years (see Figure 4). Net government investment weakened considerably during the EU-IMF Financial Assistance Programme, falling to just 0.3 per cent of GNI\(^*\) in 2012-13, as gross investment moderated and depreciation of the public capital stock remained broadly stable. Having recovered in recent years prior to the pandemic, net government investment is now estimated to increase to around 4 per cent of GNI\(^*\) in 2024 and 2025, a level last seen in the mid-2000s. Well-targeted, productive investment spending can increase the economy’s public capital stock and, in turn, have a positive long run effect on employment and economic output.\(^8\) While estimates of the

\(^6\) Budget 2021 increased voted Exchequer spending by €5.4bn. As the Irish Fiscal Advisory Council have noted, however, the increase in broader General Government terms could be as high as €8.4bn.

\(^7\) The Government notes that the 5 per cent increase is in line with the economy’s estimated nominal trend growth rate.

effect of public capital on growth vary – and crucially depend on factors such as the composition and efficiency of spending – the literature typically finds a positive relationship between the two.\(^9\)

The combination of strong growth in government day-to-day and capital spending comes at a time when broader economic activity is forecast to expand significantly and the output gap – currently estimated to be negative – is expected to dissipate over the medium term.\(^10\) In this environment, it will be important to ensure that the fiscal policy stance does not contribute to capacity constraints or excessive inflationary pressures.

**Figure 4: Estimate of net investment (% of GNI*)**\(^{11}\)

Even with the additional current and capital expenditure contained in the SES, three factors suggest there are some risks to the spending outlook over the medium term. The first is that spending overruns were commonplace in the years prior to the pandemic and, even with higher expenditure ceilings, a more effective use of the medium-term expenditure framework will be required to ensure this trend does not continue. Second, as noted in the SES, around two-thirds of planned expenditure over the period 2022-25 is already allocated, limiting the resources available for new budgetary decisions. Third, a challenge for Government will be in ensuring that resources allocated for temporary pandemic-related measures do not become

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\(^10\) The output gap refers to the difference between actual output and estimated potential output at a particular point in time. A negative output gap signals that the economy is operating below its long-run potential while a positive output gap suggests output is above potential. Against the backdrop of strong growth (averaging 5.3 per cent per annum in nominal terms between 2021 and 2025) the SPU projected that the currently negative output gap would close by 2023. Given the additional spending included in the SES, however, one would expect that this gap could now close at a quicker pace.

\(^11\) The SES outlines revised investment allocations in Exchequer rather than General Government terms. We therefore assume that the General Government investment projections outlined in the SPU increase by a similar amount and depreciation is assumed to remain at its long run average over the period 2021-25.
subsumed into the broader expenditure base (when automatic stabilisers are excluded there is €5.3bn allocated for pandemic spending next year, which is expected to completely dissipate in 2023). The spending outlook is also surrounded by a higher degree of uncertainty in the coming years, given that it remains unclear what the long-term impact of factors such as COVID-19 and climate change will be.\textsuperscript{12} Population growth and ageing will also lead to upward pressure on government spending over the coming years.\textsuperscript{13}

While revenue growth is expected to recover this year and strengthen further in 2022 in line with the projected recovery in the economy, one revenue source that faces significant downside risks over the medium term is corporation tax (CT) receipts. CT has increased rapidly in recent years, driving almost half of all tax growth since 2014 and now represents 20 per cent of all tax receipts (see Figure 5). However, there has been consistent concerns about the sustainability of receipts and these have increased following a renewed push for international tax reforms in recent years. There are a wide range of estimates of the proportion of current CT revenues that could be considered ‘transitory’; the Department of Finance\textsuperscript{14} estimated a range of between €2bn and €6bn is vulnerable, while IFAC put the figure at between €3bn and €6.5bn.\textsuperscript{15} Given this downside risk to the revenue outlook, it is notable that the SES did not outline potential revenue-raising measures. Rather, when illustrating the budgetary strategy, it noted that part of the available fiscal space could be used for tax cuts.\textsuperscript{16}

\textbf{Figure 5: Contribution of large tax heads to total tax receipts, 2000–2020}

\includegraphics[width=\textwidth]{Figure5}

\textit{Source: Department of Finance}

\textsuperscript{12} See Department of Public Expenditure and Reform (2014). “Future Expenditure Risks associated with climate change/climate finance.”
\textsuperscript{13} See Walsh et al. (2021) “Projections of expenditure for primary, community and long-term care in Ireland 2019–2035, based on the Hippocrates model.”
\textsuperscript{14} See Fiscal Vulnerabilities, Department of Finance, October 2019.
\textsuperscript{16} See Table 4 in Summer Economic Statement.
3. Modelling Expenditure, Tax Revenue and Growth Risks

In this section, we use the Central Bank’s macroeconomic model (COSMO) to illustrate the possible impact on the public finances and the economy of risks to government revenue, expenditure and economic growth over the medium term. The scenarios we consider are summarised in Table 1 along with the estimated impact on the General Government balance and the General Government debt.\textsuperscript{17}

Table 1: Summary table of government expenditure and corporation tax scenarios, impact on General Government deficit, debt, and output (deviations from baseline)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Variable</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>Average 2026-28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent spending increase (funded by borrowing)</td>
<td>GG deficit</td>
<td>-0.2</td>
<td>-0.5</td>
<td>-0.8</td>
<td>-1.1</td>
<td>-1.4</td>
</tr>
<tr>
<td></td>
<td>GG debt</td>
<td>0.0</td>
<td>0.1</td>
<td>0.3</td>
<td>0.6</td>
<td>1.8</td>
</tr>
<tr>
<td>Permanent spending increase (funded by revenue)</td>
<td>GG deficit</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>GG debt</td>
<td>-0.1</td>
<td>-0.5</td>
<td>-0.9</td>
<td>-1.4</td>
<td>-2.2</td>
</tr>
<tr>
<td>CT loss with permanent spending increase</td>
<td>GG deficit</td>
<td>-0.5</td>
<td>-1.2</td>
<td>-1.9</td>
<td>-2.5</td>
<td>-2.9</td>
</tr>
<tr>
<td></td>
<td>GG debt</td>
<td>0.3</td>
<td>1.0</td>
<td>2.2</td>
<td>3.8</td>
<td>7.2</td>
</tr>
<tr>
<td>CT loss with negative growth shock</td>
<td>GG deficit</td>
<td>-0.9</td>
<td>-2.0</td>
<td>-2.2</td>
<td>-2.4</td>
<td>-2.1</td>
</tr>
<tr>
<td></td>
<td>GG debt</td>
<td>4.1</td>
<td>8.5</td>
<td>8.8</td>
<td>10.0</td>
<td>11.8</td>
</tr>
</tbody>
</table>

Note: GG deficit and debt are p.p. deviation from baseline. Output is per cent deviation. A negative sign (-) on the GG deficit signifies an increase in the deficit while a positive figure indicates a reduction.

3.1 A permanent increase in government expenditure

The first scenario illustrates the effects of a permanent increase in current government expenditure. In this scenario, we assume that government spending increases by €1.7bn per annum on average indefinitely and compare what happens when this spending is debt-funded and revenue-funded. As outlined above, this amount is calculated based on the difference between average core spending growth in 2018 and 2019 (7 per cent) and the spending growth incorporated into the SES projections (5 per cent). This is not intended as a forecast of potential future expenditure growth but rather to illustrate the implications if government expenditure was to be higher than budgeted for in the current SES projections. Section 2 discussed some of the factors that could give rise to further increases in government spending in the coming years beyond the existing plans.

\textsuperscript{17} In relation to interest rates, the analysis assumes that for levels of the debt-to-output ratio above 60 per cent, the interest rate increases by around 10 basis points for every 10 percentage point increase in the debt ratio (see also Department of Finance (2019)). No further changes in international interest rates are assumed beyond this channel. The rationale for this effect is that an increase in the debt burden could be associated with a rise in the perceived riskiness of the public finances, leading to higher sovereign borrowing costs. The size of this effect is uncertain and would be influenced by prevailing market conditions and the ECB monetary policy stance, as well as the state of the economy. Based on the calibration we have used, the impact of this interest rate effect is relatively small in the scenarios we examine, with the rise in long-term yields remaining below 10 basis points for all scenarios.
In a scenario with a permanent average €1.7 billion per annum increase in spending funded by borrowing, the General Government balance would deteriorate by about 1 percentage point by 2025. Since the SES envisages a deficit of 2.8 per cent of GNI* in 2025, this scenario implies that the deficit would rise to just under 4 per cent. In the revenue-funded case, we assume that there is an increase in the income tax rate to offset the increase in government spending (Figure 6). As a result, the General Government balance in this case is unchanged.

The impact on the debt-to-output ratio reflects a number of developments with positive and negative effects. Firstly, in the case of the debt-funded expenditure increase, the rise in the deficit adds to the debt stock and puts direct upward pressure on the debt-to-output ratio. In the short-term this effect is mitigated somewhat by the increase in activity due to the higher spending. The latter boosts output and hence the denominator used to calculate the debt ratio. In the longer-term, the cumulative fiscal cost of the expenditure increase would have a larger impact, resulting in a small increase in the debt-to-output ratio by 2025, with bigger increases thereafter (Figure 6). In contrast, if the higher spending is funded by additional revenue from income tax, the debt ratio would decline gradually by the end of the period. This is because the direct fiscal cost of the spending increase is lower in the revenue-funded scenario, while at the same time the boost to output from higher government expenditure puts downward pressure on the debt-to-output ratio.

As well as the impact on the public finances, any decision to permanently increase government expenditure would also need to take into account the prevailing economic conditions and in particular, the cyclical position of the economy. This is an important consideration in the context of the current projections for the Irish economy which indicate strong growth out to 2025. Department of Finance projections also indicate that the output gap is expected to close over the same period. In this context, ensuring that the fiscal stance does not add to overheating pressures will be important in the coming years. Figure 7 shows that in the case of a permanent increase in expenditure funded by debt, the level of output would be over 2 per cent higher than baseline by 2025. This increase would be driven by higher domestic demand. A further output stimulus such as this in an already fast-growing economy could add to capacity constraints. Moreover, the simulation results point to some crowding out of the traded sector over the medium term as domestic demand accelerates putting upward pressure on prices and wages. If unaddressed, this could lead to the emergence of imbalances in the economy over time.

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18 This is a technical assumption for the simulation, as opposed to reflecting policy choices at this time. In reality, a range of revenue raising instruments could be considered such as carbon tax, VAT etc. The impact on the economy would be influenced by the revenue raising measure, or mix of measures, that is used. Tax measures that affect labour supply or the competitiveness of the economy tend to have the largest output effects; see Varthalitis (2019) and Hickey et al. (2020).

Model simulations suggest that if the increase in government spending was instead funded by raising government revenue, the boost to output would be lower than shown in the debt-funded case. The extent of this offsetting effect on output would be influenced by the revenue-raising measure, or mix of measures, that is used.\textsuperscript{20} This indicates that funding any permanent spending increase by raising revenue rather than through higher debt would result in a more favourable impact on the public finances as well as reducing the risk of the additional spending adding to overheating pressures.

\textsuperscript{20} See Varthalitis (2019) and FitzGerald et al. (2012) for evidence on the macroeconomic effects of increasing revenue through different tax instruments.
3.2 Corporation tax loss with permanent expenditure increase

The next set of scenarios highlight the macroeconomic and fiscal effects of an exogenous loss of corporation taxes. The reduction in CT is assumed to represent a reversal of some of the exceptional increases in revenue recorded since 2014. We assume that there is no loss of economic activity associated with the reduction in corporation tax revenue. The timing and profile of any potential loss of corporation tax is uncertain. In the first scenario, corporation tax revenue is assumed to fall by €4.7bn permanently. The reduction is assumed to take place gradually between 2022 and 2025 with one-quarter of the decline occurring in each year. This €4.7 billion figure is calculated by taking the estimate of “excess” corporation tax revenue given in Quarterly Bulletin 2021 QB3 (€5.3 billion) and deducting the €0.5 billion per annum assumed CT loss already incorporated into the Department of Finance SES projections.21

Figure 8: Impact of CT loss and debt-funded expenditure increase, p.p. deviation from Baseline

As shown in Figure 8, the loss of corporation tax revenue would have a negative impact on the public finances with the General Government deficit around 1.5 percentage points higher in 2025. The General Government debt-to-output ratio would increase by just over 3 percentage points by 2025 (Figure 8).

In the second scenario, we assume that the €4.7bn loss of corporation tax occurs alongside a permanent debt-funded increase in government spending – the scenario outlined in Section 3.1. In this case, the General Government deficit would increase by 2.5 percentage points. The level of output would rise by about 2.4 per cent by 2025. The positive impact on output mitigates some of the negative effect of the debt-to-output ratio out to 2025, however, in the longer term the combination of lower tax revenue and higher spending would lead to an increase in the debt-to-output ratio of around 7 percentage points (Figure 8). Applying these

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21 See Quarterly Bulletin 2021 QB3 Box F. The estimate of “excess” revenue is calculated by comparing the actual outturn for corporation tax to the level of revenue that would have accrued had corporation tax grown in line with changes in underlying national income (GNI*).
changes to the baseline projections from the SES implies that the debt-to-GNI* ratio would increase to 110 per cent in 2025 (Figure 9).

### 3.3 Corporation tax loss with negative external growth shock

This scenario simulates a situation where the loss of corporation taxes occurs alongside an external shock caused by a downturn in the international economy. We assume that the external shock corresponds to a temporary one standard deviation shock based on historical volatility in modified national income (GNI*). The external shock amounts to a reduction of nominal GNI* of 4.7 per cent in 2022 but its negative effects persist beyond that year as the impact of the reduction in external demand on the traded sector filters through to other parts of the economy.

**Figure 9: Debt ratio under alternative scenarios**

![Debt ratio under alternative scenarios](source)

The external shock has a negative impact on output through the direct effect on the traded sector and by reducing demand for Irish exports. The decline in traded sector activity spills over to the non-traded sector as the demand for labour declines, incomes fall, households reduce consumption and firms cut back on investment. Overall output would fall by 4.4 per cent in 2021 and would gradually return to the baseline beyond 2025. The public finances are affected negatively due to the loss of corporation tax revenue and deteriorate further due to the overall reduction in tax revenue from the lower level of economic activity. Furthermore, the model takes into account that higher social spending is required in response to the rise in

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22 The model takes into account the long-run historic relationship between changes in weighted external demand and exports of Irish goods and services. The concentration of Irish exports in a small number of sectors such as pharmaceuticals and Information and Communication Technology (ICT) means that there is uncertainty as to the precise response of Irish trade to an international downturn. In the past, the particular composition of Irish trade has proven beneficial in protecting the economy from the effects of a fall in global demand. This characteristic may not be fully reflected in the model and as a result, it may overstate the impact of an international downturn on the Irish economy.
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...the unemployment rate. In this scenario, the General Government deficit would increase by 2.4 percentage points and the debt ratio would be 10 percentage points higher than baseline by 2025 (Table 1).

Taking the baseline projections from the SES, these results would imply a deficit of just above 5 per cent in 2025. As shown in Figure 9, the debt ratio would be over 115 per cent of GNI* by the end of the projection horizon, compared to a rate of 95 per cent prior to the start of the pandemic. This would represent a challenging position for the public finances and could lead to concerns over debt sustainability in the event of any further material shocks.

4. Conclusion

The expected rebound in economic activity and the reduction in COVID-19 pandemic-related expenditure will see an improvement in the public finances over the coming years. Nevertheless, there are numerous challenges in restoring the public finances to health in the medium term despite the current favourable low-interest rate environment. The risks to the fiscal and economic outlook are heightened by the revised path for the public finances presented in the Summer Economic Statement which signals a continuation of high deficit and debt levels until at least the middle of this decade. The analysis in this Letter illustrates that any further structural increases in current expenditure should be matched with revenue-raising measures. Offsetting additional current expenditure increases with revenue-raising measures would reduce the risk of higher public spending contributing to overheating in the economy. This is especially important given the ambitious plans for expansion in labour-intensive capital expenditure over the medium-term. A permanent loss of corporation tax combined with a negative external shock would stifle the improvement in the public finances that is expected to occur over the coming years and would increase the risks facing the economy.

The Government's large-scale fiscal response which has helped to alleviate the impact of the pandemic on households and firms was in part enabled by actions taken in previous years to improve the sustainability of the public finances. As the COVID-19 pandemic eases, it will be important to rebuild the resilience of the public finances so that a similar counter-cyclical response to future crises is possible.