FISCAL ASSESSMENT REPORT

The Fiscal Impact of Covid-19

Irish Fiscal Advisory Council

May 2020

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This report can be downloaded at www.FiscalCouncil.ie

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Foreword

The Irish Fiscal Advisory Council was established as part of a wider agenda of reform of Ireland's budgetary architecture. The Council was initially set up on an administrative basis in July 2011 and was formally established as a statutory body in December 2012 under the *Fiscal Responsibility Act*. The Council is a public body funded from the Central Fund. The terms of its funding are set out in the *Fiscal Responsibility Act*.

The mandate of the Irish Fiscal Advisory Council is to:

- endorse, as it considers appropriate, the macroeconomic forecasts prepared by the Department of Finance on which the Budget and Stability Programme Update are based;
- assess the official forecasts produced by the Department of Finance;
- assess government compliance with the Budgetary Rule;
- assess whether the fiscal stance of the Government in each Budget and Stability Programme Update (SPU) is conducive to prudent economic and budgetary management, including with reference to the provisions of the Stability and Growth Pact.

The Council's acting Chairperson is Mr Sebastian Barnes (Organisation for Economic Co-operation and Development). Other Council members are Dr Martina Lawless (Economic and Social Research Institute), Prof. Michael McMahon (Professor of Macroeconomics at the University of Oxford and Tutorial Fellow of St Hugh's College), and Ms Dawn Holland (Visiting Fellow, National Institute of Economic and Social Research). The Council's Secretariat consists of Dr Eddie Casey, Mr Niall Conroy, Mr Kevin Timoney, Ms Friederike Vogler, Mr Killian Carroll, Ms Karen Bonner, and Dr Elliott Jordan-Doak. The Council would like to acknowledge the kind help from staff at the CSO, Central Bank of Ireland, ESRI, and the NTMA. The Council would also like to thank Dr Rachel Finnegan for copy editing the report.

The Council submits its Fiscal Assessment Reports to the Minister for Finance and within ten days releases them publicly. This report was finalised on 22 May 2020. More information on the Irish Fiscal Advisory Council can be found at www.FiscalCouncil.ie

Non-Technical Summary

Non-Technical Summary

The Government based its forecasts on a deep economic downturn in the first half of this year due to Covid-19. The Irish economy was in good shape when the Covid-19 shock hit. But the pandemic and necessary policy measures have had a major impact. Official projections envisage a 15 per cent decline in domestic demand in 2020. Adverse impacts are expected to persist, with unemployment projected to be 9 per cent at the end of 2021.

There is exceptional uncertainty surrounding Covid-19 and the possible health and economic outcomes. A hard Brexit, changes to the international tax system, and further global trade disruptions pose further risks.

This report develops three scenarios to 2025. A "Mild" scenario where conditions improve rapidly, with lasting damage minimised. A "Central" scenario, building on official forecasts, where confinement measures ease as planned but with lasting impacts. And a "Severe" scenario with repeat lockdowns and wider financial distress. The scenarios imply it would take 2 to 3½ years to return to pre-crisis levels of activity. This depends on health outcomes. By contrast, the Irish economy took 11 years to recover after the financial crisis.

The Government introduced large supports to manage the crisis. The supports include €7 billion of spending on healthcare, income supports, wage subsidies, and cash supports to business. A further €7 billion of business supports includes guarantees, loans, and investments.

A government deficit of at least €23 billion is now likely for 2020. In January, the Government expected a surplus of €2.6 billion this year. The deficit should improve next year if the economy recovers and supports are scaled back as assumed. But the deficit is still projected to remain large at €13 billion in 2021.

The appropriate approach for coming years will depend on how the crisis evolves. This can be assessed in terms of three broad phases:

In the immediate crisis (Phase 1), the Government should limit negative health and income impacts. It should promote as quick a rebound as possible by continuing supports, adjusting these as needed. The budgetary costs will be high. But they will be temporary and will help to limit lasting economic damage.

In the recovery (Phase 2), growth could initially be quite fast as sectors reopen. But some sectors, like tourism and food services, will fare worse than others. Some job losses will be permanent. And some retraining of workers will be necessary if the economy is to recover.

A large budgetary stimulus would help support activity in the recovery phase. Borrowing to boost demand would be appropriate. It should depend on the state of the economy and should be temporary and targeted. A stimulus might not be able to support demand in sectors where social distancing is difficult. But it could boost demand in other parts of the economy.

The economy should settle on a new growth path in Phase 3 after the recovery. The government debt burden could be near record highs at that point. The scenarios explored suggest debt ratios ranging from 114 to 160 per cent in 2021, up from 99 per cent in 2019 (as a share of modified gross national income).

High debt and low tax receipts are likely to mean the government would need to adjust taxes or spending in Phase 3. With debt at near record levels, the economy would be more vulnerable to further shocks in future. The government will need a credible budgetary policy to safeguard funding for public services and supports. Three reforms would help: (1) meaningful debt targets; (2) saving temporary receipts through a redeveloped Rainy Day Fund; and (3) guiding net spending growth with sustainable growth rates and more realistic medium-term budgetary forecasts.

It should be possible to avoid a return to severe fiscal adjustments. Getting debt ratios to fall to safer levels at the same speed as before could require adjustments of €6 to €14 billion over 2023–2025. Even in the Severe scenario, adjustments are less than half the size of those made after the financial crisis. Any adjustments could also come at a time when the economy would be closer to full employment and growing. Low borrowing costs should help to return the debt burden to a downward path. But interest rates can change quickly, and funding requirements will be large. New commitments will likely require reductions in other areas of spending or higher taxes. Nonetheless, ambitious policies can still be achieved in areas like health, housing and climate change in future.

Summary Assessment

Summary Assessment

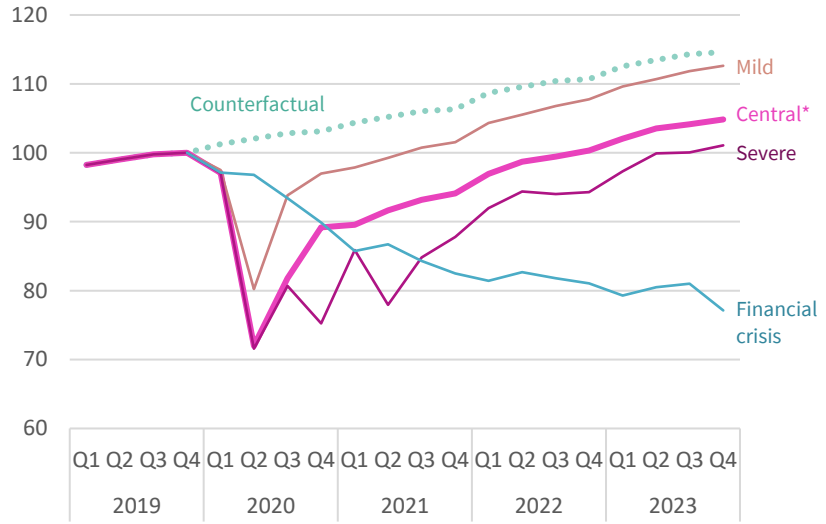
The Government based its *Stability Programme Update* (*SPU*) *2020* on a scenario where the Covid-19 crisis would result in a deep economic downturn in the first half of the year. The Irish economy was in good shape when the Covid-19 shock hit, but the global health pandemic and necessary policy measures have had a major impact. Official *SPU 2020* projections envisage a 15 per cent decline in underlying domestic demand in 2020. This reflects a sharp impact from containment measures in Q2 2020 and lasting adverse economic impacts, despite policy measures taken, with unemployment projected to be 9.1 per cent in Q4 2021. Developments since *SPU 2020* have been broadly consistent with the official projections.

The macroeconomic backdrop is exceptionally uncertain as a result of health and economic uncertainties around Covid-19. The Council endorsed the *SPU 2020* macroeconomic forecasts as being within an endorseable range, noting the wide range of outcomes that are possible. Yet there are also other major risks surrounding the economic outlook beyond Covid-19. These include risks relating to a hard Brexit, possible changes to the international tax system, and further disruptions to global trade.

Given the uncertainties, many different paths of the economy are possible. This report develops three economic and fiscal scenarios to 2025: a "Mild" scenario, where conditions improve rapidly and lasting damage is kept to a minimum; a "Central" scenario, building on the official *SPU 2020* forecasts and where confinement measures are eased as planned but there are some lasting effects; and a "Severe" scenario where the recovery is protracted and marred by repeat lockdowns and wider financial distress. The scenarios imply that it could take between 2 and 3½ years to return to pre-crisis levels of activity depending on health outcomes. By contrast, the Irish economy took 11 years to recover after the financial crisis.

Economic scenarios for Covid-19 vary widely

Underlying domestic demand (Index: Q4 2019 = 100)



Sources: CSO; Department of Finance; and Fiscal Council workings.
Note: * The Central forecasts are a replica of the official Department of Finance projections published in *SPU 2020* (see Box D). The 2008 Financial crisis is indexed to Q1 2008. The "Counterfactual" is based on the pre-Covid-19 path for the economy.

Large-scale policy support measures have been introduced for 2020 to manage the Covid-19 crisis. The Government is implementing some €7 billion of additional spending on healthcare, income supports, wage subsidies, and cash supports to business. A further €7 billion of additional supports includes guarantees, loans, and investments. *SPU 2020* projects a government deficit of €23 billion in 2020 (13.3 per cent of GNI*). This reflects €9.6 billion of additional spending and a €14.9 billion fall in general government revenue. For 2021, the deficit should improve if economic activity recovers and policy measures are scaled back as assumed, but the deficit is nevertheless projected to remain large at 7.3 per cent of GNI*. The Council assesses that the actions taken in 2020 thus far are conducive to prudent economic and budgetary management.

There are many risks around the *SPU 2020* fiscal projections. These include more severe health and economic outcomes, and larger shortfalls in revenue or higher costs. In addition, *SPU 2020*

forecasts do not incorporate the impact of any future stimulus or economic recovery plan.

The appropriate fiscal stance for the coming years will depend on how the crisis evolves. This can be assessed in terms of three broad phases. A new government will need to balance the goals of supporting the economy, minimising permanent damage to productive capacity and achieving its social objectives, while maintaining creditworthiness and sound economic management. While the timing is uncertain, the next few years are likely to be characterised by three broad phases: (1) the immediate crisis; (2) the recovery period; and (3) the new normal or "steady state" that the economy finds itself in over the medium term.

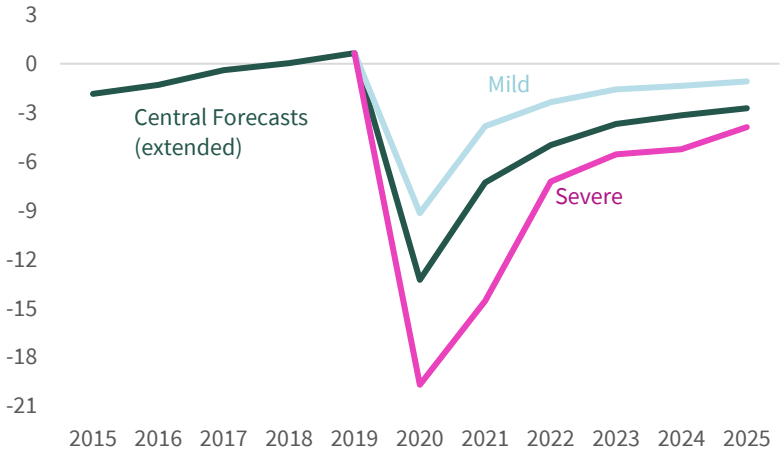
In the immediate crisis (Phase 1), the Government should seek to limit negative health and income impacts and promote as quick a rebound as possible by continuing direct spending measures and other supports. This will help to limit lasting economic damage, support incomes, and safeguard long-run debt sustainability. The immediate fiscal costs will be high, but temporary. While policy needs may evolve, and policies should be adjusted as appropriate to fit these needs, support should be provided on a large-scale for as long as is needed to avoid lengthening and deepening the economic crisis.

During the recovery period (Phase 2), the economy will be below its potential, although growth could initially be quite fast as sectors reopen. Unemployment will be higher than it was pre-crisis, there will be significant unused resources, and productivity will be lower than usual as firms adapt. Some sectors, such as tourism and food services, will fare worse than others. Some job losses will be permanent, and some retraining of workers will be necessary if the economy is to recover its lost potential.

A sizeable fiscal stimulus would help support activity during the recovery phase. Borrowing to support weak demand would be an appropriate countercyclical approach for the government to manage the economy. It should be temporary, targeted and conditioned on the likely state of the economy. It should be phased appropriately over time so that demand can adjust gradually. A stimulus might not be able to support demand in sectors where social distancing is more difficult, but it could boost demand in other parts of the economy.

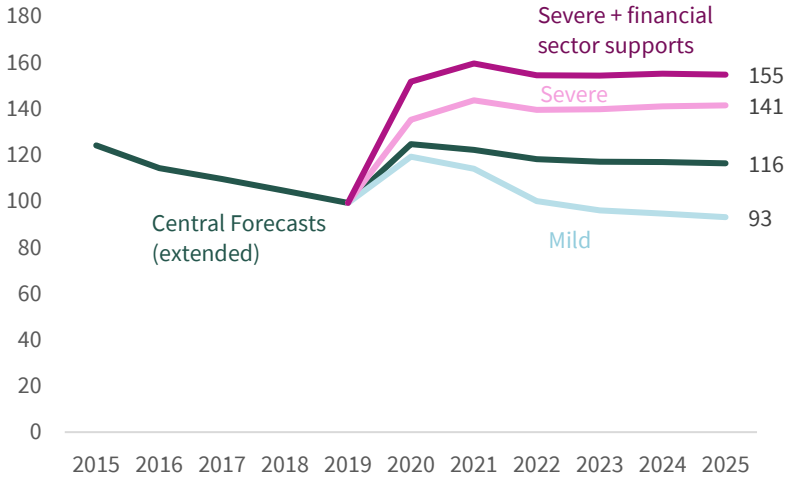
The deficit is likely to be large for many years

Budget balance, % GNI*



The debt ratio could evolve along very different paths under different scenarios

Debt ratios % GNI*



Sources: CSO; Department of Finance; and Fiscal Council workings.
Note: Scenarios are consistent with the macroeconomic and fiscal assumptions set out in Boxes D and I. The Severe + scenario includes a financial sector shock that assumes a recapitalisation of domestic banks equivalent to 10 per cent of the value of their assets (€27.8 billion) in 2021.

As the economy settles on a new growth path (Phase 3), the government debt-to-GNI* ratio could be near post-financial crisis historic highs. The scenarios explored in this report suggest that the debt-to-GNI* ratio could be in the range of 114 to 160 per cent in 2021, up from 99 per cent in 2019.

Given the very high level of debt and lower revenues, some fiscal adjustment is likely to be required in Phase 3 to put the debt-to-GNI* ratio on a downward path towards safer levels. With debt at near record levels, the economy will be more vulnerable to further adverse shocks in future. To safeguard the funding of public services and supports, the government should set a credible path for a prudent fiscal policy. One way to achieve this would be to reinforce the budgetary framework. Three reforms would help: (1) meaningful debt ratio targets; (2) saving temporary receipts through a redeveloped Rainy Day Fund; and (3) using sustainable growth rates to guide net policy spending growth along with more realistic medium-term budgetary forecasts.

Decisions will need to be made around the fiscal adjustment amid competing objectives in terms of spending and taxation. The scale of the adjustment that might eventually be required is uncertain. The scenarios considered in this report suggest that getting the debt-to-GNI* ratio to fall at a pace of 3 percentage points annually by 2025—similar to previous plans—would require total adjustments ranging from €6 to €14 billion over the period 2023–2025. New commitments will likely require reductions in other areas of spending or higher taxes. Nonetheless, ambitious policies can still be achieved in areas like health, housing and climate change.

It should be possible to avoid a return to severe fiscal adjustments. Even in the Severe scenario, the adjustments required are less than half the €30 billion of consolidation measures introduced after the financial crisis. The adjustments

would also likely be easier to achieve as they could be conducted at a time when the economy would be growing again and closer to its full capacity, especially as there is scope for a substantial stimulus in the near term to support the recovery. The low cost of borrowing should play a key role in returning the debt ratio to a downward path, though interest rates can change quickly. This risk is amplified by the fact that large funding requirements may be needed in the coming years. An increase in interest rates or a fall in corporation tax receipts would make for a more challenging environment.

The domestic and EU fiscal rules create leeway for the required response to both the public health emergency and the severe economic downturn in 2020. The Council assesses that Ireland was compliant with the fiscal rules for 2019. For 2020, the Council deems that "exceptional circumstances" exist, while the European Commission has separately activated the "general escape clause" of the Stability and Growth Pact (SGP). These flexibilities allow for some deviation from the normal rules. Depending on the future path of Covid-19, "exceptional circumstances" might persist into 2021 and a further deviation from usual requirements may be appropriate.

Chapter 1

Assessment of Fiscal Stance

1. Assessment of the Fiscal Stance

Key Messages

- The Government based its *Stability Programme Update (SPU) 2020* on a scenario where the Covid-19 crisis that enveloped global economies in early-2020 would result in a deep economic downturn in the first half of the year. This was appropriate, given the uncertainties and risks involved. The Irish economy was in good shape when the Covid-19 shock hit. The shock itself, rather than reflecting domestic imbalances, resulted from the global health pandemic. Official *SPU 2020* projections envisage a 15 per cent decline in underlying domestic demand in 2020. This reflects a sharp impact from containment measures in Q2 2020 and lasting adverse economic impacts, with unemployment projected to be 9.1 per cent in Q4 2021.

- Given the uncertainties involved, it helps to consider scenarios for different paths of the economy. We develop three alternative scenarios: a "Mild" scenario where conditions improve rapidly and lasting damage is kept to a minimum; a "Central" scenario, building on the official *SPU 2020* forecasts where confinement measures are eased as planned but there are some lasting effects; and a "Severe" scenario where the recovery is protracted and marred by repeat lockdowns and wider financial distress. The scenarios explore paths for recovery that could take between about 2 and 3½ years to return to pre-crisis levels depending on health outcomes. By contrast, the Irish economy took 11 years to recover after the financial crisis.

- Developments since the publication of *SPU 2020* have been broadly consistent with its projections. There are limited data to formally assess the economic impacts associated with the Covid-19 shutdown. Yet, various indicators offer some evidence of a sharp contraction in activity. The unemployment rate rose to 28 per cent in April, when including those on emergency supports, but appears to have stopped rising. Similarly, a steep contraction in consumer spending appears to have lessened.

- The macroeconomic backdrop is exceptionally uncertain. There are also further major risks surrounding the economic outlook, including those associated with Brexit and changes to the international tax system.

- Ireland's government debt burden was high going into the current crisis. The net debt-to-GNI* burden, using the most appropriate measure of national income, was equivalent to 86 per cent at the end of 2019. This placed it as the sixth highest in OECD countries behind France, Portugal, Italy, Greece and Japan. Debt levels in almost all countries are likely to rise as result of the Covid-19 crisis.

- The Government's debt burden (in gross terms) is projected to rise from 99 per cent of GNI* in 2019 to peak at 125 per cent in 2020. By 2022, the debt ratio would likely be below 120 per cent and steadily declining in the Central scenario. However, a more severe outlook would see the debt ratio rise to over 140 per cent and remain stuck at high levels. Additional support measures or costs could shift up the debt ratio substantially more.

- The Government has outlined some €7 billion of additional spending on healthcare, income supports, wage subsidies, and cash supports to business. A further €7 billion of additional supports including guarantees, loans, and investments have also been committed. The Council assesses that the actions taken in 2020 thus far are conducive to prudent economic and budgetary management.

- The appropriate fiscal stance for the coming years will depend on how the crisis evolves. It will need to balance the goals of supporting the economy and avoiding permanent damage to productive capacity with maintaining creditworthiness and sound economic management. A new government will need to finance its policy objectives in a sustainable way.

- The appropriate fiscal stance will likely evolve in three broad phases: (1) the immediate crisis; (2) the recovery period; and (3) the new normal or "steady state" that the economy finds itself in over the medium term. The timing of each phase depends on how the crisis unfolds.

- The first phase is to address the immediate crisis. The Government should seek to limit negative health and income impacts and promote a quick rebound as far as possible through direct spending. This would help to limit lasting economic damage from the outbreak, restore incomes quickly, and

safeguard long-run debt sustainability. The immediate costs will be high, but temporary. Failing to restore incomes quickly could result in lasting damage, endangering growth and the sustainability of the public finances over a prolonged period. Such damage would far outweigh the costs of measures to sustain household incomes and immediate spending needs. The phasing out of supports will primarily depend on how long the health crisis persists. If the health crisis fades quickly, then supports can be withdrawn relatively swiftly. However, if the supports are withdrawn too soon, it could lengthen and deepen the economic crisis.

- The second phase will be a recovery period. The economy will be below its potential, although growth could initially be quite fast as sectors reopen and as high savings rates are run down. Unemployment will be higher than it was pre-crisis, there will be significant unused resources, and productivity will be lower than usual as firms adapt. Some sectors, such as tourism and food services, will fare worse than others. Some job losses will be permanent, and some retraining of workers will be necessary if the economy is to recover its lost potential.

- A large-scale fiscal stimulus would help support activity during the recovery phase and would be an appropriate countercyclical approach for the Government to manage the economy. It should be temporary, targeted and conditioned on the likely state of the economy. It should be phased appropriately over time so that demand can adjust gradually. A stimulus might not be able to support demand in sectors where social distancing is more difficult, but it could boost growth in other parts of the economy.

- The third phase will see the economy settle on a new growth path with government debt at much higher levels. This will leave the economy more vulnerable to further adverse shocks in future. To safeguard the funding of public services and supports, the government should set a credible path for a prudent fiscal policy. One way to achieve this would be to reinforce the budgetary framework. Three reforms would help: (1) meaningful debt ratio targets; (2) saving temporary receipts through a redeveloped Rainy Day Fund; and (3) using sustainable growth rates to guide net policy spending growth along with more realistic medium-term budgetary forecasts.

Table 1.1: Summary table

% GNI* unless otherwise stated, general government basis (based on *SPU 2020* forecasts)

	2018	2019	2020	2021
General government				
Revenue [1]	41.5	42.5	41.6	41.9
Expenditure [1]	41.4	41.9	54.8	49.2
Balance [1]	0.1	0.7	-13.3	-7.3
Interest expenditure	2.7	2.2	2.3	2.0
Primary expenditure [1]	38.7	39.7	52.5	47.2
Primary balance [1]	2.8	2.8	-11.0	-5.3
Revenue growth (%) [1]	7.0	6.6	-17.0	9.5
Primary expenditure growth (%) [1]	6.9	6.9	12.3	-2.4
Net policy spending growth	6.4	6.1	5.4	-0.1
Real net policy spending growth (%) [2]	5.7	5.2	6.0	-0.5
Debt				
Gross debt (€bn)	205.9	204.0	217.5	231.5
Cash & liquid assets (€bn)	28.2	27.6	17.2	20.0
Net debt (€bn)	177.7	176.4	200.3	211.5
Equity and investment fund shares (€bn) [3]	37.0	33.9		
Gross debt ratio (% GNI*)	104.3	99.2	124.6	122.1
Net debt ratio (% GNI*)	90.0	85.8	114.7	111.5
Output				
Real GDP growth (% change)	8.2	5.5	-10.5	5.8
Nominal GDP growth (% change)	9.1	7.2	-9.2	7.1
Nominal GNI* growth (% change)	7.3	4.1	-15.1	8.6
Nominal GDP level (€bn)	324.0	347.2	315.4	337.9
Nominal GNI* level (€bn)	197.5	205.6	174.6	189.6
One-offs				
Expenditure one-offs (€m) [1]	213	0	0	0
Revenue one-offs (€m) [1]	300	0	0	0
Net one-offs (€m) [1]	87	0	0	0

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

These figures are based on the original Nominal GNI* figures provided by the Department for SPU 2020. The estimates were corrected in a later version of the report, yet the differences are relatively minor.

[1] One-offs that the Council considers relevant are excluded to assess the underlying fiscal position. For 2018, there is €300 million of corporation tax and €213 million for the medical consultants' pay settlement. For 2020, a number of temporary Covid-19 supports were introduced. While these are intended to be temporary, their duration and cost are still unclear at this stage.

[2] This measure is outlined in Box A (Fiscal Council, 2018e). It represents total general government expenditure less interest, cyclical unemployment-related costs, and discretionary revenue measures.

[3] This comprises government holdings in equity (shares and other equity) and investment fund shares (F5), including the value of bank shares held by the State.

1.1 Introduction

The Council has a mandate under the *Fiscal Responsibility Act (FRA) 2012*, and with reference to the requirements of the *Stability and Growth Pact (SGP)*, to assess the Government's fiscal stance.

This chapter draws on analysis from the rest of the report in assessing the fiscal stance in *SPU 2020*. The Council's assessment is informed by: (1) an economic assessment that considers the state of the public finances, the stage of the economic cycle, and growth prospects for the economy; and (2) the extent of compliance with the fiscal rules.

1.2 The Macroeconomic Context

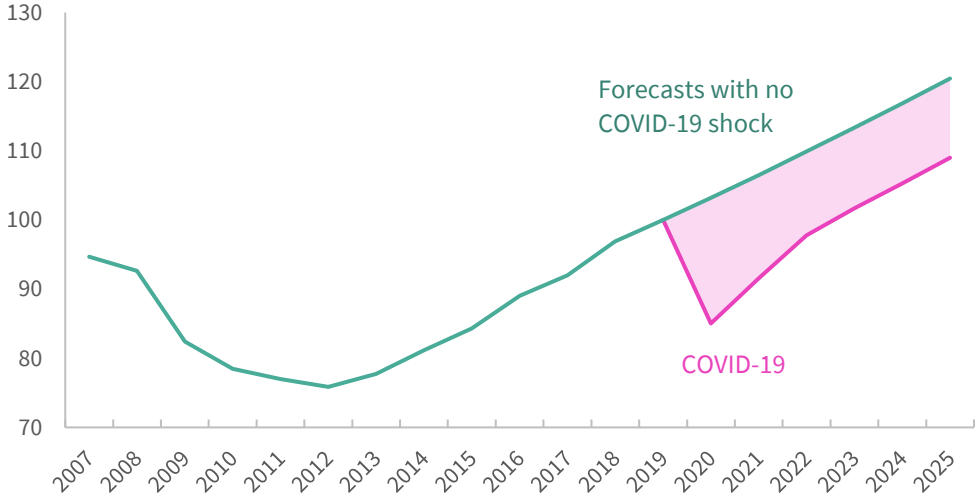
Domestic Economic Activity

The domestic Irish economy came into 2020 with a strong wind at its back — so much so that overheating was in prospect. Growth was rapid. The outlook for major trading partners was reasonably positive. Monetary conditions were favourable, while the budget balance was showing a small surplus, with spending supported in part by corporation tax receipts from multinationals. The risk of an immediate disorderly Brexit had subsided. Persistent shortages of housing meant that an eventual increase in residential construction looked set to further boost activity over the medium term absent an adverse shock. However, by the end of February the situation had taken a dramatic turn.

The Covid-19 pandemic meant that large parts of the economy were locked down as necessary containment measures were enacted to limit the spread of the virus. State supports—both existing and newly introduced—cushioned the impact of the unprecedented fall in demand for workers. In less than three months, the Irish economy went from low unemployment to one-in-every-two people in the labour force relying on social welfare payments or state-backed wage subsidies.

Figure 1.1: The Covid-19 shock is deep and rapid

Underlying domestic demand (Index: 2019 = 100)



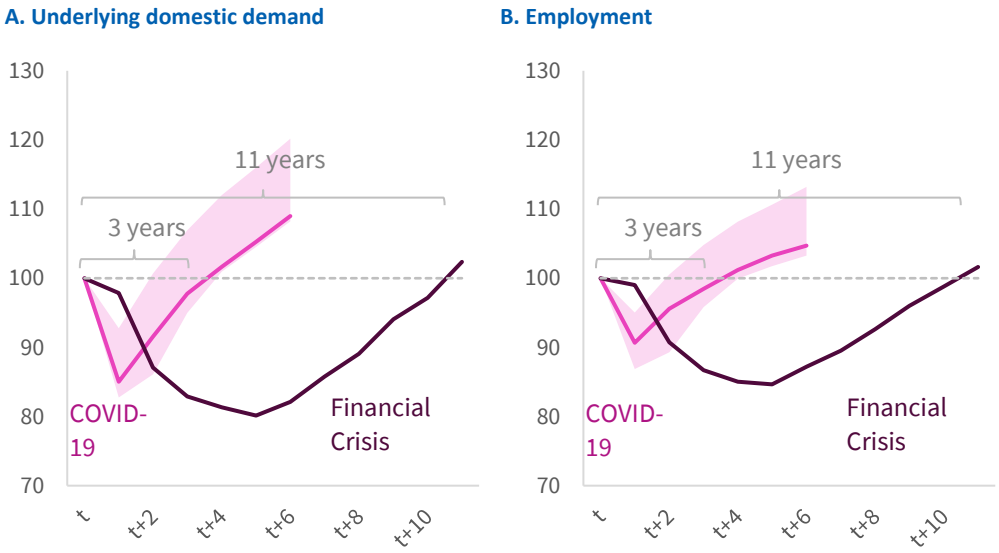
Sources: CSO; Department of Finance; and Fiscal Council workings.
Note: Underlying domestic demand comprises consumer spending, government consumption, and investment spending (excluding planes and intangibles). The Covid-19 scenario is the Central scenario outlined in Box D. It is based on an extended version of the official *SPU 2020* forecasts.

Direct confinement measures, negative impacts on work and spending opportunities as people keep their distance, and wider demand shortfalls have

meant a large negative shock to overall economic activity. These will lessen as containment measures ease. But adverse impacts are likely to persist for sectors that are more exposed to travel and social interaction (tourism, food services, retail). Figure 1.1 illustrates the scale and rapidity of the fall in output facing the Irish economy. The outlook depicted in official (*SPU 2020*) forecasts is for a 15 per cent decline in underlying domestic demand in 2020 (Chapter 2). This reflects the assumption of a sharp initial impact from containment measures lasting over Q2 2020 and of lasting adverse impacts on the economy. Damage could persist such that a gap of almost 10 per cent remains by 2025 compared with the pre-Covid-19 path.

Figure 1.2: The Covid-19 shock is not expected to endure like the financial crisis

Index: 2007 =100 for the financial crisis; 2019 = 100 for the Covid-19 shock



Sources: CSO; Department of Finance; and Fiscal Council workings.
Note: We set t = 2007 for the financial crisis and t=2019 for the Covid-19 shock. The Covid-19 scenario is the Central scenario outlined in Box D. It is based on an extended version of the official *SPU 2020* forecasts.

Comparing the shock with the financial crisis of 2008/2009 can help us understand the scale and persistence of the downturns (Figure 1.2). It also highlights the differences in the nature of the two contractions. The financial crisis was a deep and prolonged shock. It required a radical correction in the economy from a position of lost competitiveness, large trade deficits, a property bubble, and high levels of debt. The recovery to pre-crisis peak levels of underlying domestic demand and employment took 11 years, even allowing for what were eventually very favourable circumstances. By comparison, the Irish economy was in good shape when the

Covid-19 shock hit and the shock itself, rather than reflecting domestic imbalances, stemmed primarily from a global health pandemic.

Although subject to very high uncertainty, a range of scenarios presented in this Fiscal Assessment Report suggests that the recovery is expected to take between about 2 and 3½ years to return to pre-crisis levels.

There is a high level of uncertainty facing the immediate economic outlook relating to the pandemic. How long the economy will take to emerge from the Covid-19 shock and how deep the economic contraction will be is still unclear at this early stage. What happens on the health side will be key to the recovery. This includes the prospects for safe and effective vaccines or treatments and the effectiveness of containment measures (Box A). In terms of the economic impact, it is uncertain how effective government supports will be and the extent of the global fallout.

Box A: The economic shock depends on how Covid-19 evolves

The Covid-19 shock is unlike typical macroeconomic shocks. It is foremost an epidemiological phenomenon. That is, to understand how it might evolve, we need to understand how the pandemic will evolve. This box considers some aspects of how the pandemic is unfolding in Ireland.

The path out of the crisis depends on transmission risks

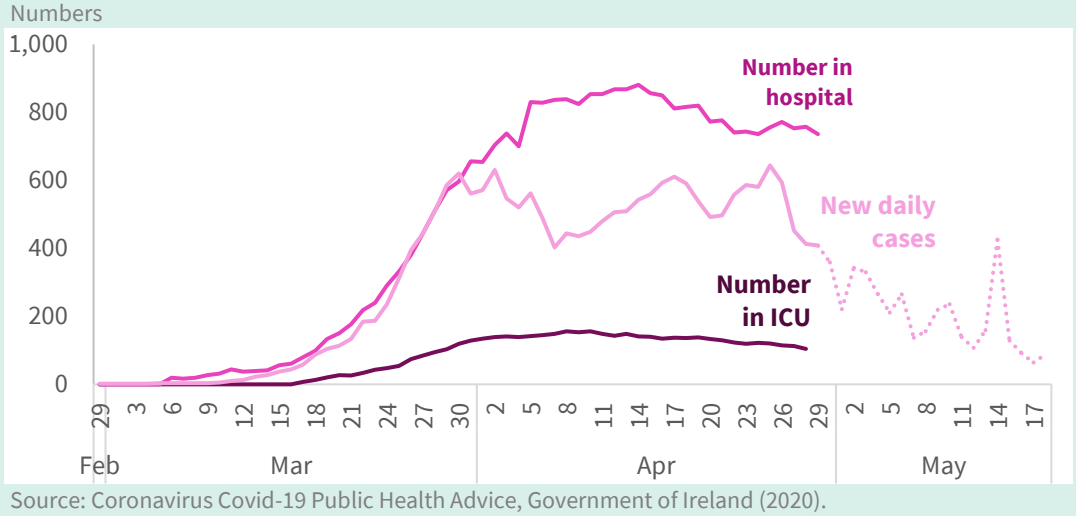
Ultimately, an effective vaccine may be needed to fully interrupt the transmission of Covid-19. As of 15th May 2020, the World Health Organisation (WHO, 2020) had identified eight candidate vaccines that were in clinical evaluation and 110 candidate vaccines in preclinical evaluation. Yet, there are no guarantees that safe and effective vaccines will be successfully identified and timely verification processes could mean that a vaccine might not be available until late next year at the earliest.

If a vaccine is not developed, the development of anti-viral drugs, tests for antibodies, and the gradual build-up of immunity in the population could pave the way for economic activity to further resume. There are of course risks if containment measures are lifted before health risks have dissipated.

Policymakers therefore face a difficult dilemma in balancing health and economic considerations when exiting from the crisis. The WHO has offered advice to countries easing restrictions. There are six criteria:

1) Controlling transmission
2) Ensuring health systems are able to detect, test, isolate and treat cases and trace contacts
3) Minimising outbreak risks in settings like health facilities and nursing homes
4) Putting preventive measures in place in workplaces, schools and other essential locations
5) Managing import risks
6) Ensuring communities are educated, engaged and empowered to adjust to a "new norm"

Figure A.1: Data on Covid-19 in Ireland



Source: Coronavirus Covid-19 Public Health Advice, Government of Ireland (2020).
Note: New daily cases refer to confirmed cases of Covid-19. Numbers in hospital and ICU are cumulative figures. External tests (including those conducted in Germany on behalf of Irish authorities) are backdated to appropriate dates as in the "Covid-19 modelling data published on Thursday 30 April 2020". The dashed line represents the latest unadjusted data on new daily cases.

In Ireland, the transmission of the disease as measured by numbers of new daily cases, numbers in hospital, and numbers in (ICUs) with Covid-19 appears to have peaked for now.

Numbers have either flattened or begun a slow decline from various stages in April (Figure A.1). The peaks in data related to the transmission of the virus are encouraging, and new daily cases have reduced, though there may still be a long way to go before health concerns abate.

The Government's Roadmap

The Government's "Roadmap for Reopening Society and Business" follows similar criteria to that of the WHO. The roadmap sets out five phases for unlocking parts of society and the economy (summarised in Table A.1). Moving through the roadmap phases will depend on the progress of the disease, healthcare capacity, testing and contact tracing, the shielding of at-risk groups, and secondary morbidity and mortality. As part of the roadmap, businesses are expected to develop plans for the safe operation and protection of staff and customers (social distancing, hygiene and cleaning, extended opening hours, shift work, staggered hours).

Table A.1: Summary of the Government's Roadmap

Phase 1 18 May	Outdoor workers (including those in construction) Retailers outdoors or with strong social distancing (garden centres, hardware, farm markets) Outdoor amenities
Phase 2 8 June	20km travel restriction Other solitary workers Small retail outlets (with controls on number of interactions)
Phase 3 29 June	Crèches, childminders and preschools for essential workers Cafes and restaurants, with social distancing/cleaning Organisations with low daily interactions with people All other retail outlets
Phase 4 20 July	Extend travel to outside region Crèches, childminders, and preschools for all other workers (phased, e.g. 1 day/week) Some higher risk services (e.g., hairdressers) Return to work for those who cannot do remote work (shift work, staggered hours) Sports team leagues (with limitations on spectators)
Phase 5 10 August	Large social gatherings (large weddings, festivals) with social distancing/cleaning Higher risk services (bars, nightclubs, cinemas, theatres, etc.) with social distancing/cleaning Primary schools, secondary schools, universities Phased return to onsite working for all others (including those who can do remote work)

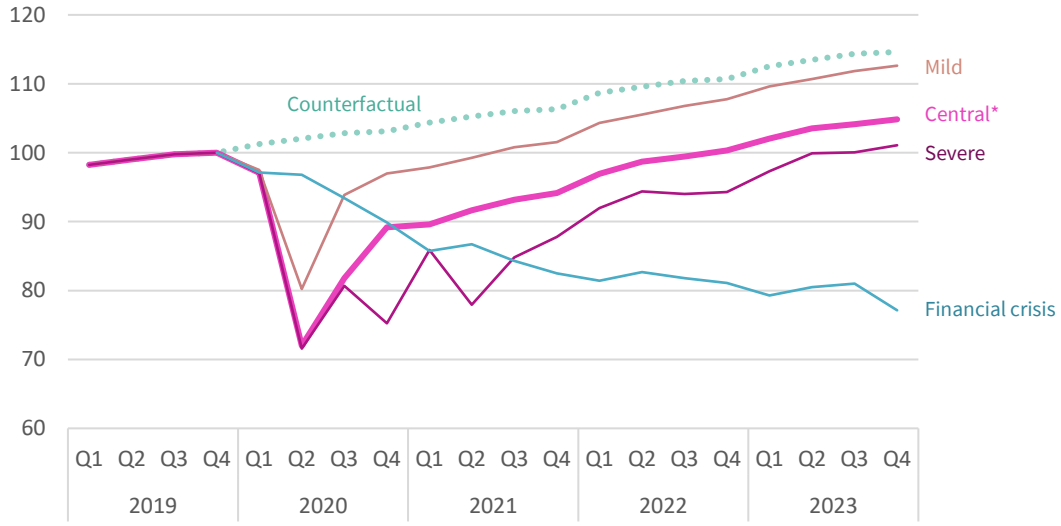
Health guidelines and behavioural norms face more prolonged impacts

The first phase has been passed. Yet, even after all the roadmap phases have been moved through, it is unlikely that the economy and society will return to previous norms. Some level of precaution, both recommended and voluntary, is likely to remain long after the initial containment phase ends.

Given the uncertainties involved, it helps to consider scenarios for different paths of the economy. This Fiscal Assessment Report sets out three scenarios over a five-year horizon to 2025 and shows a range of outcomes: a "Mild" scenario where conditions improve rapidly and lasting damage is kept to a minimum; a "Central" scenario, building on the official SPU 2020 forecasts where confinement measures are eased as planned but there are some lasting effects; and a "Severe" scenario where the recovery is protracted and marred by repeat lockdowns and wider financial distress. Box D, Chapter 2, details the basis for these scenarios.

There is a wide range of potential outcomes in terms of the scale of declines that are possible for 2020 (Figure 1.3). Activity—as measured by underlying domestic demand—could recover quickly if economic and health responses prove successful. If so, the Mild scenario could see underlying domestic demand contract by 7 per cent this year as compared to almost 15 per cent in official projections. By contrast, repeat lockdowns consistent with a second and third wave of infections could see a more stunted recovery where demand contracts by more than 18 per cent this year.

Figure 1.3: Economic scenarios for how Covid-19 plays out vary widely
Underlying domestic demand (Index: Q4 2019 = 100)



Sources: CSO; Department of Finance; and Fiscal Council workings.
Note: * The Central forecasts are a replica of the official Department of Finance projections published in *SPU 2020* (see Box D).

The path that the economy recovers to after the end of the containment measures is more important for long-run sustainability than the immediate impact. The scenarios we consider suggest that a return to pre-crisis levels of output might not be possible until anywhere from mid-2021 in the Mild scenario up to mid-2023 in the Severe scenario. A lot depends on the success of containment measures and policies to mitigate economic damage, as well as the extent to which lasting changes in behaviour are observed. The long-term growth rates to which the economy returns will depend on these factors, with more severe outcomes leading to lower rates than previously assumed. The scenarios we consider do not offer a comprehensive range of possible outcomes. The Covid-19 shock could, for instance, give rise to a systematic shift in the global economy that poses far greater downside risks than we consider.

An upside risk is that the official projections do not incorporate any fiscal stimulus after the crisis, although this would likely imply a large budget deficit. *SPU 2020* notes that the "Government will shortly bring forward an economic recovery plan, setting out its approach to repairing the damage caused by the pandemic. The costs of this are not included" (Department of Finance, 2020a, p.10). Downside risks are that the economy takes longer to recover from the health and economic impacts associated with Covid-19. There are also financial risks. Asset prices collapsed and market volatility spiked following the outbreak of the pandemic, with liquidity and financing conditions tightening rapidly (IMF, 2020). While banks have more capital and liquidity than in the past, including at the onset of the financial crisis, ongoing risks from the pandemic could test their resilience, reducing lending and amplifying the slowdown. Brexit and potential changes to the international corporate tax regime present other downside risks outside of Covid-19.

Recent developments

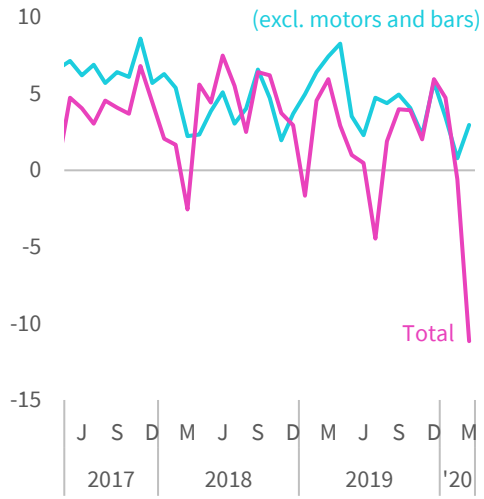
Right now, there is limited hard data available to formally assess the economic impacts associated with the Covid-19 shutdown. Yet high frequency indicators offer some evidence of the sharp contraction in activity (Figure 1.4). The developments so far are broadly in line with the macroeconomic forecasts in *SPU 2020* (Box C).

Consumer spending data for the period where containment measures took effect look exceptionally weak. For March, retail sales volumes were down by 11.2 per cent year-on-year. Data on personal debit and credit card activity plus ATM withdrawals show that the combined value of transactions was down 35 per cent year-on-year in April. There was an initial surge in transactions in early- to mid-March as closures of schools, crèches (12th March) and bars (15th March) took effect. Non-essential shops were not closed until 27th March. These data point to some stockpiling by consumers. But this was dwarfed by the precipitous declines in late-March and through April as restrictions on all but essential services were imposed. Activity appears to have bottomed out in mid-April. Card plus ATM transactions were down about 25 per cent year-on-year by the final week of the month and in early May.

Figure 1.4: Early indicators signal a sharp contraction in early 2020

% change year-on-year unless otherwise stated

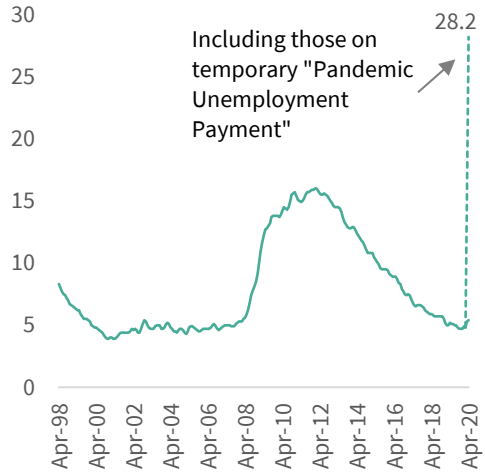
A. Total retail sales fell markedly in March, but some core items held up well



B. Personal Card and ATM transactions plummeted in April

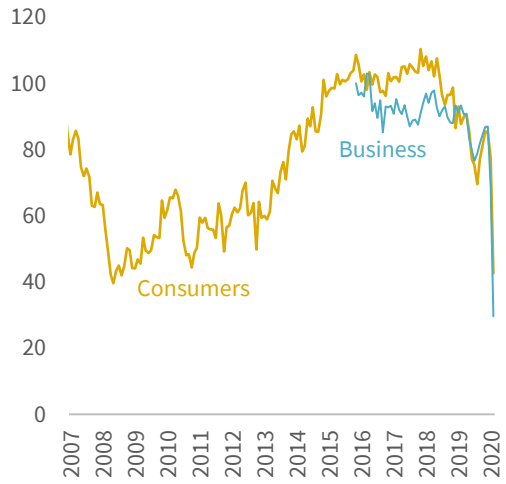
C. Unemployment rates skyrocketed

% labour force



D. Sentiment weakest since financial crisis

Index



Sources: CSO; Central Bank of Ireland Monthly and Daily Card Payments data; KBC; Bank of Ireland; and Fiscal Council workings.

Note: Card data refer to (1) gross new spending on debit cards (Point of Sale Transactions) + (2) ATM withdrawals + (3) gross new spending during the month on all personal credit cards. They are calculated using 7-day moving averages, with the monthly data converted to a daily frequency assuming a constant daily conversion from the monthly series (i.e., each day of the respective month is assumed to have equal levels of spending where daily data are unavailable). This conversion, though imperfect, allows for reasonable year-on-year comparisons. See Hopkins and Sherman (2020) for a detailed exploration of the new daily dataset. Sentiment indicators are the Bank of Ireland "Business Pulse" indicator and the KBC "Consumer Sentiment" index.

The sharp downturn mirrors what is being experienced in other countries affected by the pandemic. French, Spanish and Austrian real GDP contracted by 5.2 per cent, 3.8 per cent, and 2.7 per cent year-on-year respectively in the first quarter of 2020. In the US, consumer spending volumes contracted by 7.3 per cent in March compared to February. Advance estimates suggest that US real GDP contracted at an annual

rate of 4.8 per cent in Q1 2020 and nowcasts suggest a contraction of 31 per cent in Q2 2020. In countries like Sweden where containment measures were relatively limited, economic indicators have held up relatively well (for example, core retail sales continued to grow in annual terms albeit at a slower rate in March).

Soft data also collapsed in recent months. Consumer sentiment dropped to levels not seen since the financial crisis in 2008. Business sentiment experienced a similar fall in recent years (Figure 1.4D). The composite PMI indicator (not shown) suggests real GDP contracting by some 6 per cent in the three months to April based on their historical association.

The economic recovery

Activity is likely to pick up rapidly as confinement measures ease. But output will remain far below its potential level as a result of the current disruptions, remaining restrictions, concerns around Covid-19, weakened confidence, and weak global demand. Demand should gradually recover as these conditions improve.

There are risks that potential output over the long run could be permanently lower and there are risks of a long-run impact on productivity growth following the Covid-19 shock. Key concerns relate to how lasting the impact on investment and unemployment could be. These risks can be thought through in terms of three key factors to production:

Productivity growth could be impacted by the pandemic in a variety of ways. Firms might take pandemic risks into greater account, hence imposing higher costs. There could be less favourable terms of trade, and reduced travel. There could also be a loss of human capital and tacit knowledge if businesses fail. “Reshoring” of global supply chains is a possible response — that is, companies reversing the process of spreading production across the globe to mitigate future risks to production. Yet firms might still find diversification of production across countries more secure than reshoring. Productivity might still improve due to other factors: accelerated moves to automate work; remote working; and through creative destruction. Some of these would allow firms to adjust more flexibly to changing demand and to lessen their reliance on workers subject to infection.

Labour supply could be negatively impacted, with many workers not being able to return to businesses that suffer insurmountable losses. The longer they remain out of work, the higher the probability that they will not return to employment. Conefrey, McCarthy and Sherman (2013) show that the re-employment probabilities for individuals in the post-financial crisis period could be as weak as roughly 10–15 per cent for those with low education, who were out of work for up to five months. The current crisis is obviously unusual in that the expectations of returning to work quickly might reasonably be higher, especially as the shock is largely driven by a temporary set of containment measures, and fundamentals at the onset of the crisis were better than those at the time of the financial crisis. Reduced net migration into Ireland could also reduce labour supply, especially if travel restrictions are in place for an extended period. An accelerated shift to automation could push people out of the workforce.

Investment in capital (infrastructure, machinery and equipment, etc.) will also likely suffer as a result of the shock and the associated uncertainty. Private business investment that might otherwise have occurred is likely to be shelved due to lower revenues, firm bankruptcy, lack of liquidity, and weaker expected demand in future.

The *SPU 2020* projections did not include updated estimates of the economic cycle or potential output.[1] Yet, assessment of cyclical and supply-side conditions is nevertheless a useful input into policy.

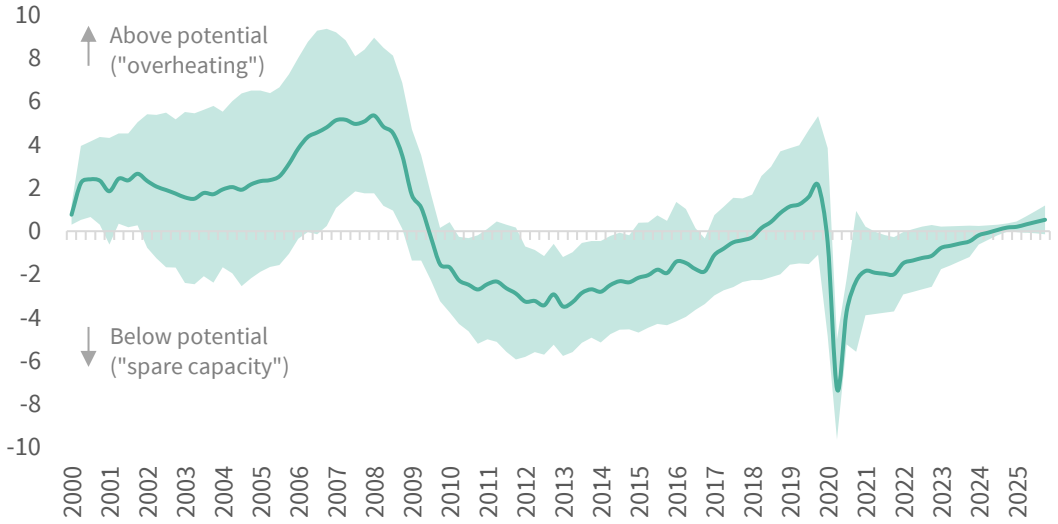
Based on the Council's assessment of potential output, the economy is likely to go from a position where tentative signs of overheating were evident to one where substantial spare capacity opens up (meaning unused labour and other factors of production). Using the Council's suite of output gap models (Casey, 2019) together with the *SPU 2020* forecasts suggests that in the Central scenario the economy would be expected to fall from a slightly positive output gap of 2 per cent to as low as 7½ per cent below its capacity in 2020. It would then gradually close the gap in later years (Figure 1.5). Behind the current output gap estimates are estimates of potential output growth rates of 2–3 per cent over the medium term (2022–2025).

[1] The European Commission issued guidance that supply-side estimates would not be required for the purposes of this stability programme, given the exceptional context.

The latest estimates—though reasonably plausible—are subject to considerable uncertainty and will likely change substantially as new information is incorporated.

Figure 1.5: Substantial spare capacity opens up in 2020 but closes faster than after 2008

% potential, output gap (gap between actual and potential output)



Sources: CSO; Department of Finance; and Fiscal Council workings.
Note: The figure shows a range of output gap estimates (the shading) and the mid-range estimates (the line). Estimates are produced using a variety of methods based on the Council's models and Department forecasts (extended to 2025 — see Box D). Given the distortions to standard measures like GDP and GNP and the relative importance of domestic activity to fiscal outcomes, the range focuses on domestic economic activity, including quarterly Domestic GVA (see Casey, 2019).

Risks to the Outlook

As well as the risks associated with Covid-19, further major risks continue to surround the economic outlook. Two key risks are those associated with Brexit and changes to the international tax system:

- **Brexit:** *SPU 2020* assumes that a relatively benign Brexit occurs at the end of this year. There is a risk that a disorderly Brexit could occur and be worse than previously assumed (see Box D, *November 2019 Fiscal Assessment Report*). There is considerable uncertainty about how Brexit will interact with the global pandemic. There is the potential for a global recession and collapse in world trade that could significantly amplify the negative consequences. Yet, with many vulnerable sectors already facing severe demand shortfalls (like accommodation and food services, but not agri-foods sectors), it is possible that the adverse impacts would not necessarily be worse than they otherwise would have been. Brexit could also pose risks to long-run potential output. Productivity growth (the key determinant of long-run growth) has a well-documented association with trade, which is likely to be negatively impacted over a prolonged period. These effects would be limited if Irish exporters overcame challenges to find new markets and if foreign investment and labour supply (through migration) were boosted by Brexit.

- **International tax changes**, including those under the OECD's Base Erosion and Profit Shifting initiative (BEPS), could affect foreign investment in Ireland and corporation tax receipts. Protectionist measures by the US and other nations could escalate further, weakening global trade. And, adverse financial developments could spill over to the Irish economy.

1.3 The Recent Fiscal Context

In the years prior to the Covid-19 crisis, efforts to turn around a large deficit after the financial crisis slowed from 2015 after the 3 per cent of GDP deficit limit was met (Figure 1.6A). Non-interest spending growth quickened from 2015, to largely keep pace with fast revenue growth that was boosted by corporation tax (Figure 1.6B). As a result, the budget balance excluding one-offs and interest costs barely improved after 2015 (Figure 1.6C).

Two features supporting the budget balance in recent years were (1) the cyclical upswing, which boosted revenues and lowered unemployment-related spending; and (2) a number of unexpected surges in corporation tax. Figure 1.6D shows the structural primary balance: the budget balance adjusted for the cycle, one-offs, and interest costs. It deteriorated after 2015. If the "excess" corporation tax receipts—receipts beyond what could be explained by domestic growth— were removed, then the structural primary balance would be seen to have deteriorated even further. Box H shows that some €5.4 billion of corporation tax receipts in 2019 (9 per cent of Exchequer tax revenue) could be considered excess. Excluding these excess receipts would suggest a structural primary balance as low as -0.5 per cent of modified GNI* for 2019 (Figure 1.6D and Box H).[2]

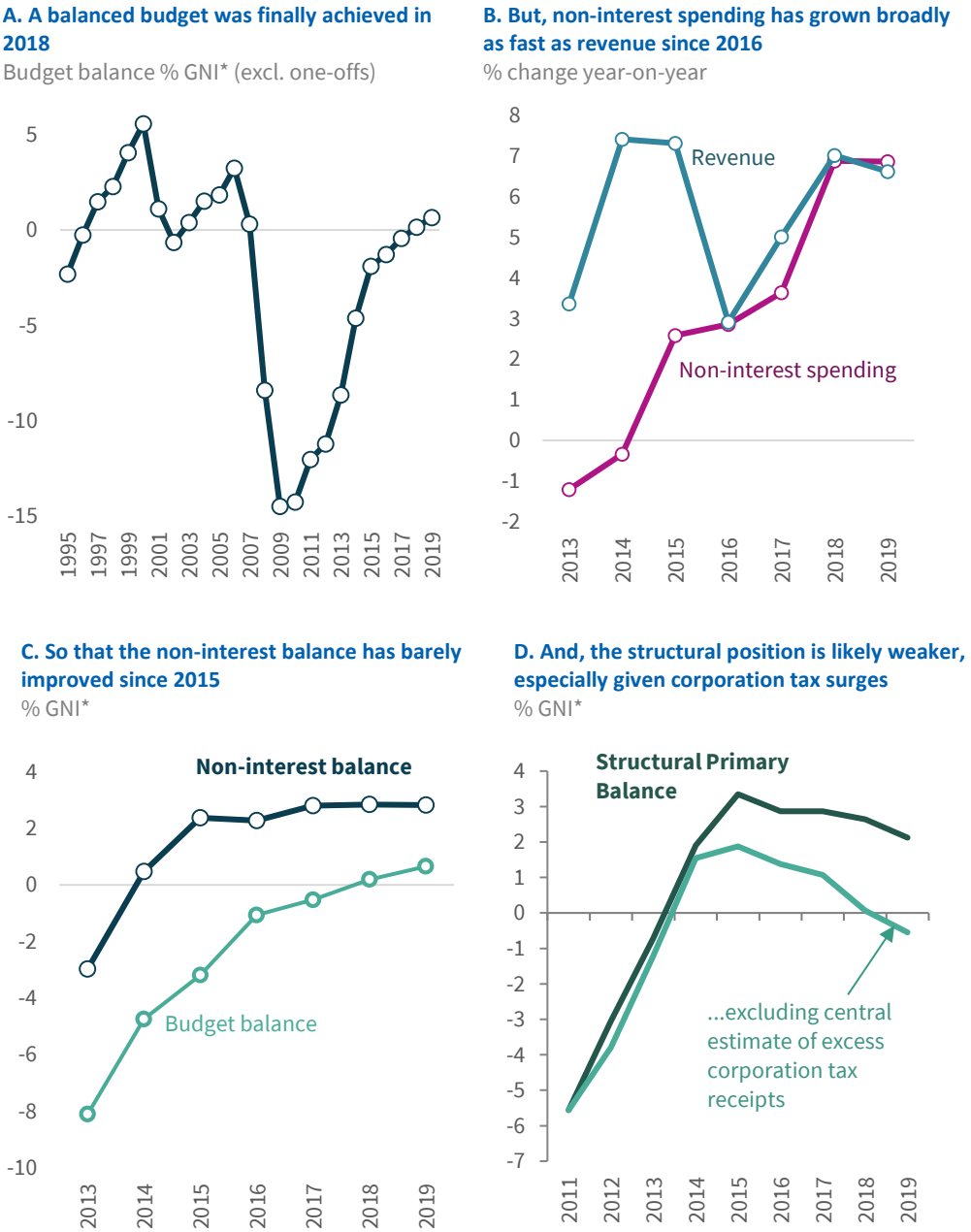
The surges in corporation tax receipts boost government revenues, but they also boost the economy. Four-fifths of receipts are due to foreign-owned multinational enterprises. This means that—unlike conventional tax receipts that are paid out of domestic activity—they represent a net injection to the Irish economy. The associated higher profits and net exports contribute to the higher growth in headline GDP seen in recent years and they inflate Ireland's strong current account surplus, though they are largely disconnected from underlying economic activity.

A repeated pattern of unplanned spending increases, particularly in health, used up much of the recent surges in corporation tax, plus much of the cyclical revenues built up in recent years. These "within-year" spending increases were outside the normal budgetary process. That is, rather than being planned for in budget documents, they arose during the year as overspends or unplanned increases in

[2] See Box B of the *June 2019 Fiscal Assessment Report* for an assessment of excess corporation tax receipts.

total government spending. Most of the increases in health spending since 2013 were unplanned (see Box I, *November 2019 Fiscal Assessment Report*).

Figure 1.6: Underlying budgetary improvements stalled after 2015



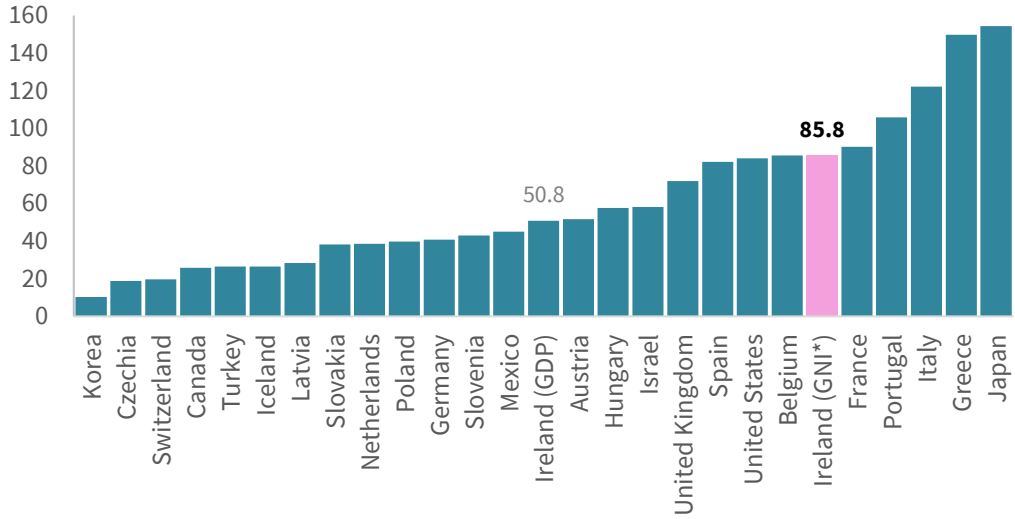
Sources: CSO; Department of Finance; and Fiscal Council workings.
Note: Revenue and non-interest spending growth and the budget balance in panel C as well as its improvement noted in panel D exclude one-offs. See Box H for how the excess corporation tax receipts are calculated.

Ireland's government debt burden was high going into the current crisis. Even if various assets held by the State were removed, the net debt burden for end-2019 was equivalent to 86 per cent when set against a more appropriate measure of national income like GNI* (Figure 1.7). This placed it as the sixth highest in OECD

countries behind France, Portugal, Italy, Greece, and Japan, although debt levels in almost all countries are likely to rise as result of the Covid-19 crisis.

Figure 1.7: Ireland had one of the OECD's largest debt burdens last year

% GDP (and % GNI* for Ireland), end-2019, net debt on a general government basis



Sources: CSO; Eurostat; IMF; and Fiscal Council workings.
Notes: Net debt is gross debt excluding assets held by the State in the form of currency and deposits; debt securities; and loans. The SGP criterion of a 60 per cent ceiling for government debt is set in gross terms rather than in net terms. Net debt does not include the State's bank investments.

1.4 Assessment of the Fiscal Stance

This section assesses the appropriate fiscal stance in the context of the severe shock posed by Covid-19. Given the uncertainties involved, the Council draws on the macroeconomic and fiscal scenarios outlined in this report to form its assessment.

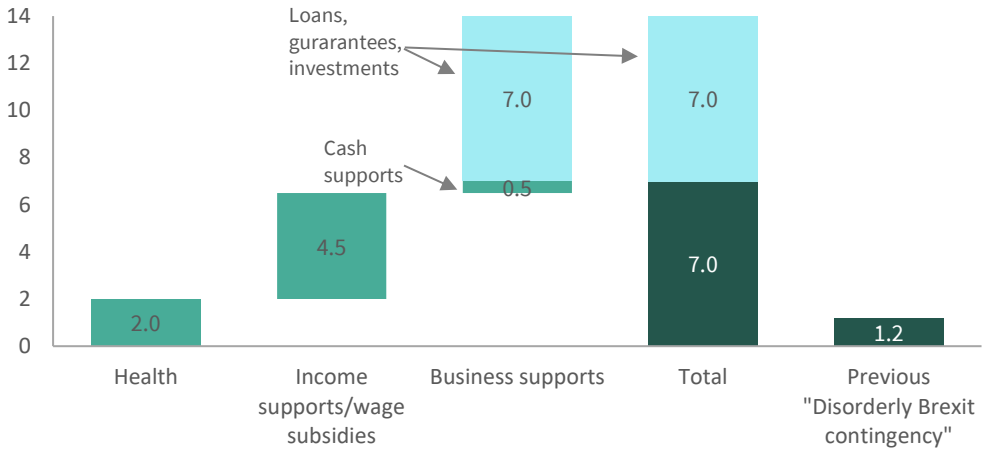
The appropriate fiscal stance will depend on how the crisis evolves. With this in mind, the Council's assessment of the fiscal stance refers to three broad phases: (1) the immediate crisis; (2) the recovery period; and (3) the new normal or "steady state" that the economy finds itself in over the medium term. The timing of each of these phases will depend on how the state of the economy evolves, illustrated by the range of scenarios in this report.

Phase 1: The fiscal stance for the immediate crisis

In early 2020, the Government acted quickly to unleash large-scale and supports to individuals and businesses, as well as expanding resources available to the health sector, in response to the pandemic.

Figure 1.8: The supports for Covid-19 dwarf previously planned Brexit supports

€ billions, impact on 2020 government expenditure



Sources: Department of Finance; and Fiscal Council workings.
Note: The previously planned "Disorderly Brexit Contingency" for 2020 was set out in *Budget 2020*, when the official forecasts assumed a disorderly Brexit for this year. It comprised about €650 million for the worst-hit sectors; about €450 million for employment supports; and the remainder for compliance checks and infrastructure costs (Box H, *November 2019 Fiscal Assessment Report*). Note that €0.75 billion of the €14 billion shown is repurposed expenditure previously outlined for 2020 so that the total new supports equate to €13.3 billion.

The fiscal supports introduced to support the health system and the economy are very large. For comparison, the Government's anticipated disorderly Brexit supports were to amount to €1.2 billion in 2020 — a small fraction of the €7 billion of spending

and €7 billion of additional supports (guarantees, loans and investments) currently envisaged for addressing the Covid-19 impacts in 2020 (Figure 1.8).

Half the supports (€7 billion) are in the form of loans, guarantees or investments. These forms of support are very different from cash supports. Initially, they may have limited impacts on the Government's debt and deficit. However, if loan losses or failures of firms materialise over time, it could add to the fiscal impacts (Box J).[3]

Initially, the temporary fiscal supports introduced by the Government were primarily aimed at supporting the incomes of those at risk of becoming unemployed and at boosting the capacity of the health system, while business supports were ramped up later. Box F provides further detail on the temporary supports.

The support measures currently outlined can be broken down as follows:

- **Income supports** include expanded illness benefits, unemployment payments, and wage subsidy supports for businesses to retain employees. When combined, these amount to an estimated €4½ billion assuming they last for a twelve-week period (though these are likely to be extended, particularly for sectors remaining closed further into the future).

- **Business supports** are predominantly made up of a mix of loans, guarantees, and investment supports that together amount to an estimated €7 billion. A much smaller amount of cash support (€0.5 billion) has been provided. Amounts are tied to firms' previous tax returns for 2019 and capped at €10,000 per firm.

- **Health supports** amounting to €2 billion include increased staffing (mainly through early recruitment of nursing students and medical interns on temporary contracts), securing private hospitals, providing supports for nursing homes, and the costs associated with procuring additional equipment.

[3] While loans and equity injections add to gross government debt, guarantees do not. Guarantees would add to government debt if called on, and where they do not have an economic rate of return. In terms of the budget balance, all three (loans, guarantees and equity injections) worsen the budget balance if the firm fails, defaults, or calls on the guarantee.

The supports are obviously very large and raise the question: would a Severe scenario imply austerity being needed? Not necessarily. Rather than outright austerity—where involuntary unemployment or a negative output gap results from cuts to existing public spending or tax increases—a Severe scenario might simply mean less ambitious budgetary plans being possible in future, without revenue-raising measures or savings being sought elsewhere.[4] It would perhaps mean a slower pace of increase in net government spending and it would be against a backdrop of a recovering economy. This would be very different to the financial crisis where sharp cuts to spending and tax increases needed to be made when the economy was in the midst of a severe downturn.

The Government's balance sheet and creditworthiness

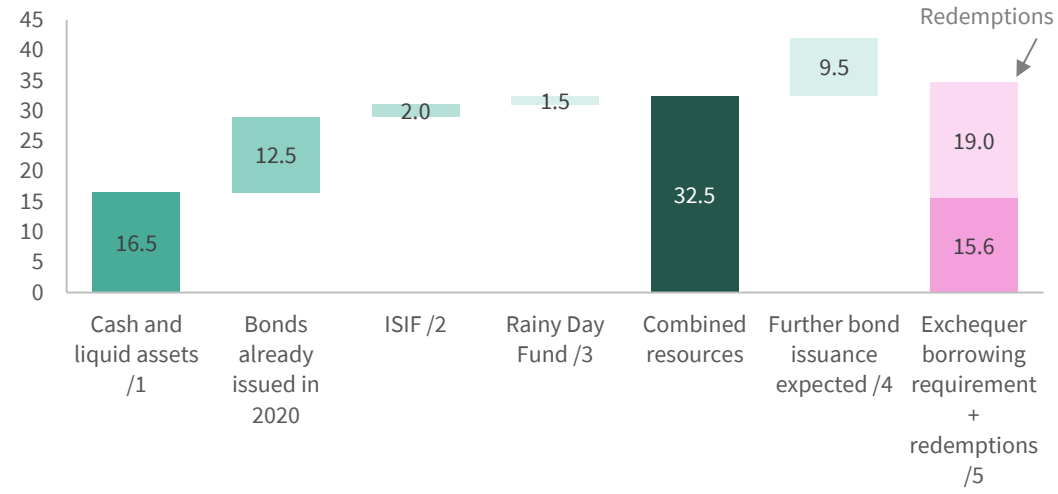
The Government's balance sheet should be able to play a central role in supporting the economy in the short term and avoiding long-term damage to the economy.

The State has financial resources available to weather the large need for fiscal supports in the short-term (Figure 1.9). Existing cash balances (€19.3 billion at end-April) can be run down to partially fund the 2020 financing needs. There is one remaining bond redemption this year (€6.5 billion in October) and there are no bond redemptions or repayments in 2021 aside from the ending of the UK bilateral loans (€0.5 billion). That will mean that most of the funding requirement in 2021 will be made up of the Exchequer Borrowing Requirement, which the *SPU 2020* central projection puts at €11.1 billion for 2021. Moreover, redemptions for 2021–2024 (€26.5 billion) are much lower than in previous years (€70 billion for 2017–2020). Bond issuance of €20–24 billion is now planned for 2020, with €12.5 billion of this already complete. In addition, the Government plans to draw on other financial resources on its balance sheet, including some of the assets in the Irish Strategic Investment Fund (ISIF) (€2 billion), which is earmarked for a recovery fund, and all of the Rainy Day Fund (€1.5 billion).

[4] A helpful definition of "austerity" is given by Wren-Lewis (2017). Austerity can be taken to mean fiscal consolidation that leads to significant increases in involuntary unemployment. A more technical definition would be that austerity is fiscal consolidation that leads to a noticeably larger negative output gap. This definition implies that while austerity will always involve fiscal consolidation, fiscal consolidation could occur without austerity.

Figure 1.9: The State has large resources on hand

€ billions



Sources: NTMA; Department of Finance; and Fiscal Council workings.
Notes:
/1 Cash and liquid assets are as at end-2019 (at end-April there were €19.3 billion in assets available after the April bond redemption).
/2 Irish Strategic Investment Fund assets are being used to fund part of the guarantees being issued, though these are not expected to impact the Exchequer Borrowing Requirement in 2020.
/3 The Rainy Day Fund has €1.5 billion, which is expected to be drawn down.
/4 Total bond issuance for 2020 is guided at €20–24 billion by the NTMA, with €12.5 billion issued.
/5 Following the 18th April redemption, the remaining redemptions for 2020 were €6.5 billion (due in October 2020).

The low cost of borrowing is a positive for Ireland's crisis-resolution efforts. Borrowing requirements are likely to be far larger in the coming years than previously anticipated.

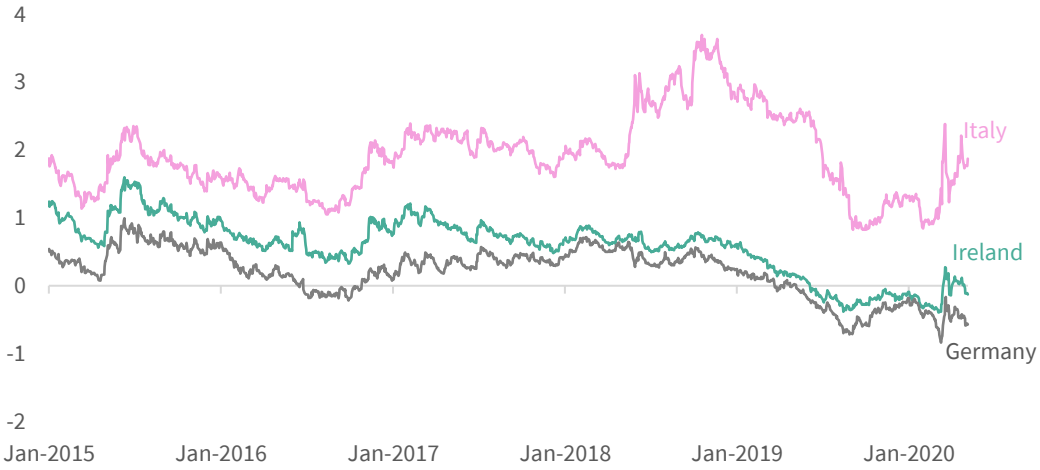
Fortunately, borrowing costs are low and have fallen since the Covid-19 crisis began. Yields on Irish ten-year sovereign bonds had sunk to lows of between -0.1 and -0.4 per cent in the early part of the year, before Covid-19 enveloped markets. Rates began to climb in the second week of March. But the rise was stemmed by substantial European Central Bank (ECB) commitments. The ECB decided to make €1 trillion of additional asset purchases (7.3 per cent of Euro Area GDP) between now and end 2020 and to lift a cap on purchasing more than a third of a country's outstanding sovereign debt under the Pandemic Emergency Purchase Programme (PEPP). Since then, Irish yields have fallen back to -0.1 per cent.

Yet creditworthiness is not guaranteed, and risks of rising borrowing costs remain important for a small, open economy in a monetary union like Ireland. The gap between Irish and German yields widened following the outbreak of the pandemic (Figure 1.10). This spread indicates the relative riskiness (in terms of default)

attached to Irish government bonds by lenders. Ireland's yields remain highly favourable—and the risks should not be overstated—but the widening of the spread is a reminder of how risk reassessments are made frequently and rapidly. Market-implied assessments of default risks are also currently low. Using data on bond yields, Figure 1.11 maps the evolution of implied default risk for Government borrowing. Again, this highlights that the risks associated with Irish borrowing are low at present. Yet, we know from previous experience that market assessments of creditworthiness can change suddenly.

Figure 1.10: The State's borrowing costs remain at historical lows

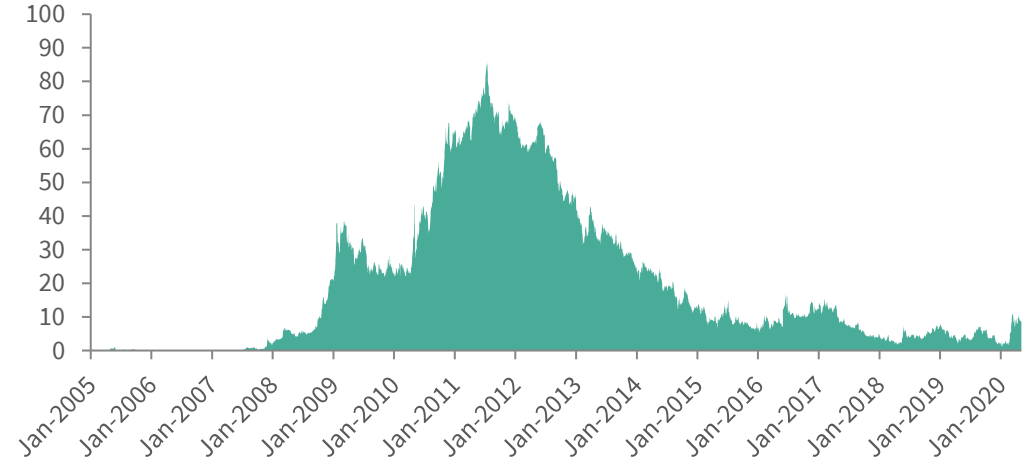
% yields (ten-year sovereign bonds)



Sources: Thomson Reuters Datastream; and Fiscal Council workings.

Figure 1.11: Implied probability of default has risen, but is far lower than before

% probability of default



Sources: Thomson Reuters Datastream; and Fiscal Council workings.
Note: The annual implied probability of default under these assumptions is $p = (r - r_f)/(1 + r - c)$, where r is yield on the bond, r_f is the yield on the German bond, and c is the recovery rate in the event of default. For an n-year bond, the total probability that this bond will never default is $(1 - p)^n$. For an n-year bond, the total probability that that bond will never default is $(1 - p)^n$. The probability of default before maturity (over a 10-year period) is then $1 - (1 - p)^n$. It assumes risk-neutral investors, no liquidity premium, a 50 per cent recovery rate in the event of a default and treats German bonds as risk free.

The budgetary supports will help both to alleviate the short-run impacts on the economy and to limit lasting damage. The analysis in Box B suggests that the €6½ billion of supports for healthcare and household incomes will offset some 2.3 percentage points of the decline in underlying domestic demand this year, for example. Yet, they will add some 2.2 percentage points to the deficit as a share of modified GNI*.

These supports should be largely temporary in nature. The need for enhanced income supports, business supports, and expanded healthcare resources are expected to unwind. This should happen as the health crisis fades and as the subsequent economic impacts subside. If this proves to be the case, then the impact on the deficit in 2020 will be large, but it could reverse quickly. This would leave less of a lasting adverse impact on the government debt trajectory.

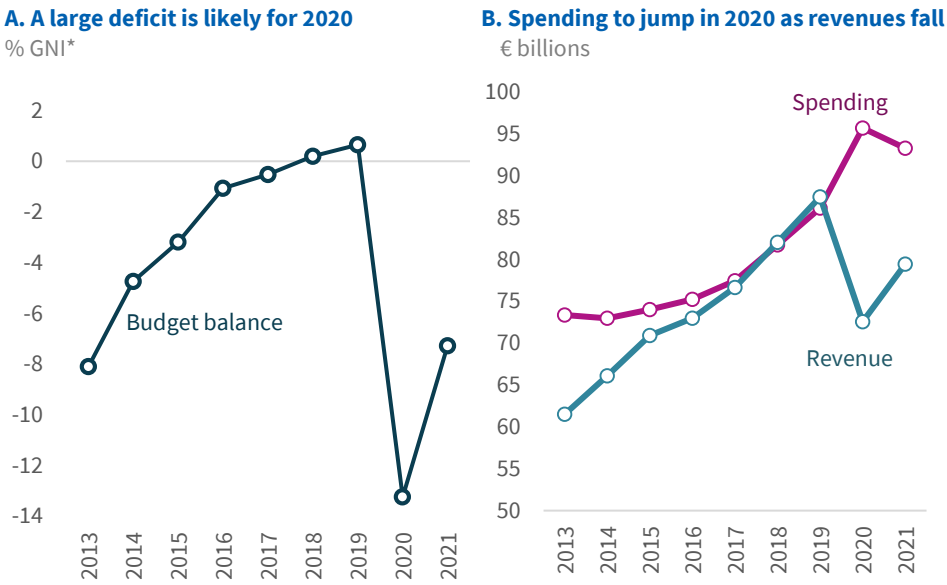
The Council assesses that the current fiscal policy is within the range of policies to support conducive to prudent economic and budgetary management. First, a large-scale response is needed to support demand and reduce the chance of permanent damage to individual and firm balance sheets and to preserve employment relationships, as well as to avoid social hardship. Second, the responses are expected to be largely temporary. Third, the Government's cost of borrowing is essentially zero. Fourth, strong cash resources are available, thanks to an effective debt management strategy in recent years. Fifth, the fiscal rules have built-in flexibility for exactly these types of situations (see Chapter 4).

Phasing out the economic supports will primarily depend on how long the health crisis persists. If the health crisis fades quickly, then supports can be withdrawn relatively swiftly. However, if the supports are withdrawn too soon, it could mean that the related economic crisis worsens and persists over a longer time, with greater risks of lasting damage. There is of course a risk that many of the supports will become more costly or more long-lasting than is assumed. Health workers employed on temporary contracts could be retained for longer; further or more costly procurement of essential medical equipment might be required; enhanced unemployment supports could—and are expected to—extend beyond 12 weeks; more job losses might occur; and business supports might bear larger losses than assumed.

If the fiscal supports associated with Covid-19 prove temporary—as is intended by the Government—then the deficit is forecast to reach 13.3 per cent of modified GNI* in 2020 before falling back to 7.3 per cent in 2021 (Figure 1.12). The *SPU 2020* forecasts show that the additional expenditure will cause non-interest spending to rise by 12 per cent in 2020 and revenue to fall by 17 per cent. However, the temporary nature of the crisis means that revenues are expected to bounce back by 9.5 per cent in 2021, while expenditure is expected to fall slightly by 2.5 per cent.

There are clear risks to these forecasts. As Chapter 3 notes, the official forecasts do not incorporate costs arising from the economic recovery plan or any extensions to supports or new policy measures, while revenues might also be worse than forecast.

Figure 1.12: Covid-19 will result in a sharp deficit in 2020



Sources: CSO; Department of Finance; and Fiscal Council workings.
Note: Figures exclude one-offs and are on a general government basis.

Ultimately, the Government will need to be cognisant of the budget constraints that will eventually bind it. The supports being provided in 2020, if required for further subsequent waves of the pandemic, coupled with further lockdowns and more lasting economic impacts, would be immensely costly. This would likely reduce the space for other budgetary objectives being met in future without additional revenue-raising measures or savings elsewhere. The scenarios we consider in this report suggest that a Severe scenario—with two further waves of the virus and two further lockdowns—could lead to debt ratios ending up stuck at higher levels unless taxes were raised or expenditure savings were made elsewhere.

Box B: Fiscal supports cushion the economic impact of Covid-19

Since the outbreak of Covid-19 in Ireland, the Government has introduced substantial budgetary supports. These are not a conventional fiscal stimulus; rather, they are primarily intended to sustain companies and workers while containment measures slow the transmission of the virus. The supports should help to ensure that businesses have resources to weather the containment period and to retain staff. This box looks at some of the key supports introduced and tries to model their impact on economic growth.

A large number of fiscal measures have been introduced

The two key measures that the Government introduced to respond to the Covid-19 shock are (1) an enhanced unemployment payment; and (2) a temporary wage subsidy for companies whose revenues are hit, but which opt to retain employees. Together they have an estimated fiscal cost of €4.5 billion. Importantly, this cost estimate may overstate the true policy cost, as standard unemployment benefits would likely have been paid to many recipients anyway as a result of the downturn. These income supports are particularly important to low-income and vulnerable households, with Beirne *et al.* (2020) noting that about one-third fewer families would have income losses beyond 20 per cent due to the supports.

Another key measure we consider is the increase in health spending, which will boost government consumption. This is primarily intended to improve the capacity of the health system, including by increasing staffing and paying for overtime costs. The estimated cost of these health measures is a further €2 billion.

There are a large number of additional government supports that we do not consider here (see Box F). These include a mix of loans, tax deferrals (for VAT and business rates), transfers, grants, and other government spending increases that have also been introduced but are relatively smaller in scale.

Table B.1 shows the main measures that we have modelled in our simulation.

Table B.1: Fiscal supports introduced

	Estimated cost €m
Pandemic Unemployment Payment + Temporary Wage Subsidy	4,500
Health spending	2,000
Extension to Fuel Allowance & Working Family Payment	75

Sources: Department of Finance; and Fiscal Council workings.
Note: We assume the payments are only made for twelve weeks in Q2 of 2020. The four-week extension to the Fuel Allowance and to the Working Family Payment eligibility is estimated to cost €70–80 million (Beirne *et al.*, 2020).

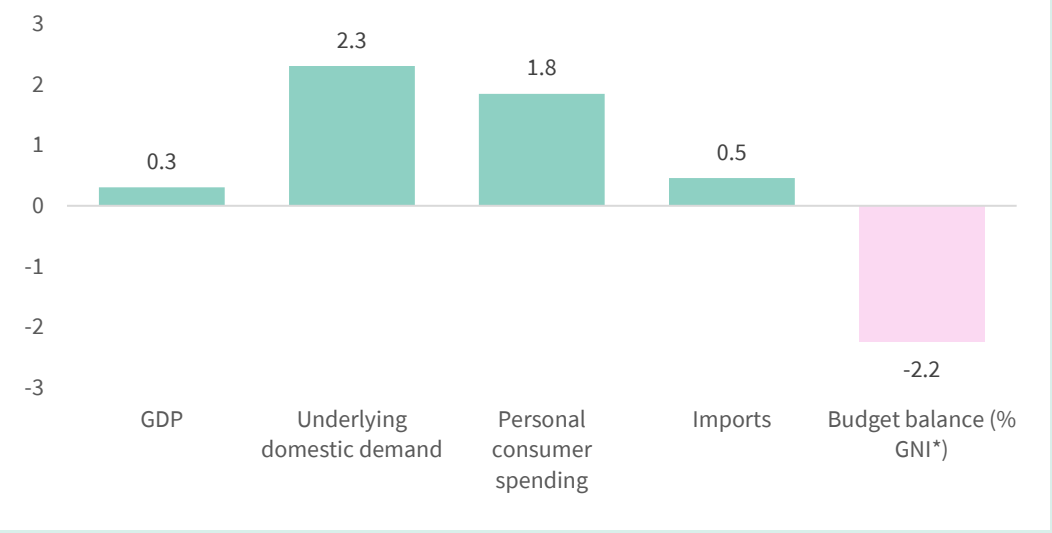
We use the Council's suite of forecasting models (Conroy and Casey, 2017) to estimate the gross impacts of the policy measures and to also allow for import leakages. Using these, we develop a counterfactual forecast where the income supports had not been provided. Comparing this counterfactual forecast with the baseline allows us to make an estimate of the impact that the supports are likely to have. Specifically, we use model estimates based on the historical relationship between consumer spending and incomes and based on the relationship between final demand and imports.

The comparison with a counterfactual scenario suggests that the measures introduced may have offset 2.3 percentage points of the decline in underlying domestic demand in 2020. This is primarily achieved by sustaining consumer spending through income supports and by raising government spending (Figure B.1). The impact on GDP is smaller, especially given the artificially high level of GDP due to distortions from multinational enterprises, but also given

the offset from higher imports. In terms of the fiscal impacts, we estimate that the general government balance will weaken by 2.2 percentage points of GNI* due to these supports.

Figure B.1: Fiscal supports boost underlying domestic demand but widen the deficit

% impact in volumes, unless otherwise stated



Sources: Fiscal Council workings.
Notes: Estimates of the impact of fiscal supports are calculated using the Council's suite of forecasting models (Conroy and Casey, 2017).

Given the exceptional nature of the downturn, these estimates are highly uncertain. Avoiding widespread collapse of firms in the business sector or the impact on vulnerable families is hard to assess. There are three further caveats worth noting:

First, the ultimate cost of the Pandemic Unemployment Payments and Temporary Wage Subsidy Scheme could be very different from the assumptions made here. The schemes could be availed of by more people or extended beyond twelve weeks. This would further boost underlying domestic demand, while worsening the government budget balance. Yet, this scenario would likely only occur in a situation where transmission of the virus and economic impacts were also more adverse. By contrast, the schemes might also end up costing less if the initial cost estimates prove to be too conservative.

Second, liquidity constraints will likely be significantly higher among the recipients of social transfers than those on average incomes. As a result, the elasticity of consumption to income may be higher than suggested by the historical relationship based on nationwide incomes. This would boost the impact on personal consumption spending relative to the estimate in Figure B.1.

Third, in cases where output is falling, unemployment is rising, and the policy rate is at the zero-lower bound, fiscal multipliers may be temporarily higher than usual. For example, Auerbach and Gorodnichenko (2012) estimate spending multipliers to be close to zero in US expansions and as high as 2 or 3 in recessions. This suggests that the fiscal supports might boost economic activity more than our estimates suggest, posing upside risks to the outlook. However, fiscal policy will not fully shield the dramatic shock posed by the crisis.

Phase 2: The fiscal stance for the recovery period

The second phase for the fiscal stance is the recovery period. This is the period over which the economy will eventually begin to recover from the immediate adverse impacts of the pandemic and necessary containment measures.

This second phase will see output well below its potential though growth could initially be quite fast as sectors reopen. That is, unemployment will still be higher than it was pre-crisis (the Central scenario projects an unemployment rate of 9.1 per cent in Q4 2021), there will be lots of unused resources for production and productivity will be lower than usual as firms adapt. Some sectors, such as tourism and food services, will fare worse than others in terms of the pace of their recovery. Some job losses will be permanent, and some retraining of workers will be necessary if the economy is to recover much of its lost potential.

On the fiscal side, the Government is forecasting that emergency supports introduced for 2020 will have fully unwound by 2021. The *SPU 2020* forecasts imply that the 2021 deficit will be half what it was in 2020 (falling to €13.8 billion or 7.3 per cent of GNI*). The main fiscal overhang from the pandemic would therefore be higher unemployment supports and significantly weaker revenues. The debt burden would be much higher. If fiscal stimulus were put in place, growth would be stronger but the deficit larger.

A fiscal stimulus would be appropriate and should be carefully designed

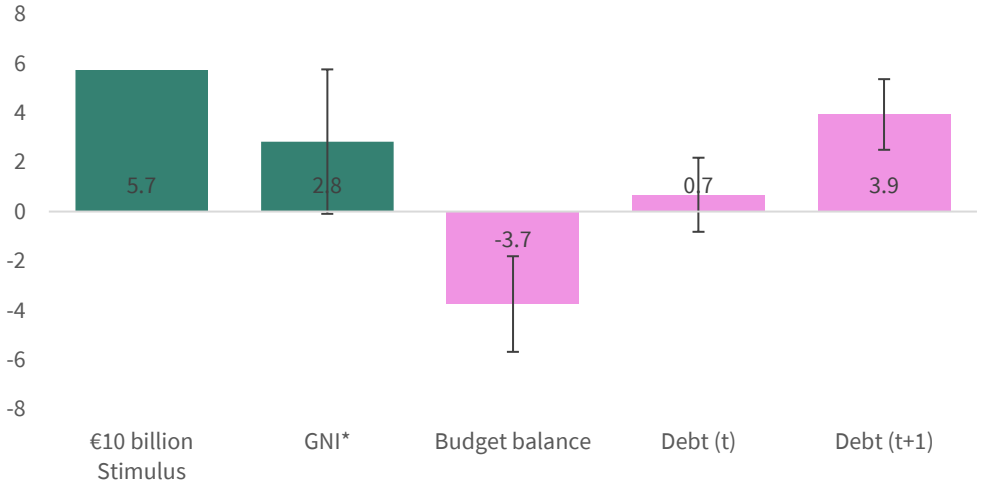
Given the large shortfall in demand that will remain and high cyclical unemployment, it would be appropriate to undertake fiscal stimulus during Phase 2 of the recovery. A stimulus would represent the appropriate countercyclical response provided that creditworthiness is maintained. It should be temporary, targeted and conditioned on the likely state of the economy. Stimulus will be most effective if guided by the best available knowledge of fiscal multipliers. It should be phased appropriately over time so that demand can adjust gradually. The Government is currently considering a stimulus or "economic recovery plan" to counteract the economic fallout from Covid-19.

To give a sense of the impacts of a fiscal stimulus, Figure 1.13 shows the typical impact of an illustrative fiscal stimulus worth €10 billion or 5.7 per cent of modified

GNI* for 2020. This indicative amount is not a recommendation from the Council and any package will need to be designed in light of the prevailing circumstances. Assuming the stimulus is temporary, it would be estimated to boost nominal modified GNI* by 2.8 percentage points. The deficit and debt ratio would be expected to rise by 3.7 percentage points and 3.9 percentage points, respectively.[5]

Figure 1.13: A fiscal stimulus could boost growth in the short term

% GNI*, 2020 impact



Sources: Fiscal Council workings.
Notes: The stimulus of €10 billion is assumed to unwind in one year. The ratios are based on nominal GNI* for 2020. An overall deficit multiplier of 0.5 is the central estimate, while error bars examine multipliers ranging from zero to one.

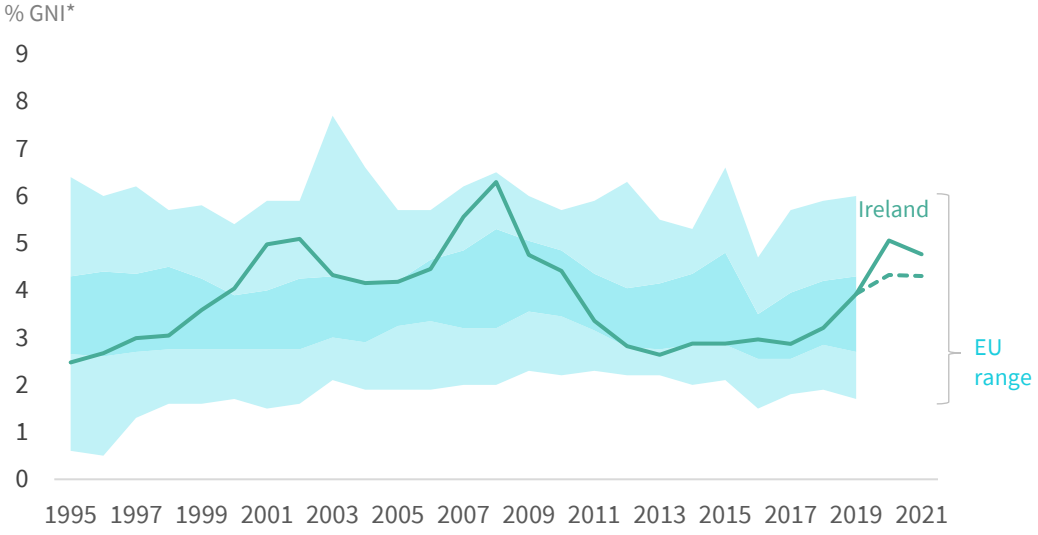
Withdrawing the stimulus gradually would also allow demand to adjust in a gradual way. One example would be where the stimulus was phased over the period 2020–2022 (with €5 billion in 2020, €3 billion in 2021, and €2 billion in 2022). That would be estimated to leave the debt ratio about 3.5 percentage points higher over the medium term.

A key question is the nature of the stimulus and the wider economic circumstances. Recent work for Ireland (Ivory, Casey and Conroy, 2020) using a variety of approaches suggests that fiscal policy impacts depend on the type of fiscal

[5] This estimated impact assumes a standard relationship between growth and budgetary measures (the "fiscal multiplier") whereby every euro of tax cuts or spending increases results in a 50 cent boost to total economic activity, given leakage to imports and behavioural responses. This relatively small impact is common for smaller, more open economies like Ireland's. While there must be significant error bands around the 0.5 estimate, the Council is reasonably confident that the overall deficit multiplier for Ireland is positive though small. From its experience with budgetary projections, the Department of Finance has also found it useful to assume an overall deficit multiplier in the region of 0.5. For a useful exploration of the multipliers literature in an Irish context, see Box 4.1, *Fiscal Assessment Report, October 2011* and Box G of the *Fiscal Assessment Report, April 2013*.

intervention. Public investment measures are seen to have a greater impact on activity than other types of government spending. Yet the impacts are wide-ranging and are not found to be significantly different from zero over the long run. This supports previous findings for Ireland and other countries (Varthalitis, 2019; Hall, 2010; Bénétrix and Lane, 2009; Giordano *et al.*, 2007). In terms of the wider economic circumstances, the literature tends to suggest that fiscal multipliers (as in, the impacts of a stimulus) are stronger in downturns, in currency unions, and when debt is low (Ilzetzki, Mendoza and Vegh, 2012; Corsetti *et al.*, 2012; Auerbach and Gorodnichenko, 2012). A question for the current situation is how effective fiscal stimulus can be for sectors where demand is constrained by social distancing measures. Rather than stimulating demand, the best that stimulus can hope to yield is stronger demand in other parts of the economy, while fiscal policy partly sustains incomes in those sectors worst affected.

Figure 1.14: Public investment has risen since being cut in the financial crisis



Sources: Fiscal Council workings.
Notes: The range is for all EU countries. Inner band is the middle 50 per cent of countries. Outer band is the full (max to min) range. The dashed green line for Ireland represents the ratio of public investment to modified GNI* based on the Budget 2020 forecasts for nominal GNI* (nominal investment amounts are unchanged).

Public investment can be a key tool in fiscal stimulus given the often high multiplier and the fact that it can contribute to productivity in the future. It can be particularly useful to make up for shortfalls in construction demand and jobs. Ireland's rate of public investment has risen to more normal levels by international and historical standards in recent years and was equivalent to 3.9 per cent of modified GNI* in 2019 (Figure 1.14). It is projected to rise further in line with the National Development Plan such that Ireland would soon have one of the largest public

investment rates among EU countries. Past Irish experience has shown public investment to be particularly procyclical — rising in good times and falling in downturns when government intervention is most needed. Public investment spending fell by 61 per cent between 2007 and 2012, whereas other government spending was broadly unchanged over the same period.[6] Given the relatively stronger fiscal multipliers attached to public investment, a repeat of this pattern would be expected to worsen the lasting damages of the current crisis.

Phase 3: Fiscal stance for the new normal and the longer term

Once the recovery has progressed and a new normal path has been reached, the fiscal stance will need to move from supporting the economy to ensuring medium-term sustainability and rebuilding the public finances. The requirements will depend on the impact of lower revenues on the budget balance, the level of the debt to GNI* ratio, growth and interest rates. These are very uncertain and depend on the path the economy takes in the coming years, including the use of stimulus measures.

Figure 1.15 considers debt scenarios based on the three macroeconomic and fiscal scenarios developed in this report (Figure 1.3 and Boxes D and I). It highlights the relative vulnerability of the debt ratio to health and growth outcomes.

- A **Mild scenario** could see debt ratios fall steadily in later years to levels nearer to 90 per cent of modified GNI* from a peak of around 119 per cent. The deficit would fall close to 3½ per cent next year and gradually close in subsequent years. The cost of servicing debt (interest burden as a percentage of GNI*) would be relatively low at about 1½ per cent. Annual average funding requirements would be very manageable at roughly €16 billion per annum for 2022–2025.

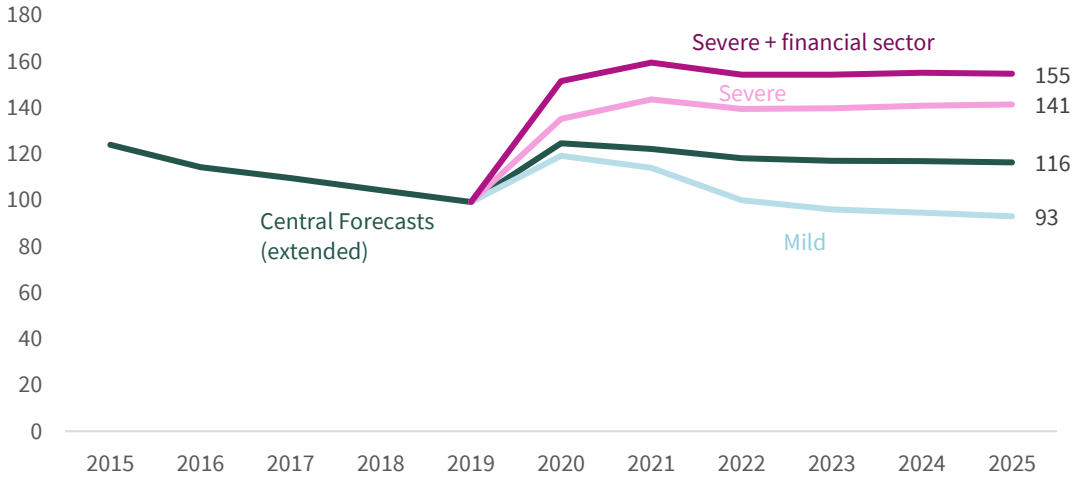
- A **Central scenario**, with a steep initial downturn and limited recovery would see the debt-to-GNI* ratio peak at 125 per cent in 2020. By 2022, the debt ratio would likely be below 120 per cent and steadily declining.

[6] Other spending here refers to total general government expenditure less interest, unemployment-related spending (COFOG: GF1005); and public investment (gross fixed capital formation). This measure rose by 1.8 per cent between 2007 and 2012.

- A **Severe scenario**, with further waves of the pandemic leading to further lockdowns in Q4 2020 and Q2 2021, could see debt ratios climb to over 140 per cent in 2021 and flattening at that level. If a financial sector recapitalisation were required—for illustrative reasons set at an arbitrary 10 per cent of the value of assets of domestic banks (the Irish headquartered group)—the debt ratio could rise to almost 160 per cent. Such an outcome could be triggered by loan losses resulting from business failures, for example, and if the government were to intervene. It is possible that other sectors could also seek supports, rather than just the banking sector. Fiscal stimulus would also further add to government debt.

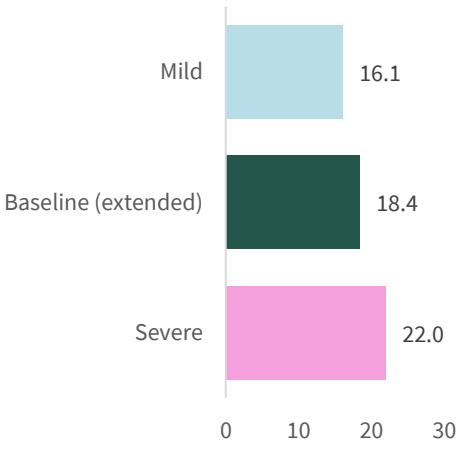
Figure 1.15: Debt sustainability depends on recovery scenarios

A. Debt ratios % GNI*



B. Budget balance % GNI* (excl. one-offs)

C. Average annual funding requirements (€bn, 2022–2025)



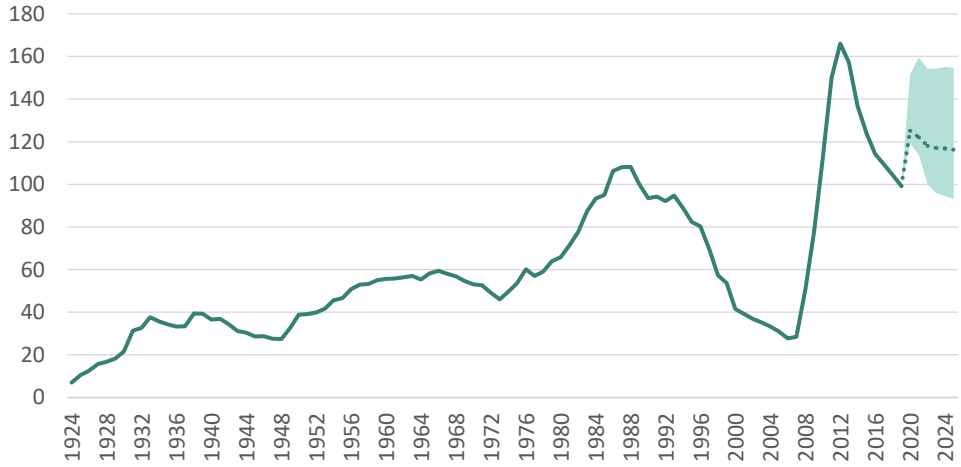
Sources: CSO; Department of Finance; and Fiscal Council workings.
Note: Scenarios are consistent with the macroeconomic and fiscal assumptions set out in Boxes D and I. The Severe + scenario includes a financial sector shock that assumes a recapitalisation of domestic banks equivalent to 10 per cent of the value of their assets (€27.8 billion) in 2021.

The Severe scenarios would see Ireland's government debt burden stuck at very high levels in the absence of any fiscal adjustment. The deficit could remain as large as 4 per cent by 2025. While debt servicing costs might still be lower than at the time of the financial crisis, annual funding requirements could be somewhat large at €20–25 billion on average.[7]

If the debt ratio climbs to very high levels and stabilises, this would be sustainable in a narrow sense (it would not lead to ever-rising debt ratios). These levels would also be consistent with the record debt ratios that Ireland experienced after the financial crisis (Figure 1.16).

Figure 1.16: Government debt could return to near historic highs

% GNI*, general government gross debt



Sources: CSO; FitzGerald and Kenny (2018); Department of Finance; and Fiscal Council workings.
Note: Modified GNI* is linked to GNI for the historical period. The range depicts the debt ratios consistent with the Council's Mild and Severe scenarios (including potential costs of recapitalising the banking system).

However, a higher debt position leaves Ireland more vulnerable to further adverse risks in future. In particular, the path of the debt-to-GNI* ratio would be far more sensitive than in the recent past to developments in interest rates and growth. With interest rates expected to be well below the Irish rate of growth, this creates a strong downward force on the debt burden. However, if this were to reverse through low growth and higher interests, the debt burden could be on a very sharp upward trend that would require a very large primary balance to stabilise.

[7] Note, we assume marginal ten-year borrowing costs of close to 1 per cent in all scenarios. While there are upside risks to this assumption for more severe scenarios, more accommodative monetary policy would also be possible in those scenarios, which would be expected to drive down interest rates.

There are several risks surrounding the economic outlook already known, including a harder-than-assumed Brexit or larger-than-expected reductions in annual corporation tax receipts. Higher levels of debt increase the likelihood that debt can rise inexorably without much harsher measures being required to reign it in. This includes debt defaults and sudden loss of funding, with deficits then having to be closed rapidly to sustain the funding of public services and supports.

Future fiscal adjustment

Given the very high level of debt and lower revenues, some fiscal adjustment is likely to be required in Phase 3 so that the debt-to-GNI* ratio is put on a downward path towards safer levels. While the scale of the adjustment required is uncertain, it should be possible to avoid a return to severe austerity, while at the same time bringing debt ratios to levels below 100 per cent in the coming decade. An increase in interest rates or a poor growth outcome would make this more challenging.

The need to undertake some fiscal adjustment implies that any expansion of public services or cut in taxes would need to be financed by savings elsewhere, by higher public sector efficiency or by tax increases.

One way to assess the scale of the challenges ahead is to consider what fiscal adjustment would be needed to get debt on a steady downward path again. *SPU 2019* planned for a primary surplus of 2.6 per cent in 2020 and for an annual pace of debt ratio reduction of almost 3 percentage points of GNI* per annum over the period 2020–2023. Table 1.2 explores what would happen if adjustments were made to gradually return to that pace of reduction in debt ratios by 2025. It shows three strategies: (1) the Government does nothing — that is, it maintains taxes and spending in real terms; (2) it adjusts spending or taxes to achieve a pace of debt ratio reduction of 3 percentage points by 2025; and (3) it introduces a €10 billion stimulus package over 2020 to 2022 before adjusting spending and taxes to achieve reductions in the debt ratio of 3 percentage points by 2025. These illustrative adjustments are phased in over three years (2023–2025). Both the scale of the adjustment and the paths to achieve this are uncertain.

- In a "**policy as usual**" strategy, the pace of debt reduction would be slow in the baseline scenario, averaging 0.6 percentage points per annum. A Mild scenario would put it at 2.3 percentage points, but a Severe scenario would see the debt ratio rising slightly at an average pace of about 0.6 percentage points per annum.

- In an "**accelerate debt reduction**" strategy, adjustments to future tax and spending plans of between €2 billion to €4.7 billion would have to be made in the years 2023–2025 to get debt ratios falling at a pace of 3 percentage points of GNI* by 2025.

- In a "**stimulus + accelerate debt reduction**" strategy, the Government first introduces a three-year stimulus of €10 billion (€3.5 billion in 2020; €5 billion in 2021; and €1.5 billion in 2022). This is used to reduce spare capacity in the economy and would return real GNI* to its 2019 level by 2022 in a baseline scenario. After the stimulus ends in 2022, the Government accelerates debt reduction. This would require adjustments of between €2 billion and €4.7 billion to tax and spending plans per annum in the later period (2023–2025). These adjustments are similar to those in the "accelerate debt reduction" strategy as they assume the stimulus would have been phased out by 2023 and so the fiscal balance is in a similar position.[8] EU supports like those proposed by France and Germany may allow for a stimulus that is funded with jointly issued debt, such that the stimulus might carry less cost to the Irish government.

[8] Given the €1 billion of stimulus in 2022, this implies a slightly greater tightening of the fiscal stance in 2023 compared with the no stimulus case.

Table 1.2: A stimulus is warranted but some fiscal adjustments would be needed in Phase 3 to put government debt on a steady downward path

% GNI* unless stated

		Policy as usual			Accelerate debt reduction			Stimulus + accelerate debt reduction		
		2023	2024	2025	2023	2024	2025	2023*	2024	2025
Mild	Debt ratio	95.9	94.6	93.0	95.7	93.5	90.5	98.8	96.6	93.6
	change (pp)	-4.1	-1.3	-1.6	-4.3	-2.2	-3.0	-4.2	-2.2	-3.0
	Primary balance	0.0	0.1	0.1	0.7	1.3	1.9	0.6	1.3	1.8
	Adjustment €bn	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
Central	Debt ratio	117.0	116.8	116.3	116.8	115.2	112.2	120.3	118.7	115.7
	change (pp)	-1.0	-0.2	-0.6	-1.3	-1.5	-3.0	-0.9	-1.6	-3.0
	Primary balance	-1.8	-1.5	-1.3	-0.7	0.8	1.9	-0.7	0.7	1.8
	Adjustment €bn	0.0	0.0	0.0	3.2	3.2	3.2	3.2	3.2	3.2
Severe	Debt ratio	139.7	140.9	141.3	139.6	139.0	136.0	143.4	142.7	139.7
	change (pp)	0.3	1.2	0.4	0.2	-0.6	-3.0	0.6	-0.7	-3.0
	Primary balance	-3.4	-3.3	-2.2	-1.7	0.1	2.7	-1.7	0.0	2.7
	Adjustment €bn	0.0	0.0	0.0	4.7	4.7	4.7	4.7	4.7	4.7

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

Notes: Estimates are derived within the Council's Fiscal Feedback's Model. "Change" refers to the annual change in gross debt-to-GNI* ratios in percentage points. The primary balance is the budget balance as a percentage of modified GNI* excluding interest costs. The "adjustments" are changes to planned spending increases. The planned spending increases are assumed to be of the order of €2.5 billion per annum in line with a "Stand-Still" basis — in other words, where today's level of public services and benefits are maintained in real terms over the medium term (allowing for price and wage increases and demographic pressures). * In 2023, the adjustment for the "stimulus + accelerate debt reduction" strategy would be €1.5 billion higher than shown here if the adjustment were taken to include the unwinding of the stimulus in 2022.

The scenarios are illustrative, but they point to the types of challenges that could be faced in later years.

A need for severe austerity is unlikely in these scenarios. The scenarios suggest tax and spending plans might have to be adjusted by some €6 billion to €14 billion to put debt on a steady downward path in later years (2023–2025).[9] Even in a Severe scenario, this is less than half the €30 billion of consolidation measures introduced after the financial crisis and should be easier to achieve (Figure 1.17). It would be

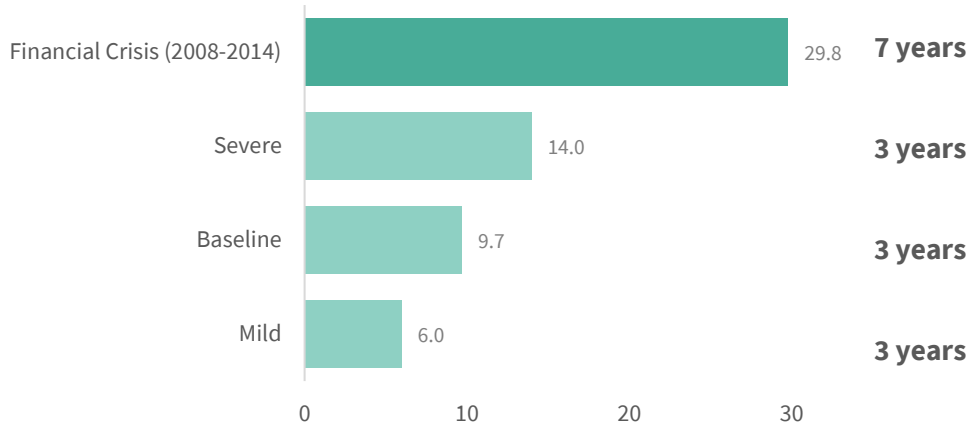
[9] There are a number of factors that could influence the scale of consolidation needs, including economic and fiscal outturns. The illustrative example assume that public sector wages and welfare changes rise in line with general wages during Phases 1 and 2. Earlier measures to control on-going spending or to raise revenues could reduce future adjustment needs somewhat.

conducted at a time when the economy is growing and is close to pre-crisis levels of activity, unlike the adjustments that took place after the financial crisis.

These illustrative adjustments are typically larger than the minimum that could be required under the fiscal rules. The rules would typically require adjustments of about 0.5 percentage points of GDP per annum. That would equate to about €2 billion in GDP terms or about €1 billion if expressed relative to GNI* in line with the Principles-Based Approach advocated by the Council (Chapter 4). However, these smaller adjustments would delay the return of debt to safer levels and prolong the fiscal adjustment period.[10]

Figure 1.17: Consolidation measures after the financial crisis were far worse than might be required down the line

€ billions



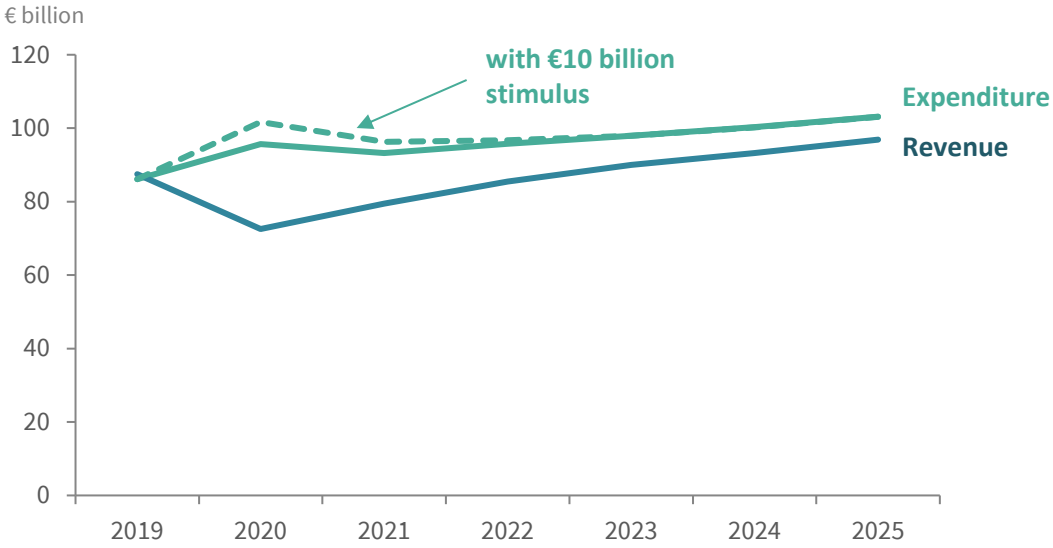
Sources: NTMA; Department of Finance; and Fiscal Council workings.
Note: Unlike the consolidation amounts during the financial crisis, the amounts set out for scenarios are relative to a situation where public sector wages and welfare payments are assumed to rise in line with general wages. The adjustments also take place over a shorter time period (three years as compared to seven years). And they take place at a stage when the economy is assumed to be growing relatively fast again.

The origins of the need for adjustment can be illustrated by looking at the gap between spending and revenue that is likely to persist with or without a stimulus package. Figure 1.18 shows how a large persistent gap is projected to open up in 2020 in the absence of policy action with revenue falling by €15 billion and spending rising by €10 billion. This narrows only gradually in a "policy as usual" scenario, such that the gap between spending and revenue, the deficit, is still over €6 billion by

[10] The EU could also require greater progress to be made than this minimum standard.

2025 in the central case. To close this gap, spending would need to adjust downwards, or taxes would need to increase.

Figure 1.18: The gap between ongoing spending and revenue is likely to be wide with or without a stimulus



Sources: CSO; Department of Finance; and Fiscal Council workings.
Note: The figure shows general government spending and revenue under the Central scenario, and an illustrative stimulus assumed at €10 billion and phased over three years (as in Table 1.2).

Another way to understand the intuition behind the debt dynamics is to look at the budget balance (excluding interest) that would be required just to stabilise debt ratios. For the same nominal growth rate, the higher levels of debt expected for 2024 and 2025 would imply a need for a primary balance 0.5 percentage points higher than pre-Covid-19 just to stabilise debt ratios. If marginal interest rates were to rise by 1 percentage point relative to our assumptions, this would require the primary balance to be a further 0.5 percentage points higher over the medium term.

Achieving the fiscal adjustment that might be required

The need to undertake fiscal adjustment should inform the choices of an incoming government. While temporary stimulus would be justified in Phase 2 of the recovery, permanent increases in spending or cuts in taxation require durable financing. On-going adjustment will require resources to be found each year during this period, so choices will need to be made about how to achieve this. In addition, lower medium-term growth and population ageing will mean that there is less fiscal space created as the economy grows than in recent years. A downward adjustment in corporation tax receipts could add to these additional pressures.

The draft document between Fianna Fáil and Fine Gael to facilitate negotiations with other parties for forming a new government includes important social objectives such as in the areas of health, housing and climate change. Implementing these policies remains feasible, but would require additional reductions in other spending areas or tax increases.

The adjustments that might be required could be achieved through different combinations of spending reductions and tax increases. To give a sense of what an annual adjustment of €2 billion could mean, freezing public sector pay would generate about €0.5 billion each year.[11] A 1 per cent reduction in non-welfare spending would equate to about €0.5 billion. Maintaining public investment at 2019 levels rather than increasing it as planned would lower spending by €2 billion relative to current plans. Not indexing income tax bands would raise about €0.5 billion each year. An increase in both the 20 per cent and 40 per cent income tax rates of 1 percentage point would raise around €1 billion euros. Doubling the Carbon Tax from €26 per tonne would raise about €0.5 billion in a full year.[12] This list is not exhaustive and is intended only to give a sense of the scale of changes in policy that would be required during the illustrative fiscal adjustment. The Council takes no view on the merits of specific tax and spending measures.

While uncertainty is high, it will be helpful to keep all options on the table, given the difficult economic and political choices that will be needed.

[11] Note that a different figure for the public sector wage freeze was provided in an earlier version of this report.

[12] Various estimates of potential revenue policy change impacts are outlined in the "Ready Reckoner" produced by Revenue. It is available at: https://www.revenue.ie/en/corporate/documents/statistics/ready-reckoner.pdf

1.5 The value of a robust fiscal framework

Navigating through the three phases identified by the Council will require careful monitoring and prudent management of the public finances. The correct fiscal stance will depend on how the recovery ultimately evolves. Both the EU fiscal rules and the Council's "Principles-Based Approach" can serve as a helpful guide for budgetary policy in future years.

The next Government should reinforce Ireland's fiscal framework. A robust framework of rules and procedures based on a principles-based approach to managing the public finances prudently would ensure that public services and supports are funded sustainably. This would help to avoid the mistakes of the past when Ireland had to cut spending and raise taxes as conditions deteriorated. Indeed, one of the few bright spots in the current crisis is that the budget balance was in a reasonable shape to begin with so that pursuing a supportive fiscal policy early on and having the possibility of a stimulus later is now more possible than it was after the financial crisis. In addition, sound fiscal frameworks can contribute to maintaining creditworthiness and credibility with markets, reducing the risks associated with high debt.

Three reforms to the fiscal framework would help to chart a prudent path for managing the public finances in coming years (these are outlined in previous work by the Council, including the *November 2019 Fiscal Assessment Report*; Barnes and Casey, 2019; and Casey *et al.*, 2018).

Reform 1: Meaningful debt ratio targets

Debt targets, in principle, are a good idea to guide policy, particularly when the debt ratio is very high. They offer transparent benchmarks for assessing sound budgetary policy over the medium term. A good debt target would have four features. It should (1) be stated as a percentage of modified GNI*; (2) have clear timeframes so that performance can be assessed; (3) be set as a steady-state target; and (4) be lower than the conventional 60 per cent ceiling that is set for EU Member States to reflect Ireland's more volatile and open economy.

Reform 2: Save temporary receipts

Using temporary revenues such as corporation tax or an economic upswing to fund long-lasting spending increases carries risks. Temporary revenues may disappear so

that government services and supports suddenly lack funding and large borrowing is required. Potentially, this can happen very suddenly.

The Council has argued for use of two tools to mitigate these risks. The Rainy Day Fund can be redesigned to operate in a countercyclical manner. It should not be capped nor should amounts allocated be pre-determined as this undermines countercyclical objectives. And its scope to be used in a downturn should be clarified in the context of the EU fiscal rules through greater engagement with the European Commission.

Reform 3: Guide policy with sustainable growth rates

A sound way to guide budgetary policy over the medium term, when the budget is in balance and the economy is in its steady state, is to anchor net policy spending growth to a sustainable growth rate.[13] This can be achieved by using alternative estimates of potential output growth like those developed by the Department of Finance and the Fiscal Council as an anchor for setting spending limits. Spending ceilings can be framed within these upper limits. If additional spending is desirable beyond such limits, then this can be funded sustainably with additional revenue-raising measures. If coupled with realistic forecasts for spending (taking account of bottom-up spending pressures from demographics and inflation), this approach would substantially reinforce Irish budgetary policy.

[13] Net policy spending examines spending growth net of tax measures and represents a good measure against which to assess the sustainability of fiscal policy. The measure is outlined in Box A, November 2018 Fiscal Assessment Report. It is total general government expenditure less interest costs, one-off expenditure items, and the estimated costs associated with cyclical unemployment. It also takes account of the impact of discretionary revenue measures (for example, net revenue-raising measures reduce the measured growth rate).

Chapter 2

Endorsement and Assessment of the Macroeconomic Forecasts

2. Endorsement and Assessment of the Macroeconomic Forecasts

Key messages

- After a period of consistently strong economic growth in Ireland lasting over six years, there has been a very sharp economic downturn due to the Covid-19 pandemic and resulting containment measures. This has already caused an unprecedented loss of employment and activity beginning in March 2020, leading to a broad unemployment rate (including Pandemic Unemployment Payment recipients) of more than 28 per cent in April.

- In the recent Stability Programme Update (*SPU 2020*), the Department of Finance's forecasts imply a fall in real national income (GNI*) of 16 per cent in 2020, followed by a partial recovery in 2021. This is a more severe decline than *SPU 2020* forecasts for gross domestic product or gross national product. The Department's forecasts imply that a full recovery to the pre-crisis level will not take place until 2022. *SPU 2020* forecasts one year ahead, unlike the normal five-year horizon. The Council endorsed the *SPU 2020* macroeconomic forecasts as being within an endorseable range, noting the wide range of outcomes that are possible.

- In this *Fiscal Assessment Report*, the Council sets out three scenarios for the Irish economy to 2025. A Central scenario is based on the same assumptions as *SPU 2020*, where scarring effects on firms and workers slow the path to recovery. A Mild scenario assumes a faster recovery following a more favourable suppression of Covid-19. The Severe scenario assumes new lockdowns are required due to further waves of Covid-19. Each of these scenarios results in permanent output losses to the Irish economy, and while not exhaustive, they illustrate a wide range of outcomes is possible given the uncertainty caused by Covid-19.

- This chapter further analyses recent high-frequency indicators of credit and debit card spending and retail sales, and notes possible upside risks to personal consumption compared to *SPU 2020* forecasts. However, risks are tilted to the downside, including a potential Hard Brexit in 2021 and disruptions to global trade.

2.1 Introduction

The Covid-19 pandemic and required policy measures have led to a very sharp economic downturn and major shock to many sectors of the economy. From an outlook at the start of the year for steady growth, low unemployment, and overheating risks, the situation has changed very abruptly and continues to evolve rapidly. With citizens in Ireland and its trading partners locked down to contain the spread of the virus, there has been an exceptionally sharp and deep slowdown in economic activity and over a quarter of the workforce is currently inactive.

In recognition of the challenges faced by Member States, the European Commission granted temporary flexibility and required that Stability Programme Updates only forecast current-year outcomes, with supply-side variables also not required in the publication.[14] The Department of Finance has nonetheless published a broad set of forecasts for both 2020 and 2021 in *SPU 2020*, which is welcome. In future, it will be important to return to the normal practice of forecasting five years ahead. The *SPU 2020* macroeconomic forecasts were endorsed by the Council in early April. The Council recognises the wide range of possible short-term outcomes, and the forecasts have also been noted by the Department as heavily contingent on core assumptions, particularly in relation to the duration of the Covid-19 disruption.

Given the high uncertainty and wide range of possible outcomes, the primary focus in this chapter is on our scenario analysis covering 2020–2025. While health and economic outcomes could follow very different paths, the scenarios provide a basis for understanding the economic and budgetary position. The Central scenario uses the same assumptions as the *SPU 2020* macroeconomic forecasts of a managed de-containment and extends this to 2025. A Mild scenario illustrates possible outcomes of a swifter improvement in health and economic conditions, while a Severe scenario traces out the impact of worse public health outcomes that would require further lockdowns in the autumn.

The chapter also looks at forecasting GNI*, which provides a better picture of the underlying economy in Ireland than the widely used gross domestic product (GDP) and gross national product (GNP), which are distorted by multinational activities.

[14] While *SPU 2020* did not include supply-side estimates, see Chapter 1 for the Council's estimates based on domestic measures of economic activity, which seem to be giving plausible results.

2.2 Endorsement of *Budget 2020* Forecasts

The Council's most recent endorsement exercise of the Department's macroeconomic forecasts was undertaken in April 2020 (see Appendix A for the endorsement timeline details).[15] The Department's provisional macroeconomic forecasts were completed on 6th April amidst the powerful and rapid economic shock due to the Covid-19 pandemic.

The short-term macroeconomic forecasts produced by the Department, and contained in *SPU 2020* for 2020 and 2021, were judged as being within an endorseable range, taking into account the methodology and plausibility of the judgments made. The Council also noted the very high degree of uncertainty regarding the spread, containment measures and global impacts of the pandemic.

The endorsement process entails three aspects: the appropriateness of the methodology used; the pattern of recent forecast errors; and comparisons with the Council's benchmark projections and other forecasts.

Methodology

The Council is satisfied that the Department's approach to macroeconomic forecasting broadly conforms to that of other forecasting agencies both in the general approach and with respect to how Covid-19 impacts have been modelled.

Given the scale and unusual nature of the immediate shock to the economy due to Covid-19, the standard model-based approach to forecasting was used only to construct a counterfactual starting point for what would have happened in the absence of Covid-19. The estimated impacts of the Covid-19 and Brexit shocks were then subtracted from this counterfactual to generate the *SPU 2020* projections.

The Covid-19 impacts were estimated by primarily using judgement for the impacts of confinement restrictions on activity in granular expenditure components of gross domestic product, along similar lines to the approach taken in Keogh-Brown *et al.* (2010). As a cross-check, the Department carried out a similar approach applied to

[15] The statutory function is detailed in Fiscal Council (2013) and Fiscal Council (2014a). Benchmark projections prepared by the Secretariat form a key part of the endorsement process. An important input into the preparation of the benchmark projections involves rounds of discussions with other external forecasters. Due to Covid-19 restrictions, and the rapidly changing nature of the impacts of the pandemic on the economy, these discussion rounds did not take place.

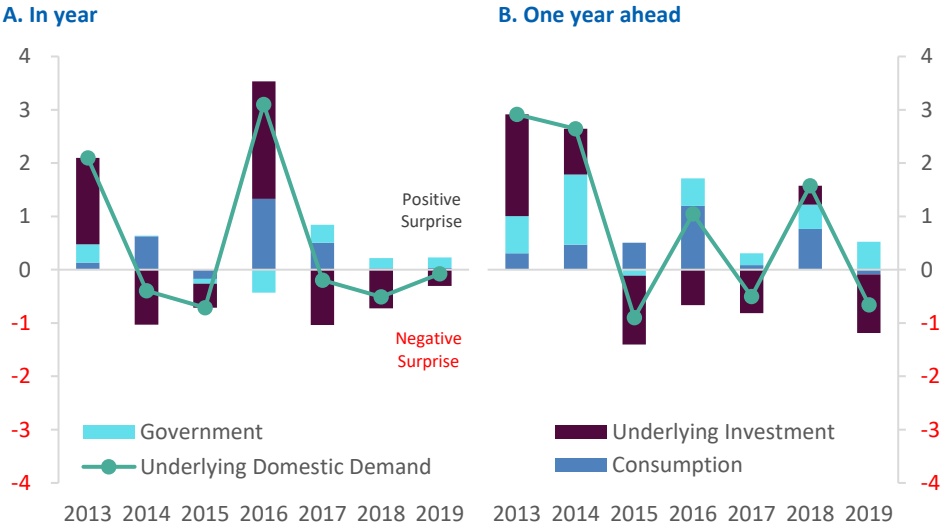
sector output and calibrations based on the COSMO structural model of the Irish economy (Bergin *et al.*, 2017); this analysis indicated a severe contraction in 2020 especially in non-traded sectors with a fall of over 20 per cent in 2020. Given the unprecedented nature of the shock, assessing likely impacts based on differences in restrictions and the relative size of sectors has been the main approach used by forecasters.

Pattern of Recent Forecast Errors

Looking back at forecast errors over recent years usually provides some useful context about current forecasts. Forecast errors for underlying domestic demand have generally been small since 2013, as shown in Figure 2.1, though there may be some positive bias in one-year ahead forecasts for personal and government consumption. However, as the Covid-19 shock is a major break with recent economic behaviour, this pattern of errors is less informative about likely forecast errors in 2020 and 2021.

Figure 2.1: Underlying domestic demand forecast errors

Percentage points



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

Comparison with Other Projections

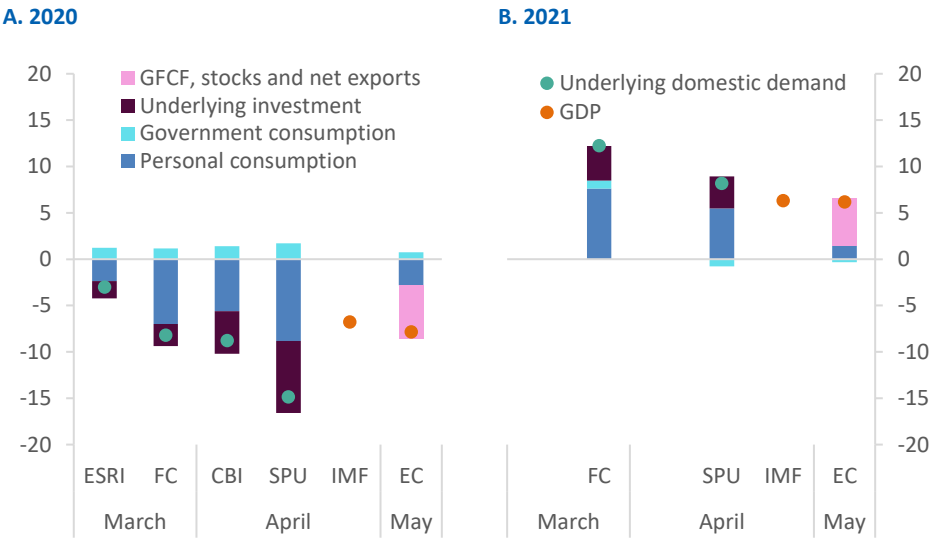
Comparison across forecasts can be a useful way of assessing their robustness. However, the speed of the Covid-19 crisis makes this less informative as forecasts heavily reflect the information available when they were made, rather than the differences in the underlying approach. Nevertheless, it can provide some insight about economic analysis of this unprecedented event. The latest forecasts generally factor in more recently available information. Recent forecasts for the Irish economy

were published in March, April, and May, in a period of very rapid change in circumstances both globally and specifically in Ireland.

Figure 2.2 compares recent short-term forecasts for economic growth in 2020 (panel A) and 2021 (panel B, where available). All forecasts compared here expect negative growth in underlying domestic demand and GDP in 2020, with personal consumption and underlying investment contracting and with higher government consumption offsetting this fall somewhat. *SPU 2020* forecasts a weaker outcome than other official forecasts for 2020, particularly for investment. While *SPU* 2020 was based on broadly similar assumptions about Covid-19, the projections put a strong emphasis on scarring effects from the initial shock. Forecasts for Ireland and many other countries made by the European Commission in May were relatively positive compared to other forecast exercises at that time.

Figure 2.2: Recent forecasts of economic growth

Percentage-point contributions and year-on-year percentage change in volumes



Sources: Economic and Social Research Institute (ESRI), *Quarterly Economic Commentary, Spring 2020*; Central Bank of Ireland (CBI), *Quarterly Bulletin No 2 2020*; Department of Finance (SPU), *SPU 2020*; International Monetary Fund (IMF), *World Economic Outlook, April 2020*; European Commission (EC), *European Economic Forecast, Spring 2020*; and Fiscal Council (FC) workings.
Note: For the *Spring 2020* QEC, the forecast change in modified investment for 2020 is taken as equal to the change in underlying investment.

The Council's benchmark projections are a key input to the endorsement process and allow the Council to work through the issues in each forecast round. The numbers are presented in Appendix B. These were completed in March, somewhat before the *SPU 2020* forecasts and when the Covid-19 crisis was unfolding rapidly, and the forecasts were made using real GNI* as the preferred measure of aggregate demand, rather than GDP or GNP.

2.3 Assessment of the *SPU 2020* Macroeconomic Forecasts, Scenarios to 2025 and Risks

The economic outlook is highly uncertain as a result of the Covid-19 crisis and a wide range of paths is possible this year and further ahead. *SPU 2020* sets out forecasts for 2020 and 2021 only, and a number of indicative top-down profiles for the recovery.

However, it is useful to have a picture of the range of future macroeconomic outcomes at least five years ahead to guide economic and budgetary policies over the medium term. This section assesses the outlook and *SPU 2020* forecasts for 2020 and 2021, sets out three scenarios for the economy to 2025, and assesses the risks. Given the fast-moving situation, analysis in this chapter considers some of the available high-frequency data, including credit and debit card spending and retail sales. The implications of Ireland's large modified current account surplus in recent years for the speed of possible economic recovery over the medium term are also discussed.

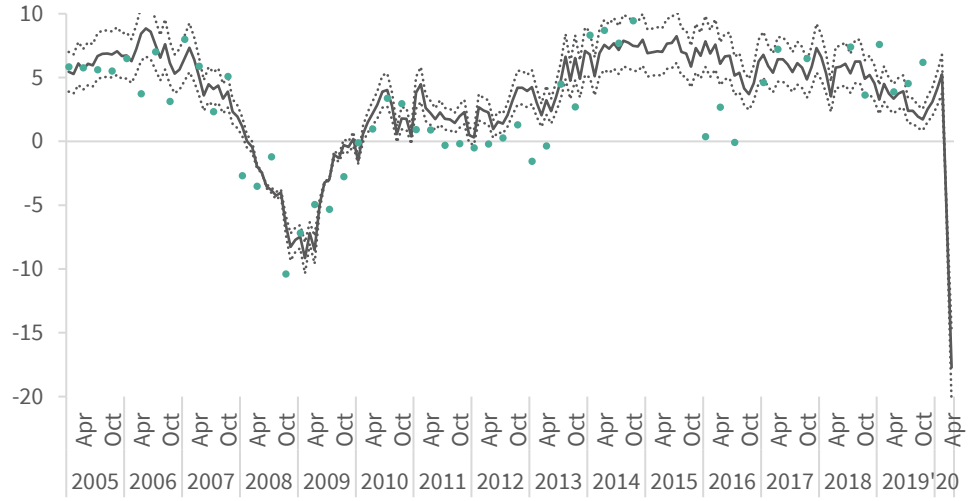
SPU 2020 Short-term Forecasts

For 2020, *SPU 2020* assumes at least three months of containment measures spanning the end of the first quarter and most of the second quarter, followed by a gradual recovery with some remaining distancing measures. The forecasts also anticipate some behavioural changes leading to weak consumer confidence, scarring effects on vulnerable firms, and possible hysteresis in the labour force (i.e. parts of the labour force affected by Covid-19 may require further training before returning to work in an economic recovery). As a result, a key assumption in the forecasts is that output does not return to its end-2019 level until at least 2022.

The restrictions to activity due to Covid-19 have already caused a large fall in demand, as many people in the labour force are unable to go to work. Domestic and external demand are expected to recover with the lifting of containment measures; however, this will occur gradually. Early evidence for the large fall in demand is presented in Figure 2.3. Based on the relationship with composite *Purchasing Managers' Index* data, this shows an estimated year-on-year fall in real GDP of between 15–21 per cent in April—broadly in line with early data from other countries.

Figure 2.3: PMI-implied growth in Ireland's GDP fell 15–21 per cent in April

Year-on-year percentage change in volume

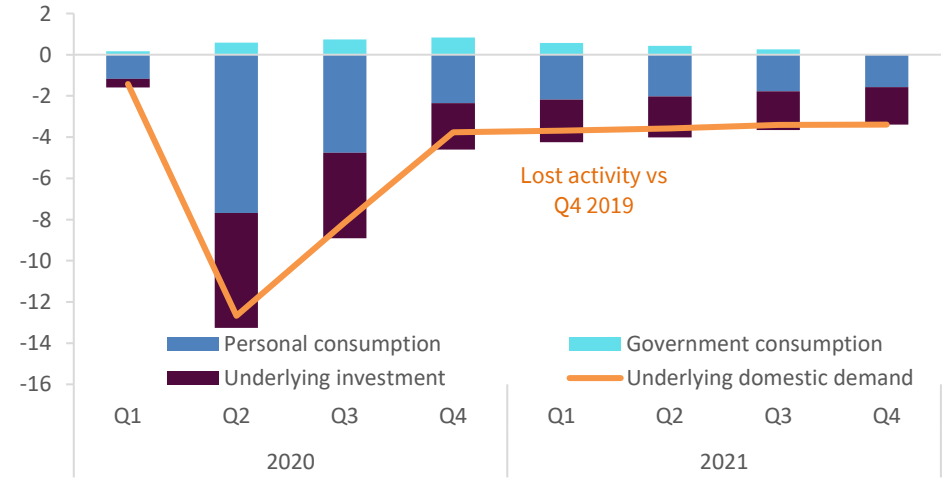


Sources: IHS Markit; and Fiscal Council workings.
Notes: Notes: Based on historical relationship between real GDP growth and composite PMI data for Ireland. 95% confidence interval shown. Historical real GDP growth for quarters shown by green dots.

The anticipated impact of Covid-19 in *SPU 2020* on underlying domestic demand results in a substantial predicted fall of close to 15 per cent in 2020, and a partial recovery of 8.2 per cent in 2021 (see Figure 2.2). Figure 2.4 presents the estimated losses to underlying domestic demand by quarter. The reductions in activity are concentrated in the second and third quarters of 2020, however output is lower in all quarters compared to the starting level and a counterfactual scenario where the Covid-19 shock did not take place.

Figure 2.4: *SPU 2020* forecasts over €12 billion of lost activity in Q2 2020

€ billion in 2017 constant prices, *SPU 2020* compared to the Q4 2020 seasonally adjusted level



Sources: Department of Finance, *SPU 2020*; and Fiscal Council workings.
Note: Seasonally adjusted underlying investment for Q4 2019 is estimated with manual seasonal adjustment of aircraft.

For 2020, *SPU 2020* forecasts a negative impact from end-2019 on underlying domestic demand due to Covid-19 of €26 billion (in 2017 prices). This implies close to €16 billion in lost personal consumption expenditure and €12 billion in lost underlying investment, partly offset by €2.3 billion of higher government consumption (see Box B in Chapter 1). For 2021, *SPU 2020* forecasts underlying domestic demand to remain €14 billion below its end-2019 annualised level.

The impacts of Covid-19 on the **labour market** have been without precedent in Irish experience. The unemployment rate for April 2020 including the Pandemic Unemployment Payment (PUP) recipients reached 28.2 per cent, up from 15.5 per cent in March and less than 5 per cent before the crisis. A further half a million workers are not included in this measure under the Temporary Wage Subsidy Scheme, which compensates firms for each employee in receipt of up to €450 per week. While the PUP recipients may not all be included in the Labour Force Survey's definition of unemployed, the lack of employment activity that is taking place clearly implies a huge shortfall in output and earnings for the economy overall. The Department forecasts that transfers by the Government are closing half of the €11 billion shortfall in market incomes.

Employment is forecast in *SPU 2020* to fall temporarily by close to half a million jobs in the second quarter, before partially recovering in the third quarter, as containment restrictions ease and people can return to work. This would be equivalent to a year-on-year decrease of 17 per cent. For the full year, *SPU 2020* forecasts an average fall in employment of 9.3 per cent. As many of those affected are employed in lower productivity sectors, the impact of these job losses on aggregate output is more limited than in the case of a more broad-based downturn affecting all sectors more evenly. Large reductions in employment are expected in sectors such as construction, wholesale and retail trade, transport, accommodation and food service activities, real estate activities, and arts, entertainment and recreation.

Table 2.1 sets out forecasts of key macroeconomic indicators contained in *SPU 2020*. Real GNI*, based on nominal GNI* deflated with the GNP deflator, implies a fall of 16.1 per cent in 2020—a more severe contraction than for GDP or GNP.

Table 2.1: *SPU 2020* macroeconomic forecasts

Percentage change in volume, unless stated

	2019[a]	*2020*	*2021*
Demand			
GNI* (implied)[b]	2.1	-16.1	7.1
…of which (contributions)			
Underlying domestic demand[c] (p.p.)	*2.8*	*-12.9*	*7.2*
Change in stocks (p.p.)	*0.2*	*-0.2*	*0.0*
Adjusted net exports[c] (p.p.)	*-0.9*	*-3.0*	*-0.1*
Underlying domestic demand	3.2	-14.9	8.2
GDP	5.5	-10.5	6.0
Personal consumption	2.8	-14.2	8.7
Government consumption	5.6	9.1	-3.2
Underlying investment[b]	2.2	-41.0	26.3
Exports	11.1	-7.7	7.5
Underlying imports[b]	13.6	-9.8	9.6
Labour market			
Population	1.3	0.7	0.9
Labour force	2.0	0.0	0.6
Employment	2.9	-9.3	5.5
Unemployment rate (% labour force)	5.0	13.9	9.7
Prices (year-on-year percentage change)			
HICP	0.9	-0.6	0.4
Personal consumption deflator	2.1	-0.1	0.7
GDP deflator	1.5	1.2	1.5
GNP deflator	2.0	1.2	1.4
Nominal value			
Nominal GNI*	4.1	-15.5	8.6
Nominal GNI* (€ billion)	205.6	174.6	189.6
Nominal GDP	7.2	-9.4	7.6
Nominal GDP (€ billion)	347.2	314.6	338.7
Modified current account (% of GNI*)	6.3	4.7	4.5

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

Notes: [a] Denotes latest outturns from the CSO, where available.

[b] Derived from nominal GNI* in *SPU 2020* deflated with the GNP deflator. These figures are based on earlier nominal GNI* figures provided by the Department for *SPU 2020*. The estimates were corrected in a later version of the report, yet the differences are relatively minor. Using the forecast approach in Box E would imply -16.7 per cent real GNI* growth in 2020, and 7.6 per cent in 2021.

[d] Contributions to real GNI* growth rates in percentage points. Adjusted net exports are exports net of underlying imports (excluding aircraft and intangibles), net factor income from abroad, factor income of re-domiciled PLCs, depreciation on aircraft leasing, R&D service imports and trade in IP.

Personal consumption expenditure in *SPU 2020* is forecast to fall in the second quarter of 2020 to around three quarters of its Q4 2019 level, and then to rebound. Nevertheless, the level in 2021 will only be around 90 per cent of its normal level.

Although some households will be affected by reduced incomes as a result of Covid-19 containment measures, the extent of this impact is mitigated by the Government's income support schemes, as discussed in Chapters 1 and 3.

Many households will increase savings as a result of enforced lower consumption expenditure and higher precautionary savings. The Department forecasts that the household savings ratio will exceed 19 per cent in 2020 and 16 per cent in 2021. However, such a high annual savings ratio is unprecedented for Irish households, exceeding the 14 per cent peak during the global financial crisis. As discussed in Box C, this could imply upside risk to the *SPU 2020* consumption forecasts, in particular for households that have not had their incomes decline by Covid-19.

Box C: Prospects for consumer spending could be better than in official forecasts

This box analyses recently published high-frequency and other data relevant to household consumption, including the retail sales index and credit and debit card spending. These signs so far point to a sharp decline in total expenditure by households, especially in April.

Retail sales data for March published by the CSO show a sharp overall decline. Five of the thirteen sectors covered were especially badly hit, falling by 28–55 per cent: bars; clothing; motors; books, newspapers and stationery; and department stores.

The aggregate series excluding motors and bars typically accounts for 45 per cent of retail sales in March. Excluding motors and bars, year-on-year growth in the volume of other sales was 2.8 per cent in March—helped especially by sectors such as food (+17.6 per cent) and household equipment (+12.7 per cent). This result is close to the 4–5 per cent year-on-year increases observed on average since 2016. The fact that it performed reasonably well likely reflects stockpiling by consumers prior to the imposition of stricter containment measures later in the month.

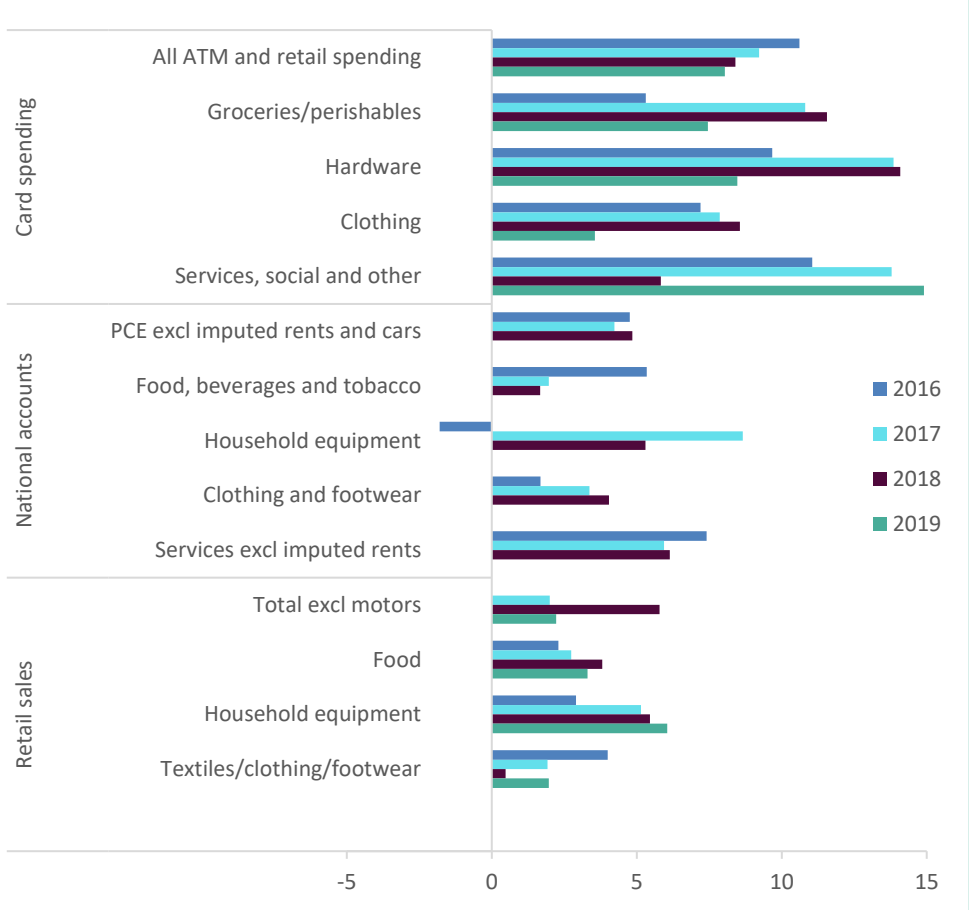
In April, the Central Bank of Ireland began publishing weekly updates to daily credit/debit card statistics. Monthly data showed a modest 2.4 per cent year-on-year reduction in total card spending in March, although the daily trend worsened as the month progressed and escalating Covid-19 containment measures were enacted (see Figure 1.4B). However, April data currently point to a much larger year-on-year fall of 35 per cent.

Some substitution from such spending to debit cards is likely due to Covid-19 restrictions encouraging the use of contactless payment, and many households having less need for credit card usage due to lower overall consumption and higher savings. The Q1 2020 data also show that a majority of the total increase in all non-ATM card spending is explained by e-commerce; this share could rise further as retailers with closed premises continue to trade online, and consumers adjust their purchasing habits.

Figure C.1 compares trends in values of certain categories with broadly similar descriptions in common for each of card spending data, personal consumption expenditure in the national accounts, and retail sales. The comparison shows that card spending annual growth rates have generally been higher than those of the national accounts and retail sales data. As shown below, this is due to a narrower coverage of spending in card statistics.

Figure C.1: Card spending growth rates are higher than those of PCE or retail sales

Year-on-year percentage change in value



Sources: CSO; Central Bank of Ireland; and Fiscal Council workings.

Table C.1 compares total spending represented by each category for card spending and personal consumption.

Table C.1: Card spending by category is less broad than personal consumption

€ billion annual average for 2015–2018, and percentage

	Card spending, € bn	PCE excl imputed rent and cars, € bn	Non-card spending in PCE, € bn	Coverage ratio, percentage
Food/groceries	8.8	17.4	8.5	51.0
HH equip	3.8	4.5	0.7	84.8
Clothing	2.7	3.5	0.9	75.6
Other retail	5.3	13.4	8.1	39.4
Services	23.0	43.2	20.1	53.4
ATM	19.1	*NA*	*NA*	*NA*
Total	62.8	81.9	19.1	76.6

Sources: CSO; Central Bank of Ireland; and Fiscal Council workings.

Note: Rounding may affect additivity. For PCE, other retail excludes cars, and services excludes imputed rents.

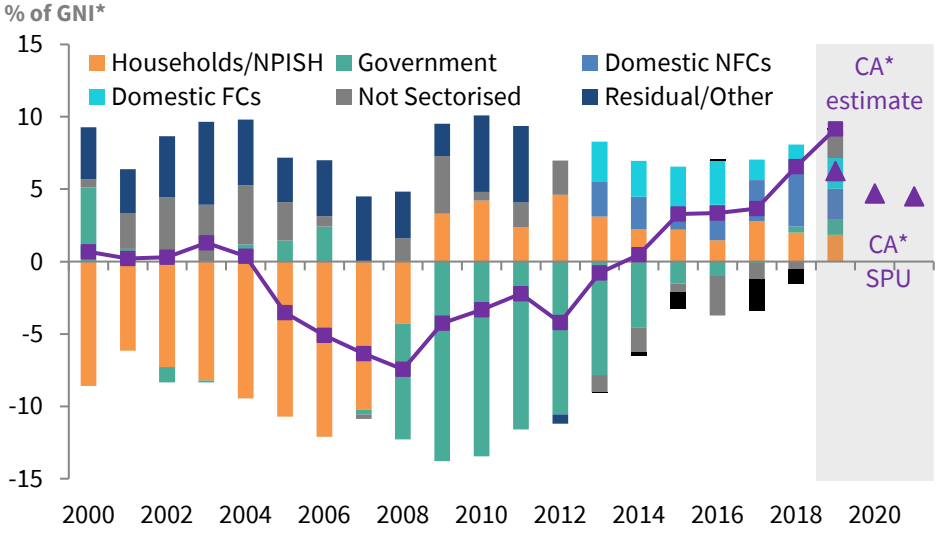
While the shares of non-ATM spending categories are similar to those of personal consumption expenditure excluding imputed rent and cars, the card spending data is less broad in coverage for each category. This partly reflects spending on these categories using ATM cash that is not captured in the card statistics breakdown by category.

The non-ATM category with the largest gap to the total is services, which amounts to over half of all spending and includes items such as accommodation/rent and utilities outlays. As many of these payments are more likely to be made by bank transfer/direct debit/standing order rather than using a card directly, this explains much of the lower services coverage.

As a result, the decline in overall consumer spending could be lower than that observed in the card spending. In the Council's scenario analysis, presented in Box D, personal consumption expenditure is projected to fall in year-on-year terms in the second quarter of 2020 by 21 per cent (Mild scenario), 29 per cent (Central), and 30 per cent (Severe). Should card spending continue to rise in May and June, this could indicate that the Mild scenario is closest to being realised, at least in the short term.

The institutional sector data on savings net of investment, combining as the modified current account (CA*), suggest there is capacity for Irish households to recover strongly in the absence of prolonged containment measures, or significant scarring for the labour force and businesses due to the Covid-19 pandemic. An important difference between the expected fall in economic activity in 2020 and the 2008 recession is the sustainability of prior economic growth. CSO data suggest savings less investment stayed positive in 2019 across domestic sectors for a second consecutive year. As shown in Figure 2.5, CA* may have exceeded 9 per cent of GNI* in 2019; the *SPU 2020* estimate of 6 per cent is also a substantial surplus.

Figure 2.5: Domestic net-savings balances remained positive in 2019



Sources: CSO; and Fiscal Council workings.
Note: The 2019 modified current account (CA*) figure is a Council estimate based on CSO guidance and known balances from the institutional sector accounts. Domestic savings are estimated by assuming that the change in NFC savings mainly relates to foreign-owned NFCs, and that domestic gross capital formation closely matches underlying investment in 2019.

The strength of aggregate household net savings at the beginning of the year could help the pace of economic recovery once the containment measures due to Covid-19 can be relaxed. The household savings ratio is forecast in *SPU 2020* to nearly double to over 19 per cent in 2020. This suggests there could be capacity for Irish households to increase consumption in future years, despite possibly higher precautionary savings, but helped by a strong financial position prior to Covid-19.

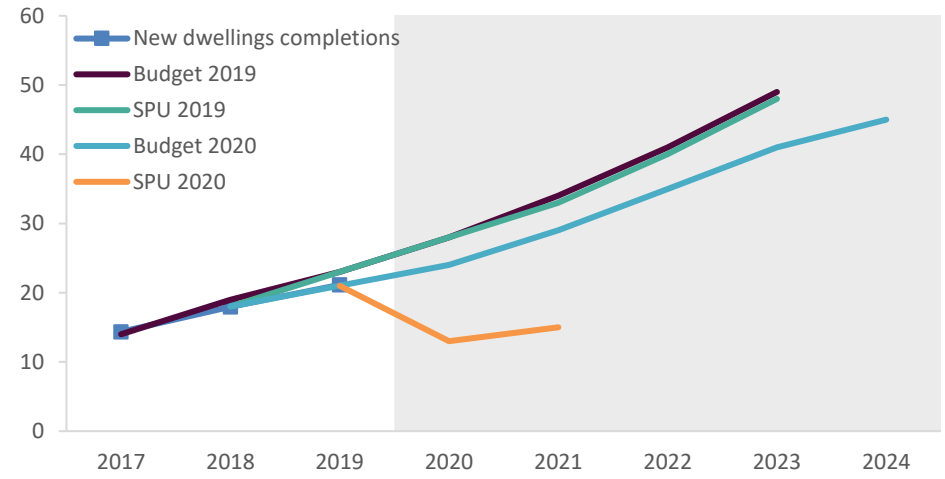
However, wealth effects and the distribution of household savings also have important implications for a recovery in consumption. Recent research by the Central Bank of Ireland (2020), based on the CSO's *Household Financial and Consumption Survey 2018* (CSO, 2020a), found that close to one in four households were employed in sectors that are at highest risk of income losses due to Covid-19. Furthermore, the median household for this group have low financial buffers—just 3 per cent of gross annual income in liquid assets compared to 6 per cent for all households. As a result of lower financial buffers, the capacity for a significant number of households to increase consumption in a recovery may be limited.

Government consumption in *SPU 2020* is set to grow by mor than 9 per cent in volume terms in 2020 as a result of higher health spending and other government activity to manage the impact of Covid-19—see Chapters 1 and 3 for detailed analysis of these policy measures. In 2021, government consumption is forecast to fall 3.2 per cent.

By contrast, **underlying investment** is projected to fall by more than 40 per cent in 2020 in *SPU 2020*. This is due to an anticipated near-standstill level of activity in building and construction in the second quarter, temporarily driving investment 70 per cent below its starting level and resulting in just 13,000 new dwelling completions in 2020 (see Figure 2.6). This implies just over 8,000 completions after the first quarter, around half the rate for the same period in 2019 and lowest annual level since 2016. House-building is expected to remain at these fairly low levels even as containment measures ease.

Figure 2.6: Downward revisions to forecasts of new dwelling completions

Thousands



Sources: CSO; Department of Finance; and Fiscal Council workings.
Note: Shading relates to forecast years.

Underlying machinery and equipment is expected to be durably weakened as firms forego planned investments as a result of heightened uncertainty and containment measures that may have forced temporary closure. In a recent survey of businesses conducted in mid-April, the CSO (2020b) found that close to one quarter of enterprises in Ireland had ceased trading either temporarily or permanently. Construction firms were the worst affected with only one in three continuing to trade. 44 per cent of all firms expected half their normal turnover at most for May 2020. While the Department's anticipated impacts are severe, there is moderate upside risk given a phased return to activity for outdoor workers began in mid-May, including construction workers. However, there are also risks of insolvency for domestic construction firms due to negative commercial and housing market developments—e.g. commercial property may be affected by increased work-from-home capability.

External demand is expected to be adversely impacted by large output falls in Ireland's main trading partners in 2020, along with limited output capacity by exporting firms while Covid-19 containment measures remain in place. A 7.7 per cent reduction in total exports volume is forecast in *SPU 2020*. The forecast reduction would likely be more adverse if not for Ireland's measured exports being dominated by certain sectors that could possibly expand despite the pandemic, such as pharmaceuticals, ICT, medical devices, and computer hardware. However, the Department anticipates that exports related to aircraft leasing and contract manufacturing activity will fall substantially this year, given most airline travel has

been grounded and the impact of virus containment measures in China on global manufacturing supply chains. Exports of tourism and travel are also expected to be severely reduced, and Brexit could further weaken the outlook over coming years.

The impact of such large declines in measured exports on aggregate demand is expected to be largely offset by a decline in underlying imports, which excludes aircraft and intangibles due to their concentration with foreign-owned multinational firms. This is due to the significant import contents of Ireland's final demand—that is, underlying domestic demand and exports. However, the effective import content of final demand in GNI* is likely to be considerably lower than for final demand in GDP (Box E). This is because much that is exported from Ireland by multinational firms requires inputs with high-import content, and profits from these sales ultimately accrue to other countries. As a result, the offset due to lower imports is likely to be far smaller for GNI* than for GDP.

Macroeconomic Scenarios to 2025

A very high degree of uncertainty applies to any short-term economic forecast at present. While the *SPU 2020* forecasts include a brief discussion of more-adverse scenarios for GDP and their implications for the general government balance, this *Fiscal Assessment Report* provides further context for the range of risks to the forecast by developing three scenarios to 2025: Mild, Central, and Severe. These are presented in Box D.

These scenarios cover a wide range of health, policy and economic outcomes. Given high uncertainty, the likelihood of the scenarios is impossible to assess in a meaningful way.

Box D: Three Macroeconomic Scenarios to 2025

There is exceptional uncertainty surrounding the economic outlook related to the Covid-19 shock. This box explores three scenarios. The three scenarios are (1) a Mild scenario where policy measures are more successful and lasting damages are kept to a minimum, (2) a Central scenario constructed using the same assumptions in *SPU 2020*, and (3) a Severe scenario where the recovery is protracted and marred by repeat lockdowns and wider financial distress. We extend these forecasts to 2025.

The Macroeconomic Scenarios

The scenarios we consider are quite different in nature.

The Mild scenario can be understood as one where containment measures are lifted relatively quickly and "hysteresis" effects (the lasting impacts or scarring from the initial shock) are much more limited than is assumed in the Department's projections. Employment rebounds quickly once lockdown measures are lifted, with two-thirds of jobs lost being recovered by Q3 2020 and a further 20 per cent by the end of the year. This would be broadly consistent with a view that policy measures to sustain businesses through the crisis, and progress towards treating/containing the virus, are more successful than assumed and that activity returns to normal at a quicker pace, unconstrained by precautionary saving or other behavioural responses by households and businesses.

By comparison, the Central scenario shows about half of the job losses occurring in Q2 2020 persisting into subsequent quarters and even through 2021. The Central scenario assumes that confinement measures are eased as planned by the Government, but some restrictions remain in place for some time.

For the Severe scenario, we explore the possibility that further waves of the virus—that is a rise and fall in transmissions of the virus again at later dates—result in further lockdown measures being enacted in line with past experience of "second waves" of infections (Figure D.1). The intermittent lockdowns could mean similar job losses in later quarters (Q4 2020 and Q2 2021) and more lasting impacts over the long run.

Figure D.1: A Severe scenario might see further surges in cases

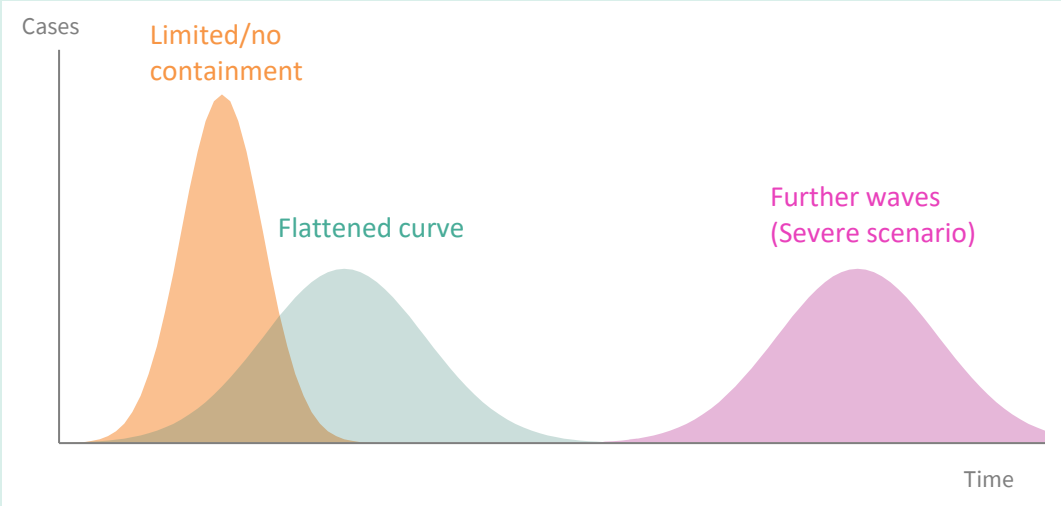


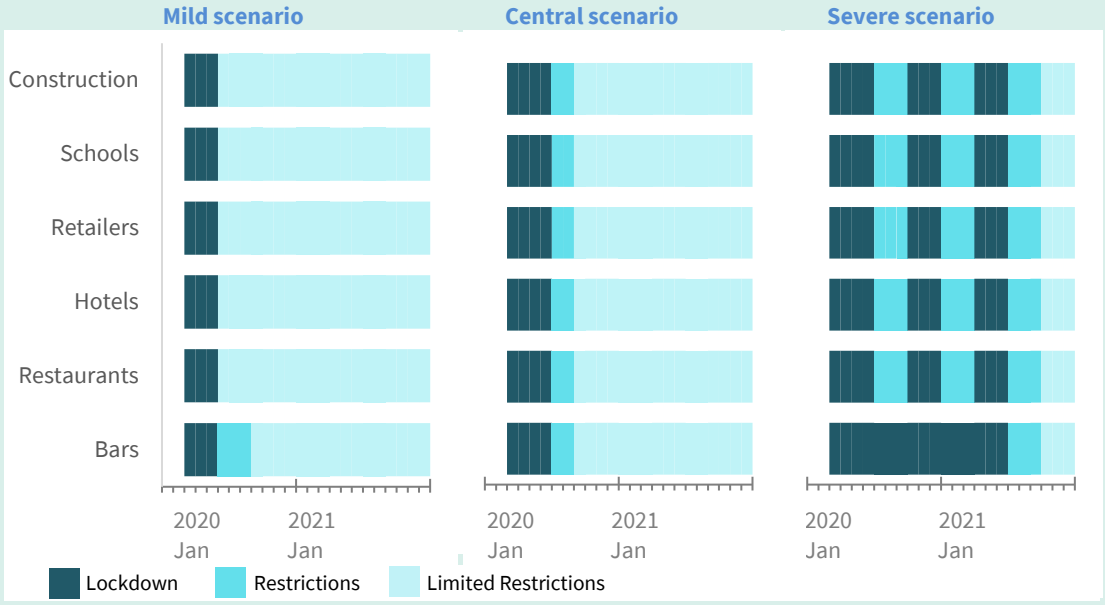
Table D.1 shows the main assumptions underpinning the three scenarios. Key to these scenarios are the assumptions about containment measures. We consider containment measures primarily in terms of the impacts on consumer spending, personal disposable income, construction and other business investment areas. It is therefore useful to think carefully through the assumptions on containment measures for key relevant areas (Figure

D.2). School closures, for instance, could impact 851,000 workers based on data for the numbers of working individuals with children. Bars could face more lasting impacts than other "social" economic activities. Though lockdown measures may be lifted, social distancing and other requirements might persist long after the lockdown has ceased.

Table D.1: Key assumptions for the scenarios

	Central scenario	Mild scenario	Severe scenario
Broad description	Government's *SPU 2020* forecasts assume a sharp contraction in Q2 2020, followed by a very protracted recovery.	Slightly milder initial contraction and faster recovery. More successful containment measures, economic supports, and progress on treatments.	Sharp initial contraction. Protracted recovery marred by repeat lockdowns and wider financial distress.
Containment measures	Strict lockdown measures last one quarter (Q2 2020). Containment measures are then relaxed over the summer.	Strict lockdown measures end in May, with limited measures remaining into Q3 2020.	Strict containment measures last until July 2020. Then intermittent lockdowns (Q4 2020 and Q2 2021) required to stem subsequent transmission increases.
Employment losses	Job losses of about 475,000 (-20%) in Q2 vs trend; half the job losses are still not recovered by Q4 2021.	Job losses of about 475,000 (-20%) in Q2 vs trend; but fewer (33%) of these losses last into Q3; down from 10% thereafter.	Job losses of about 620,000 (-26%) in Q2 vs trend and in subsequent lockdown quarters; four-fifths of job losses persist outside lockdowns.
Recovery	Economy only recovers to pre-crisis (Q4 2019) levels by Q4 2022.	Economy recovers to pre-crisis (Q4 2019) levels by Q3 2021.	Economy does not recover to pre-crisis (Q4 2019) levels until Q3 2023
Potential output	Growth reverts to previous projections of about 2.5 to 3% per annum over the medium term.	Growth reverts to previous projections of about 2.5 to 3% per annum over the medium term.	Permanent scarring on growth; remains closer to 2% per annum over the medium term.

Figure D.2: Assumptions on containment measures



Notes: "Lockdown" means that the sector is required to close. "Restrictions" means the sector is open but with restrictions on size of gatherings and requirements for social distancing. "Limited restrictions" means

that the sector is open and that restrictions on size of gatherings and requirements for social distancing are fully loosened, but with scope for reintroduction.

The Approach Used

To develop the macroeconomic scenarios, we first produce a replica of the official government forecasts and extend them under similar assumptions to construct the Central scenario. We start with a counterfactual no-Covid-19 forecast (the January 2020 projections from the Department of Finance, 2020b). The nature of the restrictions in each scenario and the assumptions about the response vary in severity. We scale up or down the relevant shocks to underlying domestic demand consistent with our assumptions about containment measures and the extent of how persistent economic damages will be.

Consumer spending: We first impose shocks to incomes. These shocks are consistent with our assumptions for school closures, job losses, replacement rates, infection rates, time lost to work per illness (two weeks), prophylactic absences (30 per cent of employed for two weeks), mortality rates, and wages by sector. Next, we shock individual areas of consumption to varying extents consistent with how vulnerable areas are considered to be. For example, alcoholic beverages including pubs; recreation services; transport equipment; public transport; clothing; and household equipment are assumed to be among the worst affected with losses of at least 50 per cent.[16]

Investment: We assume that building and construction sites are closed for the lockdown periods and open otherwise. The associated reduction in hours worked is assumed to lead to equivalent percentage reductions in construction output. For machinery and equipment spending, we assume that declines are associated with the reduction in forecast external demand using standard elasticities (Conroy and Casey, 2017).

Government consumption: We assume that this is the same as forecast in *SPU 2020*—see Box I in chapter 3 for further details on possible fiscal impacts of the different scenarios.

Trade: Exports are assumed to evolve in line with changes in external demand, with adjustments made to this for the scenarios being consistent with our changes to underlying domestic demand. In other words, weaker underlying domestic demand is assumed to be mirrored by a similar weakening of demand among trading partners.

We calibrate all the shocks to be consistent with the official *SPU 2020* projections for the purposes of the Central scenario. The overarching approach is similar to that adopted in Keogh-Brown *et al.* (2010) and by the Department.

A wide range of outcomes is possible

The scenarios cover a wide range of different outcomes. For Mild, underlying domestic demand would recover to its pre-Covid-19 level by mid-2021. This is a faster recovery than in *SPU 2020*. In the Central scenario, output takes a further year to recover, and a further two years in the Severe scenario. These outcomes result in a permanent loss of output of 4, 10 and 15 per cent for the Mild, Central and Severe scenarios respectively, compared to the level it would have reached in the absence of Covid-19.

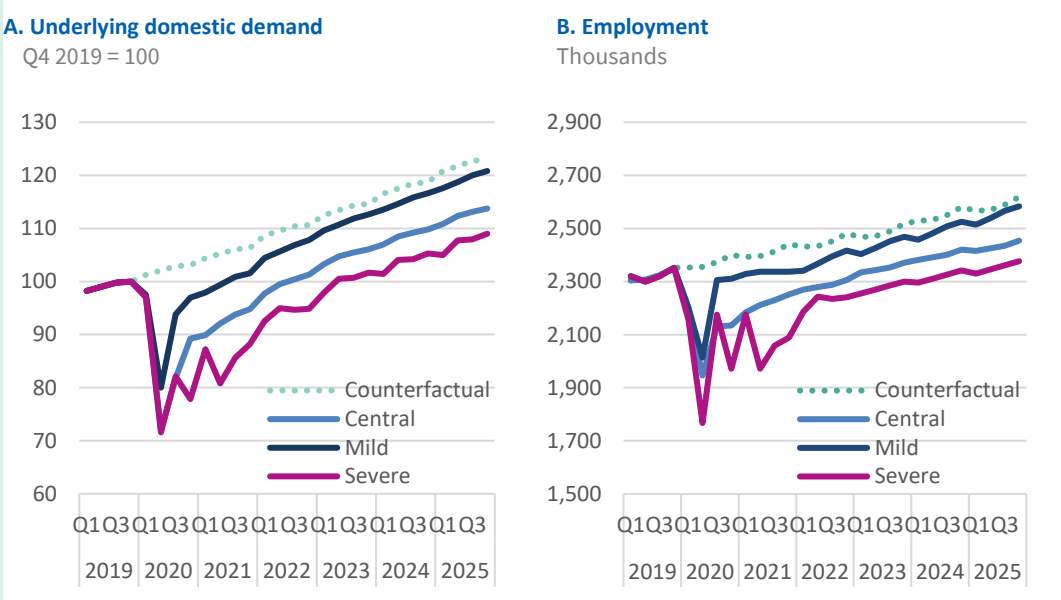
Employment outcomes also vary significantly across the scenarios with different rates of unemployment. In the Mild scenario employment makes a full recovery by 2022, whereas the Severe scenario would result in employment remaining below its Q4 2019 level until the latter half of 2023, as with underlying domestic demand. Permanent employment losses compared

[16] See Table 14 of the CSO's National and Income Expenditure Annual results at: https://statbank.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=N1814&PLanguage=0

to a future level in the absence of Covid-19 would be 11 per cent for the Severe scenario, and 7 per cent for the Central scenario.

In each scenario, it is likely that permanent losses in activity and employment will result from the Covid-19 shock. As discussed in Chapter 1, besides causing a shock to demand, the economy's long-run potential level and growth rate might be negatively impacted by Covid-19. Although this is difficult to estimate, three key factors of production could be impacted including productivity, labour supply, and investment in capital, and on balance the Council assesses that long-run growth is likely to be somewhat lower following the Covid-19 shock. Impacts could include mismatch in skills for segments of the labour market, loss of capital in businesses and firm destruction, missed investment, and lower inward migration.

Figure D.3: Permanent losses to activity and employment are likely



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

Table D.1 summarises activity and employment levels for the three scenarios explored.

Table D.2: Mild and Severe scenarios provide a plausible range for activity levels

	2020	2021	2022	2023	2024	2025	Permanent loss, %
Underlying domestic demand, Q4 2019 = 100							
Central	85	93	100	105	109	113	10.1
Mild	92	100	106	111	115	119	4.1
Severe	82	85	94	100	104	107	14.6
Employment, thousands							
Central	2,103	2,219	2,286	2,351	2,399	2,433	7.1
Mild	2,208	2,335	2,380	2,437	2,493	2,551	3.0
Severe	2,018	2,074	2,226	2,278	2,319	2,353	10.7

Sources: Department of Finance, *SPU 2020*; and Fiscal Council workings.
Note: Permanent losses are calculated as the percentage difference to counterfactual following Q4 2019.

The scenarios detailed above are indicative for outcomes that are considered plausible. However, as noted in Box A in Chapter 1, there is continuing uncertainty surrounding the future path of Covid-19 and prospects for vaccines. As such, the scenarios presented here are not exhaustive, and do not cover all possible paths for economic activity in Ireland.

Furthermore, there is high uncertainty on the economic effect of any medical path. For example, the scenarios do not include a possible spill-over into a banking or financial crisis, and the more adverse macroeconomic implications this would involve.

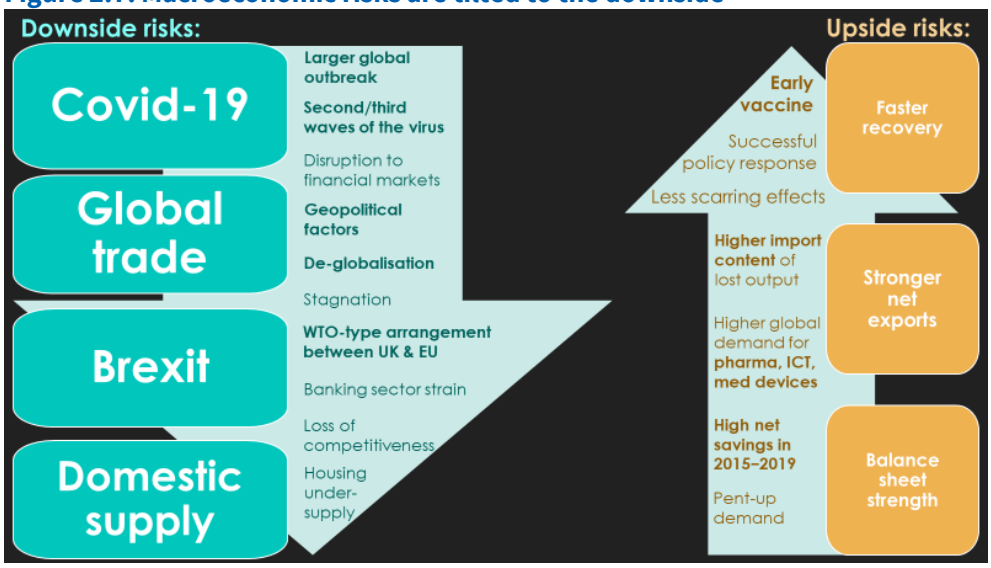
Macroeconomic Risks

Uncertainty around the macroeconomic outlook is high. Relative to the *SPU 2020* forecast and the Central scenario here, risks are tilted to the downside, driven by a more adverse direct economic impact of Covid-19, including the possibility of second/third waves of Covid-19 in Ireland due to containment measures proving unsuccessful. Other downside risks include a possible hard Brexit beginning in 2021, the possible relocation of multinational firms' activities out of Ireland, global trade tensions, and de-globalisation resulting in lower external demand. As a small open economy, Ireland is particularly exposed to global economic conditions which have turned sharply negative as a result of Covid-19. The realisation of such external downside risks would be expected to result in a slower economic recovery over the coming years.

However, there are also upside risks to the forecasts, as noted in *SPU 2020*. These mainly include a vaccine (or effective treatment) becoming available earlier than currently anticipated, a lower than expected degree of scarring affecting firms and employment in the Irish economy, and outperformance of net exports.[17] Another potential cause of outperformance for economic growth is the large modified current account surplus that had increased steadily throughout Ireland's recovery from the global financial crisis. This means that Irish households and firms began 2020 with significant net savings, and these could be employed more rapidly than anticipated in *SPU 2020* when a post-Covid-19 recovery becomes possible. Figure 2.7 summarises the downside and upside risks facing the Irish economy.

[17] Outperformance of net exports could occur due to strong exports in key sectors with activities in Ireland, such as pharmaceuticals, information-communication technologies, and medical devices.

Figure 2.7: Macroeconomic risks are tilted to the downside



Sources: Department of Finance, SPU 2020; and Fiscal Council workings.
Note: Size of arrows indicates subjectively assessed combined impacts and likelihoods.

The Council has previously noted that Ireland's external trade variables have been difficult to forecast accurately, given the distortions caused by multinational firms. The consequences of this issue are further developed in Box E, which notes that the composition of gross domestic product (GDP) and gross national product (GNP) result in headline economic growth rates that are often overstated relative to a more relevant measure of aggregate demand, such as modified gross national income (GNI*). The issue arises due to the overweighting of net exports.

Box E: Forecasting real GNI* growth rates in place of GDP and GNP

Despite well-documented distortions to Ireland's gross domestic and national product (GDP and GNP), described by the Economic Statistics Review Group (ESRG, 2016) and in previous Council publications, growth rates in GDP and GNP remain widely used as the main forecast variables for the Irish economy for both domestic and international forecasters.

GNI* is more relevant as a measure of the incomes and activity of Irish people and better reflects the domestic tax base. The Central Bank, Department of Finance and Fiscal Council have placed greater emphasis on GNI*, in line with the ESRG recommendations—although *SPU 2020* puts more emphasis on GDP in calculating fiscal ratios.

Since 1996, GDP and GNP growth rates have been higher than GNI* growth rates in all but six years.[18] This was especially evident during the global financial crisis (2007–2012), when cumulative falls in GDP and GNP were 7 and 12 per cent respectively, whereas GNI* fell by 19 per cent.

[18] For 1995–2012, real GNI* can be approximated by deflating nominal GNI* with the GNP deflator. This correlates closely to the GNI* deflator for data that are published (2013–2018), and the CSO has advised that is also indicative for earlier years.

This difference is due to the distorted net exports component. In the absence of published series for adjusted exports and imports that are consistent with GNI*, this box provides an overview of a methodology for forecasting GNI* for 2019–2021 based on approximations of GNI*-based exports and imports.[19] This approach finds that whereas the import content of multinationals' activity in the Irish economy is very high, it is much lower for domestic activity.

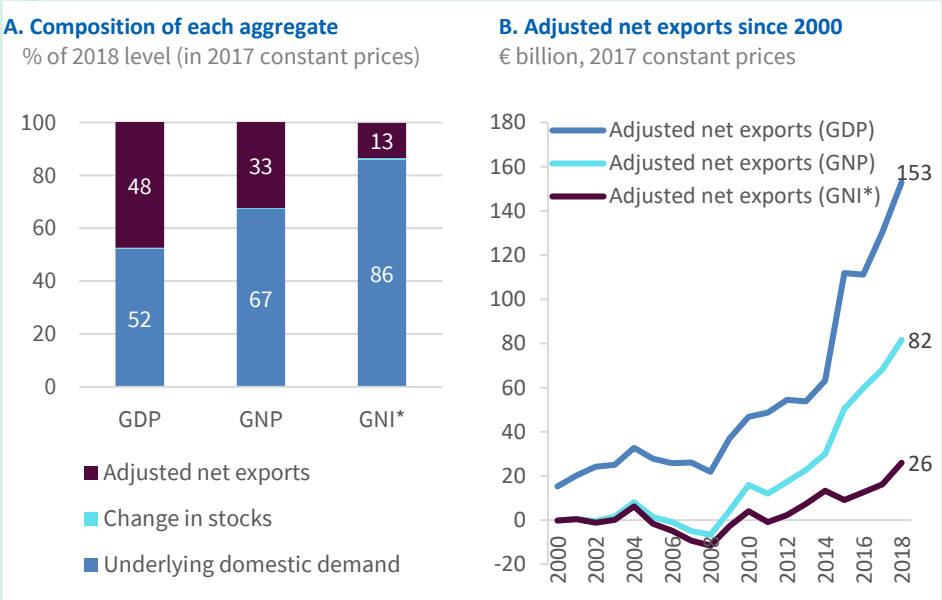
Domestic demand has a high share of aggregate demand when using GNI*

Expenditure on GDP and GNP each comprise final domestic demand (C+G+I), changes in stocks, and net exports—exports net of imports for GDP, less net factor income for GNP.

Ireland's net exports included in GDP and GNP are heavily impacted by undistributed profits of multinationals.[20] As a consequence, it is useful to focus on underlying domestic demand. This excludes import-heavy aircraft and intangibles from investment as they are mainly related to foreign-owned multinational entities, and provides a relevant measure of domestic demand (Fiscal Council, 2018e).

One implication is that measured GDP and GNP both understate the domestic demand share in output compared to GNI*. As shown in Figure E.1A, the underlying domestic demand share is far higher for GNI*.

Figure E.1: GDP and GNP understate the share of domestic demand in total output



Sources: CSO; and Fiscal Council workings.
Note: Adjusted net exports for GDP includes underlying net exports. For GNP, it is reduced by net factor income from abroad; this is equivalent to the current account with aircraft and intangibles investments added back in (since they are excluded from underlying domestic demand). For GNI*, adjusted net exports is further reduced by net factor income of redomiciled PLCs, and depreciation on aircraft leasing, R&D services imports and trade in IP. An additional category covering the statistical discrepancy (and subsidies less taxes for GNI*) has been omitted from panel A.

Ireland's measured exports have exceeded GDP since 2011, and they have long been dominated by sales of multinational firms. The impact of exports on GDP is partly offset by the

[19] Although full-year data for 2019 are available for GDP and GNP, there is as of yet no CSO outturn available for GNI*. This will be published in the *National Income and Expenditure 2019* report.

[20] A rapid increase in "contract manufacturing" since 2015 caused a level-shift in net exports, and onshoring of IP has also artificially inflated both GDP and GNP—see Connolly (2017) for details.

import content of exports, including royalties (services) and intermediate inputs, e.g. chemicals and computer parts (goods).

GNI* further adjusts for the direct impact of multinationals; adjusted net exports amounted to just €26 billion in 2018, below €82 billion for GNP and €153 billion for GDP (Figure E.1B).

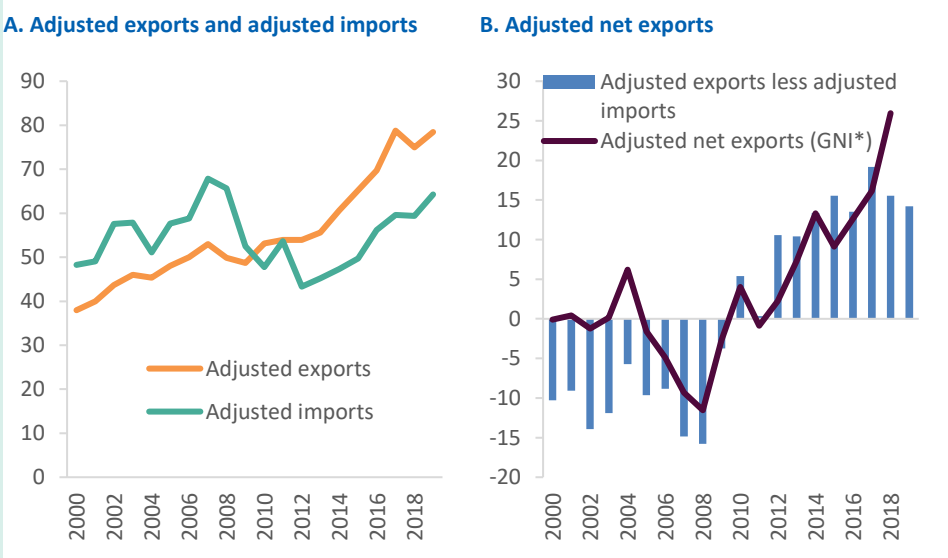
Forecasting real GNI* with adjusted exports and adjusted imports

The Council has previously forecast nominal GNI* using a GNP forecast and assuming that a constant depreciation share of new investments in intangibles and aircraft are subtracted as factor income of multinational firms (Fiscal Council, 2019c). Real GNI* can then be obtained by deflating with a forecast of the GNP deflator. *SPU 2020* forecasts apply a similar approach in forecasting nominal GNI*, and combined with the GNP deflator, this implies real GNI* growth in 2019 of 2.1 per cent, falling to –16.1 per cent in 2020, and recovering to 7.1 per cent in 2020.

An alternative approach involves approximating historical series for adjusted exports and imports that are consistent with adjusted net exports in GNI*. These series can be used to estimate the adjusted-imports content of final demand under GNI*. Adjusted exports on the same basis can also be forecast using its relationship with explanatory variables such as the demand for imports in Ireland's main trading partners, and the real effective exchange rate (Conroy and Casey, 2017).

Figure E.2: Adjusted exports less adjusted imports evolves similarly to adjusted net exports in GNI*

€ billion, 2017 constant prices



Sources: CSO; and Fiscal Council workings.
Note: Adjusted exports and adjusted imports exclude categories of goods and services that are considered to be dominated by multinational firms.

To approximate historical series for adjusted exports and imports that are consistent with GNI*, firstly underlying imports (excluding aircraft and intangibles) can be combined with net factor income from abroad. Next, external trade in goods and services that is likely to be

dominated by multinational firms is excluded.[21] The rationale for this is that such activities are likely to have high broad-import contents, whether due to costly raw materials or large royalties or profit remittances; i.e. multinationals' profits should have less bearing on GNI* than GNP or GDP.[22]

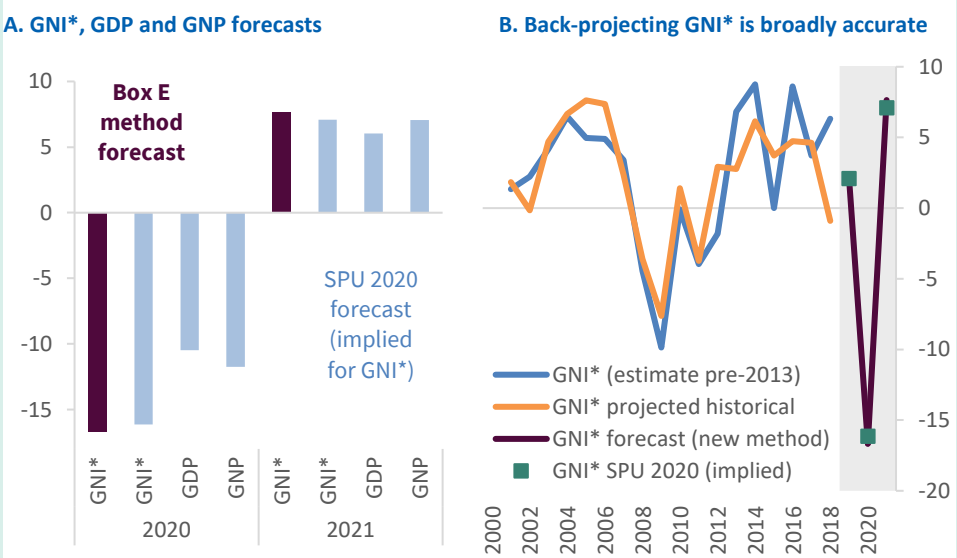
The remaining "non-multinational-firm" items are shown in Figure E.2A. As panel B shows that adjusted exports less adjusted imports and adjusted net exports included in GNI* have evolved similarly for 2000–2018, these adjusted exports and adjusted imports may be relevant to forecasting real GNI*.

The figures show a growing adjusted trade deficit prior to the global financial crisis, reflecting net borrowing from abroad. Since 2011, this has transformed into a persistent trade surplus—despite the severity of the Covid-19 shock, this trade surplus is not eliminated.

Although the approximations of adjusted exports and imports are inexact and exclude some activity that is included in GNI*, the share of adjusted net exports demand in GNI* will remain appropriately modest relative to aggregate demand using this approach. A further advantage is that unlike the Council's previous methodology, it does not depend at all on forecasts of aircraft or intangibles.

Figure E.3: GNI* growth is likely to underperform GDP and GNP growth in 2020

Year-on-year percentage change in volume



Sources: CSO; Department of Finance, *SPU 2020*; and Fiscal Council workings.

Note: The GNI* projection in panel B uses outturn data for underlying domestic demand, the change in stocks and statistical discrepancy, and projects adjusted net exports forward from 2000 using the change in adjusted net exports. The estimated historical series for adjusted net exports is shown in Figure E.2B.

[21] Using three-digit level Standard International Trade Classification groups for goods, and balance-of-payments categories for services, the following components can be excluded based on the likelihood that multinational firms dominate exports and imports. For merchandise: contract manufacturing, some chemicals and related products (SITC items 515, 541, 542, 551, and 598), some machinery and transport equipment (752, 759, 776, and 792), and professional, scientific and controlling apparatus (872). For services: insurance, financial services, computer services, royalties/licences, and business services other than R&D and operational leasing. R&D and operational leasing business services are not excluded here as intangibles investments have already been excluded from adjusted imports, and aircraft (792) have been excluded from both adjusted exports and adjusted imports. However, a more granular breakdown for services trade would be necessary to exclude less of the activities of domestic-owned firms in these sectors.

[22] Where nominal series are used, they are converted into volumes using relevant trade deflators.

For adjusted exports over 2001–2019, the elasticities with respect to imports by Ireland's main trading partners and the real effective exchange rate are 0.75 and –0.24, respectively. Taking adjusted imports as a share of final demand, the import content for 2000–2019 has been reasonably stable with an average of 0.27 and a standard deviation of 0.03. A final demand forecast multiplied by 0.27 equates to adjusted imports.

To maintain consistency with the historical GNI* series, the forecast change in adjusted net exports can be added to the previous year's adjusted net exports in GNI*. Applying this to the 2018 GNI* outturns, there are near-identical forecasts to those implied by *SPU 2020* for 2020 and 2021, as shown in Figure E.3A. Compared to the *SPU 2020* forecasts for GDP and GNP, both forecasts of GNI* in 2020 indicate a more severe contraction of around –16 per cent.

In Figure E.3B, the historical relationship between GNI* and a projection based on this methodology is shown. The projection begins in 2001 and uses outturns for underlying domestic demand, the change in stocks, and statistical discrepancy, but applies the change in adjusted exports less adjusted imports. Although the relationship was stronger prior to the global financial crisis, published real GNI* growth rates for 2013–2018 have been volatile. With the exception of 2018, which is an outlier due to weaker adjusted exports—although it is also a reflection of limitations in the methodology, especially with regard to services—the projected series provides a more plausible profile for recent economic growth in Ireland.

Chapter 3

Assessment of Budgetary Forecasts

3. Assessment of Budgetary Forecasts

Key Messages

- *SPU 2020* forecasts a sharp deterioration in the general government balance in 2020 due to the impact of Covid-19. A deficit of €23.1 billion is forecast (13.3. per cent of GNI*) for 2020. This reflects €9.6 billion of additional spending and a €14.9 billion fall in general government revenue. To give a sense of the scale and speed of revisions, estimates from January this year had projected a surplus of €2.6 billion (1.3 per cent of GNI*) for 2020.

- For 2021, the fiscal outlook is set to be determined by how quickly or slowly the economy bounces back. *SPU 2020* forecasts an almost halving of the deficit to €13.8 billion (7.3 per cent of GNI*).

- There is a very high level of uncertainty surrounding economic and fiscal forecasts. If restrictions on economic activity last longer than assumed, then the deficit may be larger than forecast. In addition, *SPU 2020* forecasts do not incorporate costs arising from any economic recovery plan or other new policy measures. Such additional measures would contribute to a larger deficit in 2020.

- Brexit poses another significant risk to the economic and fiscal outlook. A hard Brexit would have a significant long-run impact on the Irish economy and public finances. *SPU 2020* is based on a much softer Brexit.

- With no projections beyond 2021 in *SPU 2020*, three scenarios are presented for paths for the public finances to 2025. Assuming no policy changes and taking into account demographic and price pressures, the general government balance remains in deficit in a range from around 3 to 12 per cent of GNI* out to 2025.

- General government debt is rising rapidly. Debt as share of GNI* is projected to peak in 2020 and to stabilise in a range between 90 and 140 per cent of GNI* without policy action from 2022.

3.1 Introduction

The fiscal forecasts for *SPU 2020* were made in mid-April amidst the extreme economic shock due to the Covid-19 health emergency. Along with the economic outlook, the fiscal outlook has changed rapidly. Policy measures will help to somewhat mitigate the economic impact of the crisis (Box B in Chapter 1). However, the economic downturn, combined with these new policy measures, means that *SPU 2020* projects a substantial deficit for this year and next. In line with the macroeconomic forecasts, *SPU 2020* only forecasts fiscal variables for 2020 and 2021.

This chapter assesses recent data from the Central Statistics Office (CSO), Fiscal Monitors, and the latest set of fiscal forecasts produced by the Department of Finance in *SPU 2020*. In 2019, the general government balance (excluding one-off items) reached a surplus of €1.3 billion, an improvement of €1.0 billion relative to 2018 (Table 3.1). For 2020, a large deficit is expected to emerge due to the forecast economic downturn and policy response. This deficit is forecast to narrow significantly in 2021, as economic conditions improve somewhat.

There is currently high uncertainty surrounding macroeconomic and fiscal projections. Given the uncertainty, three scenarios for the public finances out to 2025 are presented (Box D, Chapter 2).

Table 3.1: Summary of fiscal outturns (2018–2019) and SPU forecasts (2020–2021)

€ billion, excluding one-offs, unless stated

	2018	2019	2020	2021
General government balance	0.3	1.3	-23.1	-13.8
Total revenue	82.0	87.5	72.5	79.4
… % change	7.0	6.6	-17.0	9.5
Total expenditure	81.7	86.1	95.7	93.3
… % change	5.5	5.4	11.1	-2.5
Interest expenditure	5.3	4.5	4.0	3.8
Primary expenditure	76.4	81.7	91.7	89.5
… % change	6.9	6.9	12.3	-2.4
Primary balance	5.6	5.8	-19.2	-10.1
Nominal GNI* growth (% change)	7.3	4.1	-15.5	8.6

Sources: CSO; Department of Finance; and Fiscal Council workings.
Note: One-offs are removed from variables to get a sense of the underlying fiscal position. One-off items/temporary measures are as assessed by the Council to be applicable, as per Table 1.1, Chapter 1. Rounding can impact on totals. Nominal GNI* figures are based on earlier nominal GNI* figures provided by the Department for *SPU 2020*. The estimates were corrected in a later version of the report, yet the differences are relatively minor.

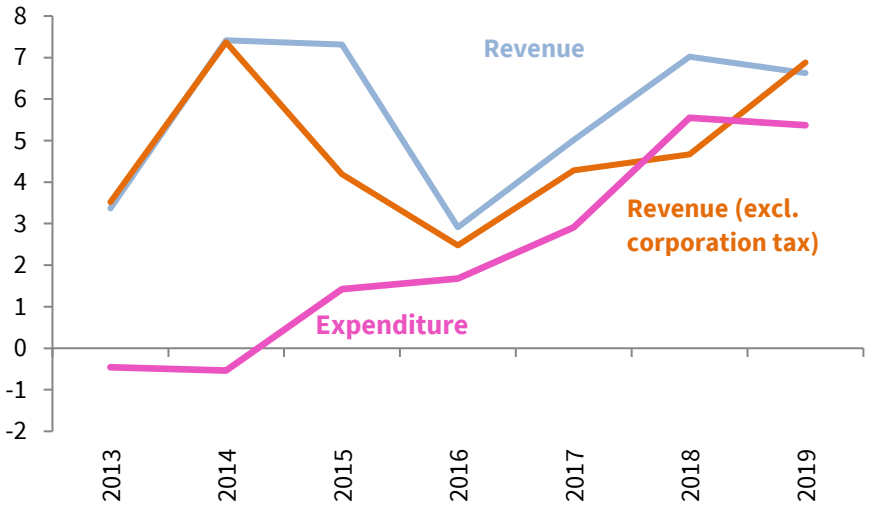
3.2 Assessment of 2019 Outturns

Balance, 2019

The **general government surplus** for 2019 (excluding one-offs) was €1.3 billion, an improvement on 2018 (when an underlying surplus of €0.3 billion was recorded). This improvement was aided by strong cyclical revenue growth, declining unemployment and falling interest payments (€0.9 billion lower than in 2018). Figure 3.1 shows underlying revenue and expenditure trends. General government expenditure growth was accelerating in recent years, with growth above 5 per cent in 2019. Despite this accelerating trend, spending growth has been generally surpassed by revenue growth, although by a smaller margin if corporation tax revenue is excluded.

Figure 3.1: Expenditure growth has accelerated since 2013

% growth, year on year



Sources: CSO; Department of Finance; and Fiscal Council workings.
Note: Revenue and expenditure are in general government terms. They exclude one-offs as assessed by the Council.

The **primary surplus** (excluding one-off items) was €5.8 billion in 2019, almost unchanged relative to 2018. Non-interest spending and revenue both grew by more than 6 per cent in 2019 (excluding one-off items).

Expenditure, 2019

General government **primary expenditure** (excluding one-off items) grew by €5.2 billion in 2019, almost €1 billion more than anticipated in *Budget 2020* in October 2019. Compensation of employees was €0.9 billion higher in 2019 than forecast in both *Budget 2020* and *Budget 2019.* The largest increases for the year came from

gross fixed capital formation (GFCF, €1.7 billion), compensation of employees (€1.7 billion) and intermediate consumption (€1.2 billion).[23]

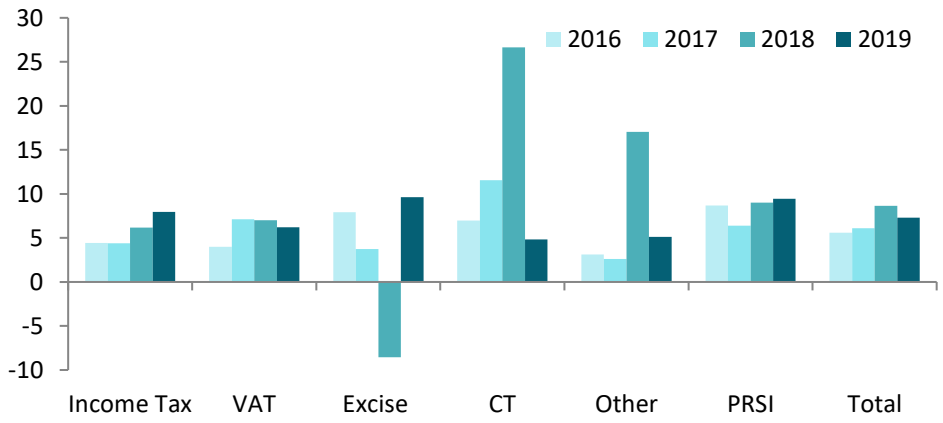
Revenue, 2019

The outturn for **general government revenue** in 2019 was €87.5 billion, €1.1 billion higher than anticipated in *Budget 2020,* just three months earlier, and €2.2 billion higher than anticipated in *Budget 2019* (6.2 per cent higher than 2018). This overperformance relative to *Budget 2020* forecasts was mostly driven by corporation tax.

Some €59.3 billion in **exchequer tax revenue** was collected in 2019. Total exchequer tax revenue, including PRSI, grew by 7.2 per cent in 2019 (Figure 3.2). This is €4.7 billion higher than 2018 and €1.7 billion ahead of profile for 2019.

Figure 3.2: Tax revenue and PRSI growth 2016–2019

% change year-on-year



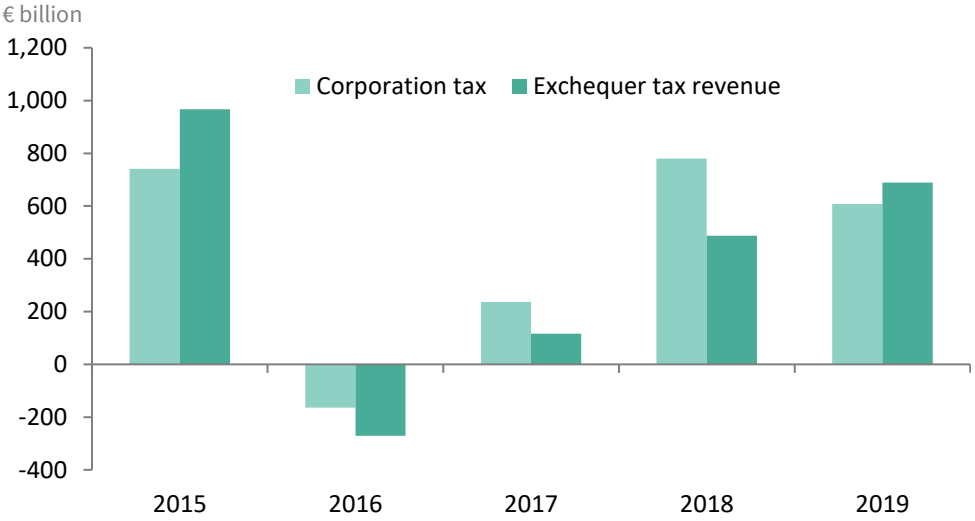
Sources: CSO; Department of Finance; and Fiscal Council workings.
Note: Tax revenue expressed in exchequer terms. Other includes stamp duties, customs, capital gains tax, capital acquisition tax and other unallocated tax receipts. It excludes local property tax and motor tax for comparability purposes. Total represents the growth of exchequer tax revenue and PRSI.

In recent years, in-year surprises in exchequer tax revenue have been largely driven by unexpected corporation tax receipts. Figure 3.3 shows the in-year surprise in tax revenue from October projections of that year versus the outturn less than three months later, for that year as a whole. For 2019, some €0.6 billion more corporation tax receipts were collected in the last three months than forecast in *Budget 2020*.

[23] Much of the increase in compensation of employees and intermediate consumption is related to increased health expenditure.

This was 88.2 per cent of the total surprise in exchequer tax receipts in the final three months of 2019.

Figure 3.3: In-year surprise in corporation tax



Sources: CSO; Department of Finance; Budgets 2016-2020; and Fiscal Council workings.
Note: Figure shows the in-year surprise in tax revenue from October of that year vs the outturns for that year. For example, figures for 2015 show the difference between the forecast of tax revenue in October 2015 (*Budget 2016)* vs the outturn for 2015. Exchequer tax revenue does not include PRSI.

3.3 Forecasts for 2020 and 2021 in *SPU 2020*

The fiscal projections in *SPU 2020* look radically different compared to previous forecasts. This is due to the Covid-19 crisis, the impact of policy measures introduced to mitigate the economic downturn, and the large fall in tax revenues. There is exceptionally high uncertainty surrounding economic and fiscal forecasts at present.

In line with the macroeconomic forecasts, fiscal projections in *SPU 2020* are prepared for this year and next year, rather than the usual five-year horizon. While the heightened uncertainty makes producing medium-term projections difficult, such projections would help support a medium-term orientation for fiscal policy and monitor potential economic imbalances.[24]

Expenditure

In 2020, *SPU 2020* forecast an increase in general government expenditure of €9.6 billion (11.1 per cent), two-thirds coming from Covid-19 measures and around a third from normal spending increases already planned in *Budget 2020*. With interest costs now set to fall by €0.5 billion, primary spending is projected to increase by €10.1 billion (12.3 per cent).

The *SPU 2020* expenditure forecasts for 2020 are based on the December 2019 Revised Estimates for *Budget 2020* (€70.4 billion) together with €8 billion for Covid-19-related costs.[25] Of these costs, €6.8 billion relate to Covid-19 policy measures introduced across a range of areas, while €1.3 billion relate to higher unemployment payments at standard rates over the remainder of the year after the 12-week duration initially planned for the Pandemic Unemployment Payment (PUP) and Temporary Wage Subsidy Scheme (TWSS) has elapsed. Specifically, it is assumed that all of those who are unemployed after the 12-week period would revert to the standard rate of Jobseeker's Benefit or Allowance.[26]

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[24] Fiscal ratios presented throughout are based on the earlier nominal GNI* figures provided by the Department for *SPU 2020*. The estimates were corrected in a later version of the report, yet the differences are relatively minor.

[25] Revised estimates for *Budget 2020* included €1.2 billion of spending contingent on a no-deal Brexit occurring. Only €50 million of this is now expected to take place, with the remaining funds reallocated to other spending items.

[26] Some claimants of the Pandemic Unemployment Payment or Temporary Wage Subsidy Scheme may not be eligible for the standard jobseeker's allowance or benefit after the 12-week period

Table 3.2 shows the breakdown of the €8 billion in Covid-19 costs. Of the additional €2 billion of funding for health, €1.8 billion is for intermediate consumption (purchase of medical equipment and renting of private hospital facilities), €0.1 billion is for additional staffing and €0.1 billion is for gross fixed capital formation.[27]

Table 3.2: Covid-19 spending

€ billion

	2020
Covid-19 spending	8.0
PUP/TWSS	4.5
Unemployment payments (post-PUP/TWSS)	1.3
Business supports	0.3
Health (in addition to *Budget 2020*)	2.0
Of which:	
Intermediate consumption	1.8
Compensation of employees	0.1
Gross fixed capital formation	0.1

Sources: *SPU 2020*.
Note: PUP stands for Pandemic Unemployment Payment and TWSS stands for Temporary Wage Subsidy Scheme.

Approximately 6,000 temporary staff have been employed in the health sector. Some of this additional staffing is due to redeployment and early recruitment of nursing students and medical interns. Given that much of staffing is assumed to be temporary, and much of the purchase of medical equipment is assumed to be one-off, SPU forecasts for 2021 are made based on almost no carry over impact into 2021. Gross voted spending in the Department of Health last year was €17.5 billion, so a €2 billion package corresponds to just over 10 per cent of annual spending. Given the recent challenges of managing health spending within budgets, there is still a risk of health spending exceeding this new budgeted level for this year.

Employment and unemployment policy supports account for €4.5 billion of the package. The PUP and TWSS are assumed to run for 12 weeks, ending in mid-June

elapses. This may be more common for part-time employees or those that have not made sufficient PRSI contributions.

[27] This is in addition to the €840 million increase which had already been budgeted for 2020 as per the Revised Estimates 2020. For context, gross voted expenditure in health increased by €1.5 billion in 2019.

when the initial scheme was scheduled to expire.[28] For forecasting purposes, *SPU 2020* assumes that both schemes end after the 12-week period elapses.[29]

Fiscal forecasts in *SPU 2020* assume that there are just under 600,000 claimants of the PUP, with a further 452,000 availing of the TWSS. Applying an average costing of €350 per week for the PUP and TWSS to this number of claimants for 12 weeks would imply a total cost just under €4.5 billion.[30] On a general government basis (Table 3.3), the cost of these schemes is reflected in increased spending on social payments (up €4.2 billion) and subsidies (up €2.0 billion).

Business supports with a fiscal cost of €0.3 billion have been incorporated into *SPU 2020* forecasts. Liquidity supports of €1 billion were announced on 8th April. These are assumed to not incur a cost. While business supports have a set cost, potential costs from liquidity supports or loan guarantees are more uncertain (see expenditure risks section).

It is important to note that fiscal forecasts in *SPU 2020* were based on the policy measures announced at that time. Further policy measures are likely to lead to increased spending, so one might take the *SPU 2020* forecasts as a lower bound for expenditure for both 2020 and 2021.

No account was taken in the forecasts of spending related to an economic recovery plan anticipated in the *SPU 2020* document. Any extension of the PUP and/or TWSS would also lead to higher-than-anticipated expenditure for 2020.

[28] Taoiseach Varadkar noted in relation to the Pandemic Unemployment Payment that "it will need to continue at least until people have the opportunity to return to their jobs. For the vast majority, that will not be possible before mid-June, so, yes, it will need to be extended beyond mid-June". https://www.oireachtas.ie/en/debates/debate/dail/2020-05-07/2/

[29] If one simply divides the assumed €4.5 billion cost equally over 12 weeks, this would imply a cost of €375 million per week. This gives some sense of the cost of additional weeks of this scheme (assuming the numbers of claimants were constant).

[30] €412 per week is the maximum level of subsidy available under the TWSS.

Table 3.3: General government expenditure forecasts

€ billion

	2019	2020	2021
General gov. expenditure	86.1	95.7	93.3
Compensation of employees	23.9	24.3	24.9
Intermediate consumption	12.0	14.3	13.6
Social payments	30.7	34.9	33.7
Interest expenditure	4.5	4.0	3.8
Subsidies	1.7	3.7	1.6
Gross fixed capital formation	8.1	8.8	9.0
Capital transfers	1.7	2.0	2.4
Other	3.6	3.8	4.2
Primary expenditure	81.7	91.7	89.5
Primary expenditure (% GNI*)	39.7	52.5	47.2

Sources: *SPU 2020*.

Note: Primary expenditure is calculated as total expenditure minus interest payments.

Compensation of employees for 2019 was €0.9 billion higher-than-forecast in *Budget 2020* and *Budget 2019*. Despite this upward revision to the 2019 level, the *SPU 2020* forecast is only €0.5 billion higher than that in *Budget 2020*. This means that *SPU 2020* forecasts lower growth for 2020 (€0.3 billion) compared to *Budget 2020* (€0.7 billion).

SES 2019 estimated public sector pay increases in 2020 to cost €0.4 billion.[31] Additional temporary recruitment into the health sector (related to Covid-19, and hence was not part of *Budget 2020* forecasts) in 2020 is expected to cost €0.1 billion. Growth due to these two items alone (€0.5 billion) would exceed the increase forecast in *SPU 2020*. So if one was to start from the 2019 outturn as a base for forecasting the 2020 level, one would forecast a higher level for 2020 than is the case in *SPU 2020*.[32]

Overall, intermediate consumption is forecast to increase by €2.3 billion this year, of which €1.8 billion relates to Covid-19 healthcare spending. *Budget 2020* had forecast an increase of €1.0 billion for 2020.

[31] One of the elements of this is a 2 per cent pay increase for more than 300,000 employees in early October 2020. This pay rise is expected to cost €0.1 billion in 2020 and to have a carryover cost of €0.3 billion in 2021.

[32] If some of the 2019 level of expenditure is assumed to be one-off or if the Covid-19 crisis means less hiring is needed in 2020, then using 2019 as the base to forecast from may not be advisable. However, there is no clear data to suggest that this might be the case.

Gross fixed capital formation is forecast in *SPU 2020* to grow by €0.8 billion in 2020.[33] This increase in general government terms is also reflected in exchequer capital spending. The slowdown in building and construction activity could result in lower capital spending. However, Approved Housing Bodies purchase completed homes as well as funding new builds. As many of these bodies are included in the general government sector, general government capital spending may be less sensitive to new building activity.

Box F: Policy measures introduced since the Covid-19 outbreak

The government has introduced a range of fiscal supports since the onset of the Covid-19 outbreak in Ireland. Broadly speaking, these efforts have focussed on three areas; providing income support to those made unemployed as a result of the crisis, including directly subsidising wages for employees who otherwise would have been made unemployed, delivering cash flow supports to businesses, and directing additional funding towards the health sector.

All told, the government has allocated an additional €14 billion (8 per cent of estimated GNI* for 2020) of funding for the provision of these programs (of which €7 billion is through direct spending). This box provides a brief overview of the government's fiscal measures outlined to date, along with some tentative indications as to how these programmes may evolve over the coming months.

Table F.1: Overview of Fiscal Measures

	Est. cost €m
Income Supports	4,500
Pandemic Unemployment Payment: Emergency unemployment payment of €350/week to those who have lost their jobs on or before 13th March due to Covid-19. It is higher than the standard jobseeker's allowance of €203 and the government has budgeted for such payments to run over a 12-week period until 8th June.	
Temporary Wage Subsidy Scheme: A tiered payments system that subsidises between 70% and 85% of an eligible employee's salary up to maximum of €412/week (equivalent to pre-tax annual income of almost €22,000).[2] The scheme was launched on 26th March with a duration set to 12 weeks by the government.	
Enhanced Illness Benefit Scheme: The Illness Benefit Scheme for those who have been either diagnosed with the virus or have been told to self-isolate by a medical professional has been increased to €350/week, up from the standard Illness Benefit rate of €203. This payment is provided for 2 weeks for those medically required to self-isolate, and 10 weeks for those diagnosed with the virus. It is unclear whether this payment will extend beyond the 12-week lockdown period.	
Business Supports	7,500
Covid-19 Working Capital Loan Scheme: Designed to facilitate access to short-term liquidity for businesses impacted by the virus. The term of these loans is reflective of this aim, and is between 1 and 3 years, with a maximum fixed interest rate of 4 per cent.	450

[33] An increase of €0.9 billion was projected in *Budget 2020*.

Covid-19 Future Growth Loan Scheme: An upgraded pre-existing facility to provide longer term loans to firms impacted by Covid-19. The interest rate ceiling is set at 4.5% for this facility, with durations between 8 and 10 years.	200
Sustaining Enterprise Fund: Designed to provide manufacturing and internationally traded services companies with capital to help stabilise and rebuild their businesses	180
Credit Guarantee Scheme: Designed originally to offer protection to SMEs affected by Brexit. The facility is intended to reduce the onset of liquidity and credit constraints for smaller borrowers who would otherwise face barriers to attracting credit.	150
Pandemic Stabilisation and Recovery Fund: This fund will form part of the Irish Strategic Investment Fund's portfolio, replacing the amount allocated to its global investments. The fund will invest in medium to large scale enterprises across all sectors, with a focus on near term economic stimulation and stabilisation of the Irish economy.	2,000
Covid-19 Credit Guarantee Scheme: Credit guarantees of 80% on lending to SMEs until the end of 2020, for terms between 3 months and 6 years, and values between €10,000 and €1m. Lenders are subject to a portfolio cap of 50%, with the scheme applying to all sectors of the economy.	2,000
Restart Grant for Micro and Small Businesses: The grant will reimburse micro and small businesses equivalent to a maximum amount reflecting their 2019 commercial rates bill, with a cap per business of €10,000, and a minimum of €2,000.	250
Commercial Rates Break / Tax Forbearance: Revenue tax and commercial rates breaks and deferrals have been facilitated for businesses. Tax liabilities for businesses will be 'warehoused' for one year following the recommencement of trading. Rates will be deferred for 3 months beginning 27th March for businesses forced to close as a result of the shutdown	2,260
Health Sector Supports	2,000
Capacity Increasing: Additional capacity, increasing staffing and overtime.	
Securing Private Hospitals: Securing the use of private healthcare facilities.	
Additional Funding: Measures to support the Covid-19 Action Plan and supports for nursing homes. Customs 'green routing' for critical pharmaceutical goods.	
Total:	**14,000**
-- of which direct spending*	7,000
-- of which guarantees / loans/investments	7,000
Less funds previously allocated for other purposes	–750
Total (less funds previously allocated)	**13,300**

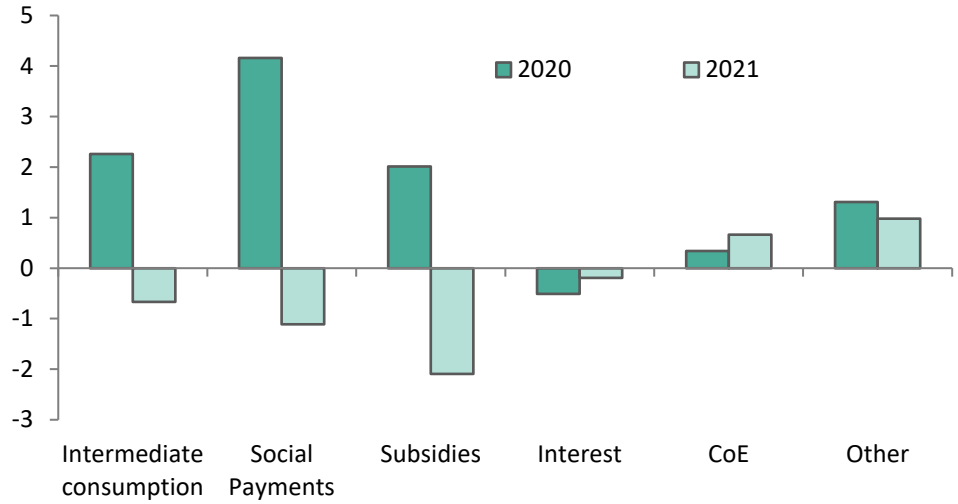
Sources: Department of Finance; Department of Business, Enterprise, and Innovation; Fiscal Council workings.
*The government has also launched a round of smaller direct grants to supplement the main lending facilities and investments detailed in this box.

On a headline basis general government expenditure is forecast to fall in 2021 (€2.4 billion or 2.5 per cent), nevertheless leaving it €7.2 billion above its 2019 level. The projected fall reflects halting spending on the main government support schemes and the ending of exceptional health spending related to Covid-19 (Figure 3.4), partly offset by higher compensation and other costs.

Subsidies are forecast to fall by €2.1 billion in 2021 after the TWSS has ended. Social payments are forecast to fall by €1.1 billion. This is partly due to the savings from the assumed ending of the PUP scheme and the reduced level of unemployment. Intermediate consumption is also forecast to fall in 2021 (€0.7 billion), after exceptionally strong purchases of equipment for the health sector in 2020.

Figure 3.4: General Government Expenditure

Year-on-Year change, € billion



Sources: *SPU 2020*.

Note: CoE stands for Compensation of Employees. The "Other" category here includes gross fixed capital formation, capital transfers and other general government expenditure.

Compensation of employees is forecast to increase by €0.7 billion in 2021. This is partially driven by a €0.3 billion carryover cost arising from a pay increase which is due to start in October 2020 (and hence would have to be paid for a full year in 2021).

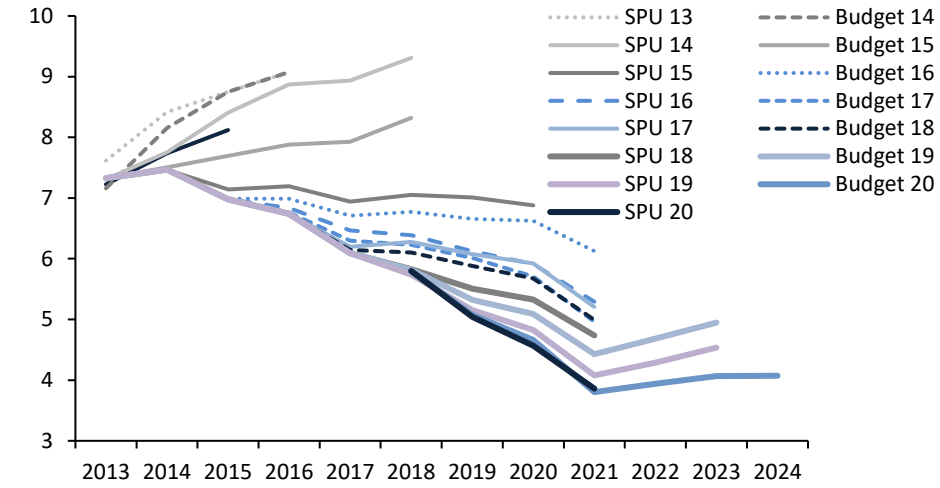
Budget 2020 had projected annual contributions of €0.5 billion to the Rainy Day Fund, starting in 2021. *SPU 2020* forecasts indicate that no contributions would be made in 2020 or 2021, with a drawdown of the €1.5 billion fund expected in 2020.

Interest expenditure

Figure 3.5 shows the reduction in forecast and actual interest costs. Figure 3.5 also shows that interest costs have been consistently lower than forecast for a number of years. Given the short forecast horizon in *SPU 2020*, the impact of large deficits and increasing funding requirements are not evident in the forecasts.

Figure 3.5: Revisions to national debt cash interest payments

€ billion

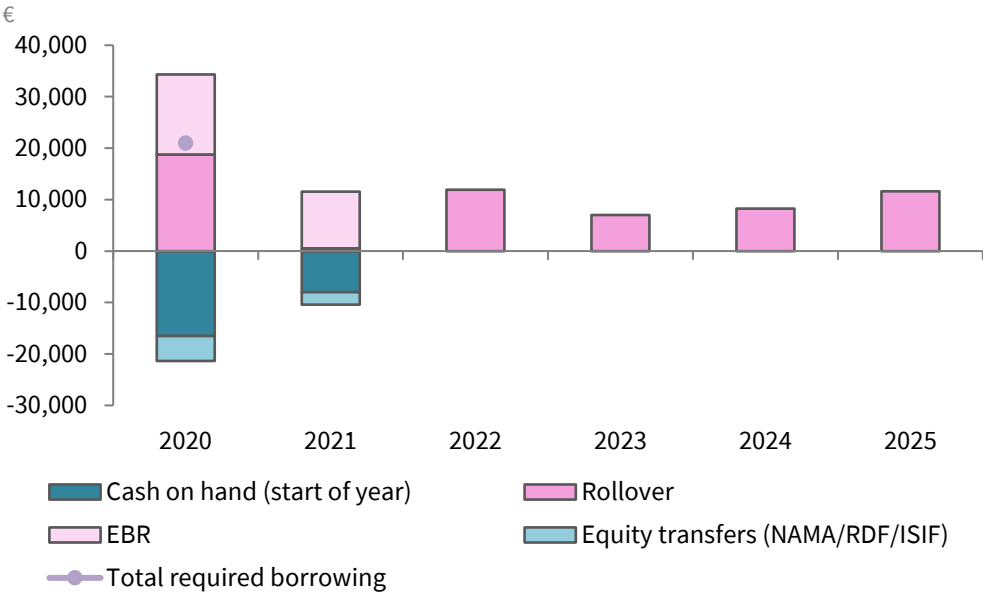


Sources: Department of Finance.

Despite the absolute amount of Irish government debt increasing in 2020 and 2021, the cost of servicing this debt is forecast (in *SPU 2020*) to fall. Improvements in government creditworthiness and policy actions by the ECB and other central banks have reduced the interest rate at which the government can borrow. Retiring higher coupon bonds and refinancing at lower rates has brought down the effective interest rate on Irish government debt.

These falls in interest rates more than outweigh the increase in the stock of debt, hence debt service costs fall. In the coming years, the marginal rate will be important due to high funding requirements both for new borrowing and rolling over existing liabilities (Figure 3.6).

Figure 3.6: Government debt issuance and rollovers



Sources: Department of Finance & NTMA.
Note: EBR stands for Exchequer borrowing requirement. Cash on hand at the start of 2021 is estimated at approximately €8 billion based on the anticipated run down of cash balances in 2020 using information in *SPU 2020*. Total required borrowing is only shown for 2020. Thereafter, total required borrowing in a calendar year would depend on the pre-funding strategy of the NTMA and the future exchequer borrowing requirements.

Expenditure risks

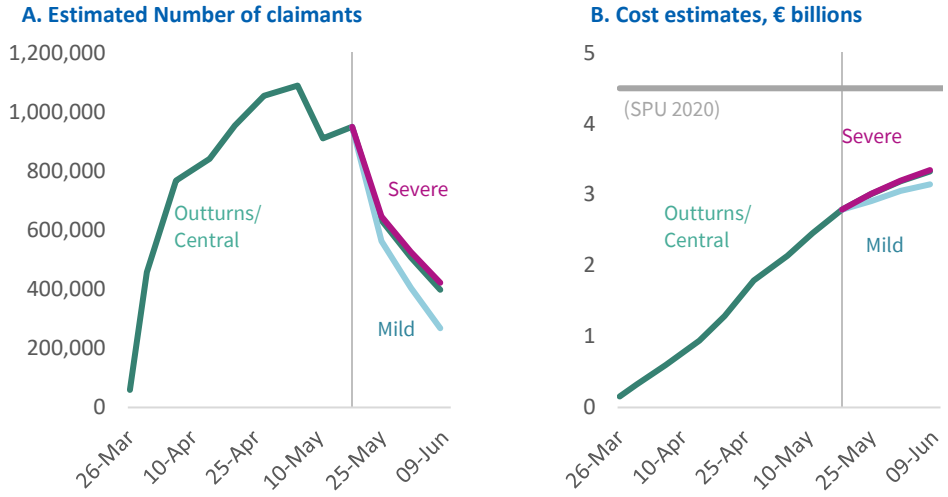
As noted earlier, fiscal forecasts in *SPU 2020* are based on the PUP and TWSS being in place for 12 weeks. Hence any extension to these schemes would imply an upside risk to expenditure forecasts in *SPU 2020*. As noted earlier, the costing of €4.5 billion was based on almost 600,000 claimants of PUP, with a further 452,000 availing of the TWSS. These estimates are based on those numbers availing of these schemes for the full 12 weeks.

Latest estimates suggest that 585,000 are currently claiming the PUP, while a further 249,200 are in receipt of the TWSS.[34] Figure 3.7 shows that there was a rapid increase in uptake of these schemes. Despite this, in the first three weeks the scheme was operating, uptake was well below the average levels assumed in costing the scheme. If the number of claimants falls as restrictions are lifted (Figure 3.7), the cost of these schemes could be less than €3.5 billion.[35] These lower-than-

[34] Correct as of 21st May. Latest data refers to May 18th.
[35] If the number of claimants were to stay constant for the final three weeks of the schemes at the current estimated levels, the cost would run below €4 billion. The number of claimants on the TWSS can be estimated by dividing the weekly scheme expense details provided by the Revenue Commissioners by €350.

anticipated costs for the initial phase of the scheme may aid offsetting the cost of extending the scheme beyond the 12 weeks that have been budgeted for.

Figure 3.7: Claimants to date and illustrative scenarios



Sources: Revenue; Department of Social Protection; and Fiscal Council workings.
Notes: The scenarios are broadly consistent with the Mild, Central and Severe scenarios outlined in Box C. Budgeted costs in the *SPU 2020* assume a 12-week period of claims totalling €4.5bn ending in early June.

There are also risks surrounding social payments after the PUP and TWSS are ended. Upside risks (to the public finances) would stem from faster-than-expected progress in containing the virus, and a synchronised economic recovery that exhibited few scarring effects. On the downside, repeated waves of the virus, an economic restart that was slower than anticipated, or one where strong social distancing measures needed to remain in place would be costly.

Fiscal stimulus or further policy measures beyond those assumed in *SPU 2020* pose a significant risk to SPU fiscal forecasts. Figure 1.18 gives an illustrative example of how spending could evolve with an assumed stimulus package over three years. Table 1.2 shows the impact such a package could have on the general government balance.

Health expenditure poses a risk to fiscal forecasts in *SPU 2020*. Expenditure in this area has proven difficult to manage in recent years. A successful containment of Covid-19 would result in fewer outlays for the health sector and would allow for a more manageable transition back to the pre-crisis norm, including meeting the pent-up demand for elective procedures. There is also a risk that the allocation of €2 billion in additional funding for the health sector proves insufficient, with this being

determined by the evolution of the virus. A failure to contain Covid-19 would exert great pressure on an already capacity-constrained service.

All additional healthcare staff hired in 2020 have been assumed to be temporary. If these were to be retained for longer than budgeted for, then that would pose an upside risk to expenditure projections for both 2020 and 2021.

The ultimate costs of liquidity supports or loan guarantees to the exchequer is largely dependent on how economic conditions evolve. A rapid resumption of economic activity would lead to less debt and liability being accumulated. Firms would be better placed to attract market-based funding and take advantage of the economic recovery.

On the downside, extending or repeating the lockdown, the failure of a meaningful recovery to materialise, or one that involves the economy being forced to run at a reduced capacity would threaten the solvency of many firms. Liabilities associated with extending credit guarantees and other measures would be realised if firms ceased to trade, or continued support would result in many 'zombie' firms operating at the expense of the state.

Regarding interest payments, the higher levels of government debt, combined with increased borrowing requirements, mean that the marginal interest rate on government borrowing becomes more important.

Budget 2020 allocated €1.2 billion of spending in 2020 contingent on a hard Brexit occurring this year. *SPU 2020* assumes a much more benign outcome. As a result, this contingent spending is not included in *SPU 2020* estimates. However, spending related to preparing for Brexit may be required in 2021 or later. More generally, higher unemployment as a result of Brexit would put upward pressure on expenditure.

Revenue

The sharp fall in economic activity forecast for 2020 has major implications for government revenue in 2020. A reduction in income and employment means lower direct taxes and social contributions (Income tax and PRSI combined are forecast to

fall by €6.6 billion in 2020). Falling consumption means lower indirect tax receipts (*SPU 2020* forecasts a fall of €3.7 billion in VAT and excise receipts).

The general forecasting methodology used in *SPU 2020* for the various revenue headings is to project the change of revenue using the change in the associated macroeconomic driver, multiplied by an elasticity. The elasticity reflects how closely receipts move with its macroeconomic driver. Where applicable, any assumed impacts of policy changes are also included. In addition to these factors, judgement is often applied. Judgement can be helpful to take account of specific factors like changes in behaviour or where the elasticities may be misleading. Given the uncertainties at this time, there may be reasons to anticipate factors other than those typically considered as impacting on receipts. For example, specific sectors being more severely impacted may result in a larger effect on certain tax headings than would be anticipated by simply looking at the macroeconomic driver.

Box G: Experience of Falling Revenues in the 2008 Crisis

While the standard approach to revenue forecasting performs reasonably during normal times, past sharp downturns—notably in 2008—lead to very large falls in revenues.

This box evaluates how a standard revenue forecasting methodology would have performed in 2008, the most recent example of a sharp fall in revenue. This is useful in the current environment. If standard forecasting methodologies tend to underestimate or overestimate revenue when a sharp fall in activity and revenue occurs, then there may be a case for supplementing model-based forecasts with judgement.

While different revenue headings typically track changes in their respective macroeconomic drivers, this relationship might not hold during a recession. For example, if income losses were concentrated at the top of the income distribution and/or meant people earning less and moving to a lower tax bracket (where average tax rates are lower), this would result in a bigger loss in income tax revenue than predicted by looking at changes in aggregate income.

To assess this, the Council's standard forecasting methodology is used on the historical data for the 2008 crisis. The change in the macroeconomic driver is used, which is then multiplied by its elasticity. The elasticities used are those estimated using policy-adjusted revenue in Conroy (2019).

For example, for aggregate income tax (including USC), an elasticity of 1.4 is estimated in Conroy (2019).[36] When forecasting income tax, the Department forecasts PAYE income tax and USC separately. Elasticities of 2.1 and 1.2 respectively are used. If one weighted these elasticities by their share of 2019 receipts, a weighted average of 1.9 would result. Using a higher elasticity would mean forecasting stronger growth when income is rising, and larger falls when income is contracting.

[36] This elasticity is estimated over the period 1987 – 2018.

The actual outturn of the macroeconomic driver is used for this exercise, so any errors are due to the forecasting methodology and not macroeconomic errors. The revenue forecasts are adjusted for the yield or the cost of tax policy changes.

Forecasts are examined in year (T), one year ahead (T+1) and two years ahead (T+2). The revenue headings examined are income tax (including USC), VAT and PRSI.

Table G.1: Income tax (including USC) forecast errors from standard model (percentage of receipts)

Forecast horizon	2009	2010	2011	2012	Average (2009–2012)
T	11.8	13.6	0.0	-4.4	5.3
T+1	12.4	24.9	10.7	-4.4	10.9
T+2	6.0	25.5	19.5	5.3	14.1

Source: Fiscal Council workings.
Note: Model projections use the outturn of the macroeconomic driver, an elasticity of 1.4 and budget day estimates of the cost/yield of income tax policy changes. Positive values indicate forecasts exceed the outturn. Negative values indicate outturns exceed the forecasts.

For income tax, we can see that the model forecast would have typically overestimated the outturns during this period by around 5 per cent in-year and by around 10 per cent and 15 per cent one- and two-years ahead respectively. Forecasts for 2010 were around 25 per cent too optimistic.[37] While based on a very small number of observations, these results may indicate that superior forecasts may be obtained by applying some negative judgement to the model-based forecasts during a severe downturn.

It is worth noting that the Department of Finance typically uses an elasticity (1.9 in aggregate terms) which is larger than that used for this exercise (1.4). So, for periods where economic activity is contracting, using the Department's methodology would lead to lower forecasts of revenue. Nevertheless, errors would be large if the past pattern were repeated.

Table G.2: VAT forecast errors using personal consumption as the macro driver (percentage of receipts)

Forecast horizon	2009	2010	2011	2012	Average (2009–2012)
T	13.0	3.4	1.5	-0.3	4.4
T+1	26.3	16.9	5.0	1.2	12.3
T+2	27.1	30.8	18.9	4.5	20.4

Source: Fiscal Council workings.
Note: Model projections use the outturn of the macroeconomic drivers, an elasticity of 1.0 (consumption) and budget day estimates of the cost/yield of VAT tax policy changes. Positive values indicate forecasts exceed the outturn. Negative values indicate outturns exceed the forecasts.

For VAT, initially we use only personal consumption as a macroeconomic driver. An elasticity of 1.0 is applied, as is done by the Department in forecasting VAT receipts. We find that forecasts using this approach (without any judgement applied) would have vastly overestimated VAT receipts. These errors grow over time, as errors cumulate.

[37] It is worth noting that there were substantial income tax policy changes occurring in this period. If the yields from these policy changes were overestimated, then this could partially explain the forecasts exceeding the outturns.

This overestimation of VAT receipts in this period may be due to not taking account of the severe contraction in building and construction activity which took place. This activity has previously been found to be VAT rich (construction activity accounting for a third of VAT receipts in 2008). Using consumption as well as building and construction activity as macroeconomic drivers would have resulted in small negative forecast errors (before applying judgement) during this period (see Table G.3).

Table G.3: VAT Forecast Errors Using Personal Consumption and Building and Construction Investment as Macro Drivers (percentage of receipts)

Forecast horizon	2009	2010	2011	2012	Average (2009–2012)
T	2.8	-5.7	-2.4	-0.3	-1.4
T+1	9.0	-3.0	-8.0	-2.7	-1.2
T+2	7.0	2.9	-5.3	-8.1	-0.9

Source: Fiscal Council workings.
Note: Model projections use the outturn of the macroeconomic drivers, an elasticity of 0.8 (consumption) and 0.2 (building and construction) and budget day estimates of the cost/yield of VAT tax policy changes. Positive values indicate forecasts exceed the outturn. Negative values indicate outturns exceed the forecasts.

For PRSI, the elasticity estimated in Conroy (2019) is consistent with that used by the Department of Employment Affairs and Social Protection (1.0). We find that in-year forecasts have average errors close to zero (albeit with large errors in opposite directions in 2011 and 2012). When looking one or two years ahead, there is some evidence that forecasts may be biased downwards. Overall, there does not appear to be very strong evidence for applying judgement to model-based forecasts of PRSI, particularly if a conservatism bias applies.

Table G.4: PRSI forecast errors (percentage of receipts)

Forecast horizon	2009	2010	2011	2012	Average (2009-2012)
T	-0.8	-0.1	-10.3	14.2	0.8
T+1	-2.5	-0.9	-10.4	2.8	-2.8
T+2	-5.5	-2.6	-11.0	2.7	-4.1

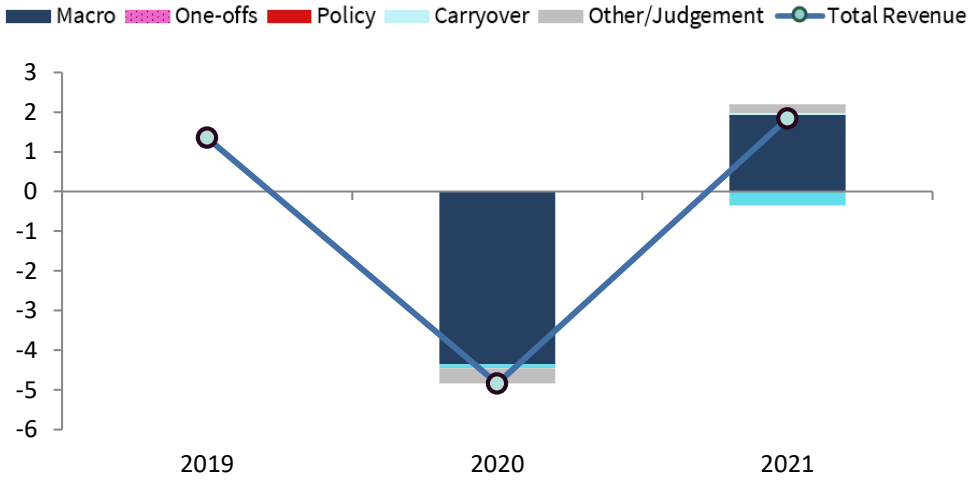
Source: Fiscal Council workings.
Note: Model projections use the outturn of the macroeconomic driver, an elasticity of 1 and budget day estimates of the cost/yield of PRSI policy changes. Positive values indicate forecasts exceed the outturn. Negative values indicate outturns exceed the forecasts.

Focusing on **exchequer tax revenue**, *SPU 2020* forecasts a fall of 16.4 per cent in 2020. Income tax is forecast to fall by €4.7 billion (20.4 per cent) in 2020. This largely reflects the fall in income (macro driver) and employment (Figure 3.8). In addition to this macro driver effect, negative judgement (€0.4 billion) has been applied to the SPU forecasts (just under 2 per cent of income tax receipts). This is broadly

consistent with previous experience.[38] For 2021, income and employment are forecast to recover somewhat. In line with that, income tax receipts are forecast to grow (€1.7 billion or 9.2 per cent), but the level remains below 2017 levels.

Figure 3.8: Falls in 2020 income tax (PAYE and USC) caused by lower macro drivers and judgement applied

€ billion change year-on-year



Sources: Department of Finance; and Fiscal Council workings.
Note: "Other" reflects other factors/judgement applied by the Department of Finance and carryover impacts from previous policy measures. The elasticities used by the Department of Finance are used for this exercise (2.1 for PAYE income tax, 1.2 for USC). See Appendix C for more details.

PRSI receipts are forecast to fall in 2020 by 16.6 per cent. This fall is less severe than is the case for income tax and reflects that income tax is more progressive and so more sensitive to the level of income, as well as having a broader base that includes more volatile components such as profit-like income. As a result, income tax revenue is more sensitive to changes in income. For 2021, PRSI is forecast to grow by 9.9 per cent, recovering half of the revenue decline in 2020.

VAT receipts are projected to decline in 2020 by €2.8 billion or 18.6 per cent. This reflects the projected fall in consumption. As well as this impact, negative judgement (€0.8 billion or 6.1 per cent of receipts) is applied. This is applied to reflect forbearance measures in place from the Revenue Commissioners in 2020. Forecasts from the Department use only personal consumption as a

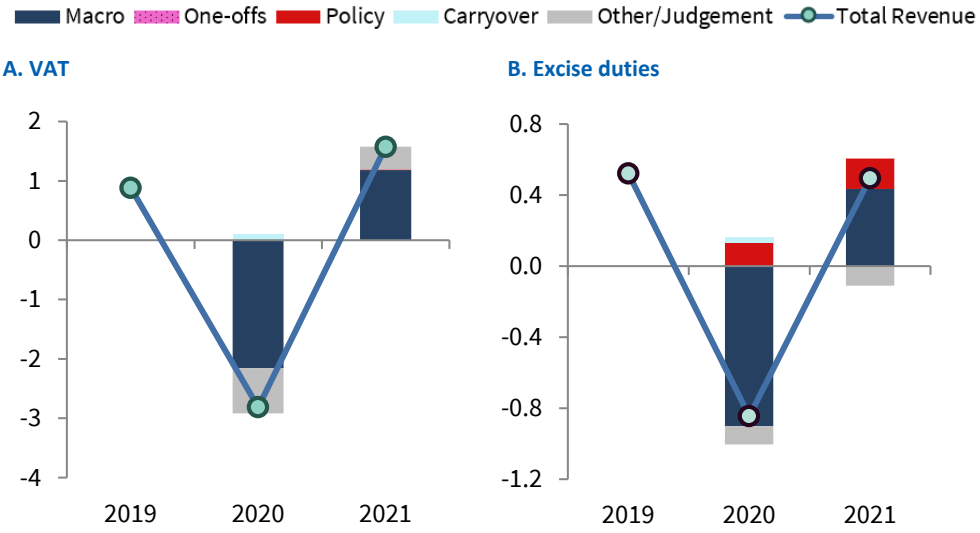
[38] Forecast errors from the last recession would average 5.3 per cent for in-year forecasts, which would imply €1 billion of judgement for 2020. However, as the Department are using a higher elasticity than that used in Box G, this would imply a larger fall in income tax receipts for a given fall in income. This difference in elasticity would equate to approximately €0.7 billion for 2020.

macroeconomic driver. If building and construction activity were to be used alongside consumption (using elasticities from Conroy, 2019), a more severe fall in VAT receipts would result.[39] This difference is substantial (€0.8 billion), as *SPU 2020* forecasts a sharp fall in building and construction activity in 2020.

For 2021, VAT receipts recover somewhat, reflecting the forecast recovery in personal consumption (Figure 3.9). Positive judgement is applied in 2021 (€0.4 billion) as it is assumed that forbearance measures from the Revenue Commissioners will not continue into 2021.[40] *SPU 2020* forecasts an increase in receipts of €1.6 billion (12.8 per cent) in 2021.

Figure 3.9: Falls in 2020 VAT and excise by lower macro drivers and judgement applied

€ billion change year-on-year



Sources: Department of Finance; and Fiscal Council workings.
Note: "Other" reflects other factors/judgement applied by the Department of Finance and carryover impacts from previous policy measures. See Appendix E for more detail.

Excise duties are forecast to fall in 2020 (€0.8 billion or 14.2 per cent). This decrease is driven mainly by reduced personal consumption.[41] Downward judgement of €0.1

[39] This presumes that the same level of judgement (€0.8 billion) is applied.
[40] This is applied as positive judgement, as the negative judgement in 2020 leads to a lower base for 2021 forecasts. As a result, model forecasts for 2021 are impacted by the judgement applied in 2020.
[41] Revenue (2018a) report that 43 per cent of 2017 excise duties were derived from alcohol and tobacco. A further 34 per cent of excise duties came from petrol and diesel.

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.[42]

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 McGuiness and Smyth (2019), we show that most of the performance in corporation tax in recent years is still unexplained by the domestic economy.

[42] 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.

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

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

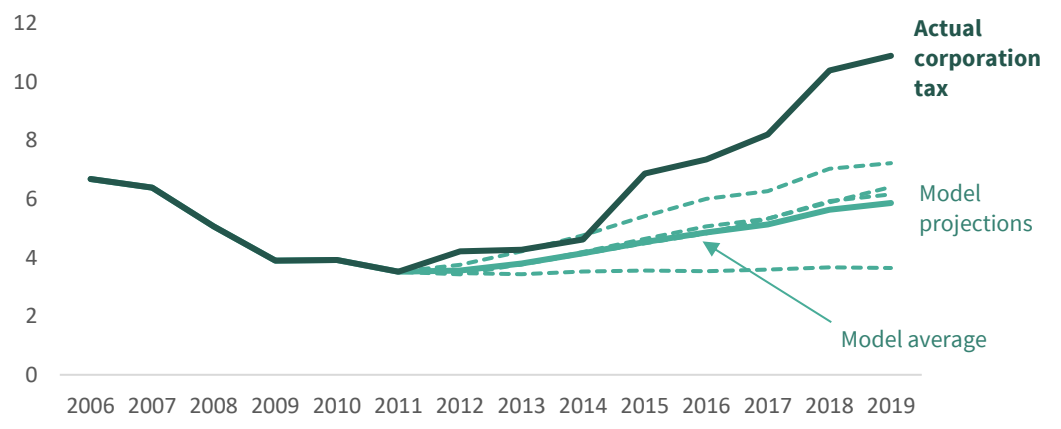
$$\Delta CT_t = \alpha_s + \beta_s \Delta output_t + \gamma(CT_{t-1} - (\alpha_L + \beta_L output_{t-1})) + \varepsilon_t \quad (3)$$

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

€ billions



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

billion (14.4 per cent). Social contributions (mainly made up of PRSI) are forecast to fall (€1.8 billion or 12.1 per cent) in 2020.

Table 3.4: *SPU 2020* general government revenue forecasts

€ billion, excluding one-offs

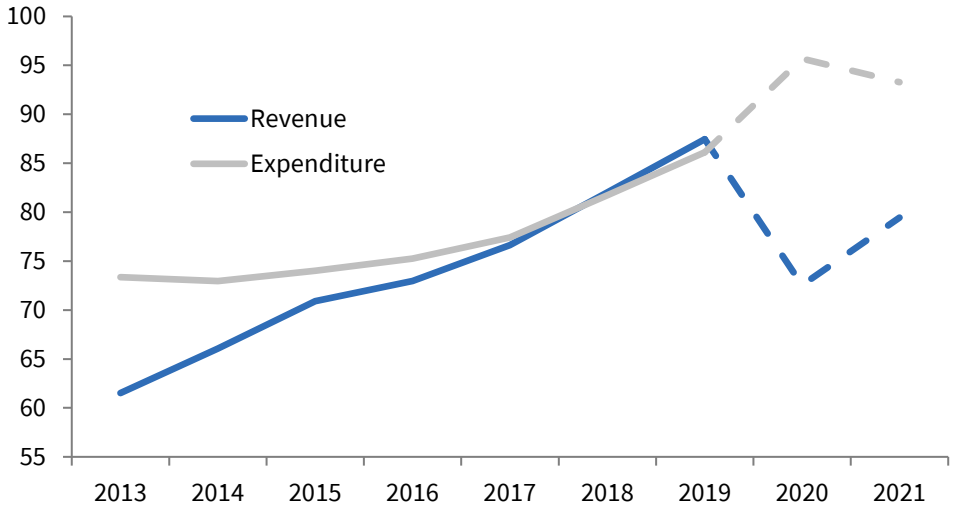
	2018	2019	2020	2021
General gov. revenue	82.0	87.5	72.5	79.4
Taxes on production and imports	25.7	27.2	21.9	25.0
Current taxes on income, wealth	34.0	36.6	31.4	33.7
Capital taxes	0.5	0.5	0.4	0.5
Social contributions	13.5	14.5	12.8	13.7
Property income	1.3	1.7	1.2	0.6
Other	7.0	6.9	5.0	6.1

Sources: Department of Finance.
Note: One-offs are those assessed by the Council as applicable.

SPU 2020 projects that general government revenue will recover somewhat in 2021, in line with the economy (Figure 3.10). Growth of €6.9 billion or 9.5 per cent is forecast. Even with this strong growth, revenue remains well below 2019 levels (€8 billion or 9.2 per cent lower).

Figure 3.10: General government revenue and expenditure

€ billion, excluding one-offs



Sources: Department of Finance; and CSO.
Note: One-offs are those assessed by the Council as applicable.

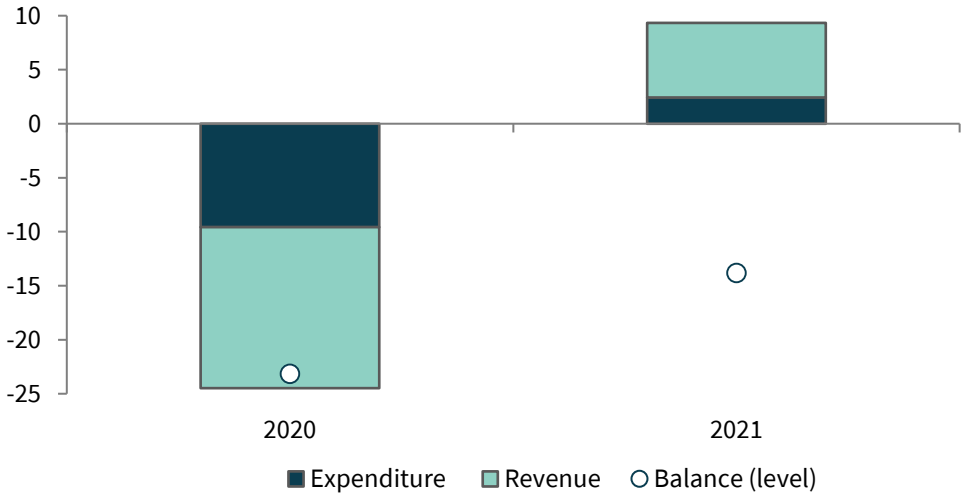
Taxes on production and imports are forecast to rebound most strongly (€3.1 billion or 14 per cent), having fallen mostly sharply in 2020. This is driven by the strong growth forecast for personal consumption in 2021, relative to the weak 2020 level. Current taxes on income and wealth are also forecast to recover some of the losses in 2021 (an increase of €2.4 billion or 7.5 per cent relative to 2020). Given the forecast improvement in income and employment, social contributions are also forecast to grow in 2021 (€0.9 billion or 7.0 per cent).

Budget Balance, 2020 and 2021

SPU 2020 forecasts a **general government deficit** of €23.1 billion (13.3 per cent of GNI*) in 2020. To give a sense of the scale and speed of revisions, estimates from January this year had projected a surplus of €2.6 billion (1.3 per cent of the projection at the time for GNI* (Department of Finance, 2020b)). For 2021, a deficit of €13.1 billion (7.3 per cent of GNI*) is forecast in *SPU 2020*. Figure 3.11 shows that revenue changes are forecast to have a bigger impact on the general government balance in 2020 and 2021 than expenditure changes.

Figure 3.11: Expenditure and revenue contributing to changes in the general government balance

€ billion, annual change



Sources: Department of Finance; and CSO.
Note: Changes in expenditure are recorded as their impact on the balance (i.e. expenditure increases are recorded as negative, as they worsen the balance). The level of the general government balance is also shown.

Revenue Risks

Box H suggests that approximately half the corporation tax receipts could be considered "excess", that is, larger than would be explained by the economy's underlying performance and historical/international norms. However, there are also

some upside risks to the *SPU 2020* forecasts. For example, the changing international tax environment could result in companies paying more corporation tax in Ireland in the next few years, as has been the case recently. This, however, remains uncertain and the tax head remains the most volatile of the main taxes.

Looking over a longer horizon (beyond that covered by *SPU 2020* forecasts), other important risks could materialise. The OECD BEPs process could negatively impact on corporation tax receipts. Department of Finance (2020b) estimates suggest an impact to the level of receipts of €0.5 billion in 2022, rising to €2 billion in 2025. More generally, changes to the international tax environment could impact on Irish corporation tax receipts over the medium term.

Brexit will have significant impacts on the Irish economy and the public finances. As noted in Chapter 1, a hard Brexit could reduce long-run potential output. Lower activity and output would result in lower revenue. The three scenarios in Section 3.4 give a sense of how revenue responds to differing economic conditions.

3.4 Three Medium-term Fiscal Scenarios and Risk Analysis

Five-year ahead fiscal projections, as usually provided in the Budget and SPU are key to informing budgetary choices. With uncertainty exceptional high, this section develops three fiscal scenarios out to 2025 consistent with the Mild, Central and Severe scenarios set out in Box D, Chapter 2. The Central scenario is designed so that it matches general government expenditure and revenue forecasts (for 2020 and 2021) published in *SPU 2020*. These scenarios reflect both different economic outcomes and the different policy measures required in each scenario, assuming that policy reactions are broadly in line with those to date.

Box I: Policy Measures and Fiscal Scenarios

This box sets out three fiscal scenarios based on the macroeconomic scenarios set out in Chapter 2 Box D. These scenarios are based on the implementation of announced and existing policy measures. For periods of lock-down, it is assumed that the Government mobilises the same supports as have been used to date. For the Central and Mild scenarios, the only lockdown period is the 12-week period running from late-March 2020 to mid-June 2020. For the Severe scenario, there are additional 12-week lockdown periods in Q4 2020 and Q2 2021.

Income Supports/Unemployment Payments.

In lockdown periods, we assume that the enhanced PUP and the TWSS are available. In each case, these schemes are as they currently operate, with a wage subsidy of up to 85 per cent and a PUP of €350 per week. We assume that those whose employment is impacted by the lockdown period are split evenly between the PUP and the TWSS.

In non-lockdown periods, those who are unemployed receive the standard Jobseeker's Benefit/ Jobseeker's Allowance payments.

We assume that Social Welfare payments are indexed in line with private sector wages. Pension expenditure (state pensions and public sector pensions) is projected to increase by approximately €1 billion per year on average over 2022-2025. This is driven by both demographic change and increases in line with private sector wages. It is assumed that the statutory retirement age increases to 67 in 2021.

Health Expenditure

We assume that the additional funding planned for health spending is sufficient in the Central scenario (€2 billion). For the Mild case, while this scenario implies slightly less demand for health services, we assume that there is no saving relative to the Central scenario. This is because additional staff have already been hired, private facilities have been rented and additional equipment has been purchased. For the Severe case, we assume that each additional wave of the virus (which corresponds to a 12-week lockdown period) implies additional healthcare costs of €1 billion. For the Severe scenario, there is an additional €1 billion of health spending in both Q4 2020 and Q2 2021.

Beyond 2021, for all three scenarios, health spending is projected forward using Fiscal Council standstill estimates. These are estimates of the cost of maintaining 2021 service levels, after taking account of service demand (driven by demographics) and price pressures.

Business Supports

For the Mild and Central scenarios, it is assumed that loan guarantees do not lead to fiscal costs. As a result, the only costs incurred are €0.3 billion in business supports which are included in *SPU 2020* projections. For the Severe scenario we assume that €500 million of losses arise in 2023 and a further €1 billion in 2024.

Public Pay Bill

For the Central scenario, *SPU 2020* forecasts of compensation of employees are used for 2020 and 2021. Thereafter, Fiscal Council Stand-Still Scenario estimates are used (Fiscal Council, 2019b). These take account of increases in public sector employment required to hold service levels constant in light of increasing demand due to demographic change. Pay rate increases in line with private sector wages are assumed. There are slight differences between the three scenarios for the public sector pay bill, as inflation and private sector wage pressure differs in each of the three scenarios.

Capital Spending

In all three scenarios, capital spending takes the values forecast in *SPU 2020* for 2020 and 2021. Thereafter, general government capital spending is assumed to be 4.4 per cent of GNI*. This reflects previous government plans to have exchequer capital spending amounting to 4 per cent of GNI*. A further 0.4 percentage points of non-exchequer spending is assumed, leaving a general government total of 4.4 per cent.

As GNI* is different in each of three scenarios, this mechanically leads to different levels of capital expenditure in each of the three scenarios. In 2025, capital spending in the Mild scenario is projected to be €1.9 billion higher than in the Severe scenario.

Revenue

In terms of government revenue, we assume that there is no difference in policy between the three scenarios. In effect, this assumes that there are no major policy changes that yield or cost significant revenue.[43] Changes in the macroeconomic driver multiplied by the elasticity are used for projections of revenue. Judgement applied to forecasts in 2020 and 2021 is assumed to unwind over the following two years. As a result, there is no judgement applied for 2024 or 2025 (apart from corporation tax).

Judgement is applied to corporation tax receipts after 2021. This is to take account of the possible impact of the OECD's BEPS initiative. The amount of judgement applied is based on the estimates given in the *January 2020 Fiscal Strategy* published by the Department of Finance (2020b). Corporation tax receipts are reduced relative to the baseline level by €0.5 billion in 2022, €1 billion in 2023, €1.5 billion in 2024, and €2 billion in 2025. Despite this negative judgement, receipts increase slightly over this period.

Budget Dynamics and Interest Costs

An interest model nested in the Council's Fiscal Feedbacks Model was used to generate interest projections, with the assumption that marginal interest costs were about 1 per cent in each scenario. While there are upside risks to this assumption for more severe scenarios, more accommodative monetary policy would also be possible in those scenarios, which would be expected to drive down interest rates. The Central scenario mirrors projected interest costs for 2020 and 2021, while the Mild and Severe scenarios mirror SPU projections for 2020.

[43] For income tax, beyond 2022, it is assumed that tax bands widened in line with wage rates. As a result, there no yield from non-indexation beyond 2022.

Expenditure

The three scenarios show that there is a wide range of levels of expenditure possible in 2020. Projections from the three scenarios range from €93 billion to €101.8 billion for 2020. The main differences between the three scenarios arise from social payments and subsidies.

In the Mild case, the economy recovers quite rapidly after Q2 2020, with job losses diminishing over the next two years. Reduced unemployment results in social payments falling in 2021. Expenditure falls back by 2022 to reach a similar level to *Budget 2020* plans, reflecting higher compensation of employees and unemployment payments offset by lower intermediate consumption.

For 2020 and 2021, expenditure forecasts in the Central scenario mirror those in *SPU 2020*. The Central scenario is based on a slower recovery than in the Mild scenario. After the lockdown ends, half of the jobs initially impacted are assumed to be affected until Q4 2020 (193,000 out of an initial 380,000). This slower recovery means more people transition from the temporary support schemes to standard unemployment payments. As outlined in Box I, both the Central and Mild scenarios assume €2 billion of extra health spending in 2020. For 2021, expenditure falls by €2.4 billion. This is entirely driven by falling unemployment as the economy gradually recovers.

From 2022 onward, spending in the Mild scenario is driven mainly by demographics and price pressures, given by the Fiscal Council's standstill estimates. An ageing population results in higher spending, particularly in areas such as pensions and health. Some savings on social payments are made as unemployment continues to gradually fall from just under 8 per cent in 2022 to just under 5 per cent in 2025. Primary spending growth averages 3.5 per cent over 2022-2025.

The Severe scenario assumes a sharp contraction in activity and employment in Q2 2020. Additional lockdown periods (Q4 2020 and Q2 2020) lead to increases in unemployment and delay a recovery.[44] In 2021, the unemployment rate averages at almost 15 per cent. As a result of the additional unemployment and additional periods where the PUP and TWSS are paid, there is significantly higher spending on

[44] As detailed in Box I, during all lockdown periods it is assumed that the PUP and TWSS are in place.

social payments and subsidies. In 2020, social payments and subsidies combined increase by more than €11 billion compared to 2019. In 2021, spending in these areas falls somewhat, but remains almost €8 billion higher than in 2019. Due to the additional lockdown periods assumed, there is additional health spending of €1 billion in both Q4 2020 and Q2 2020 relative to the Central or Mild scenarios. This additional spending is assumed to be mainly on medical equipment and hence is classified as intermediate consumption.

Expenditure in the Severe scenario falls in 2022, as the unemployment rate falls below 10 per cent. As unemployment continues to fall over 2023–2025, this partially offsets spending increases in other areas in line with demographics and price pressures. Due to the rising level of debt, interest costs rise in 2022 and 2023, before falling thereafter.

Expenditure in all three scenarios converges to a similar level by 2023 and then progress in a similar way (Table 3.5). This reflects the assumption that additional spending is largely mobilised in the short-term to tackle direct Covid-19 effects. The higher unemployment and debt in the Severe scenario have only a modest impact on spending. Given the risks that expenditure could be higher to support the economy, spending could be higher than in these scenarios and vary more across them for a longer period.

Table 3.5: Expenditure, Revenue and Balance under the three Scenarios

€ billion

	2020	2021	2022	2023	2024	2025
Expenditure						
Mild	93.0	91.3	94.9	97.9	100.6	103.7
Central	95.7	93.3	95.7	98.0	100.3	103.1
Severe	101.8	99.1	96.1	98.2	101.5	103.0
Revenue						
Mild	76.3	83.6	89.6	94.1	97.3	100.9
Central	72.5	79.4	85.5	90.0	93.2	96.9
Severe	68.7	73.4	81.3	86.0	88.7	91.7
Balance						
Mild	-16.7	-7.7	-5.3	-3.8	-3.4	-2.7
Central	-23.1	-13.8	-10.2	-7.9	-7.0	-6.3
Severe	-33.2	-25.7	-14.8	-12.2	-12.9	-11.3

Sources: CSO; *SPU 2020*; and Fiscal Council workings.
Notes: The three scenarios are as outlined in Box D in Ch2.

Revenue

General government revenue falls in all scenarios but recovers at different speeds. For 2020 and 2021, the *SPU 2020* forecasts of exchequer tax and general government revenue are used for the Central scenario.

Despite being the most optimistic of the scenarios, the Mild scenario still sees a significant fall in revenue in 2020. General government revenue declines by more than €11 billion. Falling income tax reflects falling employment and income, while reduced VAT and excise are driven by reduced consumption. The recovery assumed in 2021 yields an increase in receipts of over €7 billion, recovering much of the revenue lost in 2020 (Table 3.6). General government revenue exceeds 2019 levels by 2022 in the Mild scenario. Increases in employment and wage rates yield increased income tax receipts. Revenue growth moderates, thereafter, averaging 4 per cent over 2023 – 2025.

Table 3.6: Revenue by heading and scenario

€ billion

	2019	2020	2021
Income tax			
Mild	22.9	18.7	20.3
Central	22.9	18.3	19.9
Severe	22.9	16.7	18.5
VAT			
Mild	15.1	13.7	15.2
Central	15.1	12.3	13.9
Severe	15.1	11.3	11.7
Corporation tax			
Mild	10.9	10.7	11.4
Central	10.9	10.2	10.8
Severe	10.9	10.0	10.3
All other gen govt. revenue			
Mild	38.5	33.1	36.8
Central	38.5	31.8	34.8
Severe	38.5	30.7	32.9

Sources: CSO; *SPU 2020*; and Fiscal Council workings.
Notes: Three scenarios are considered in this exercise. They are as outlined in Box D in Ch2.

In the Central scenario, general government revenue falls by almost €15 billion in 2020.[45] Income tax and VAT account for half of this fall. The gradual recovery of

[45] The Central scenario takes general government and exchequer revenue forecasts from *SPU 2020* for 2020 and 2021.

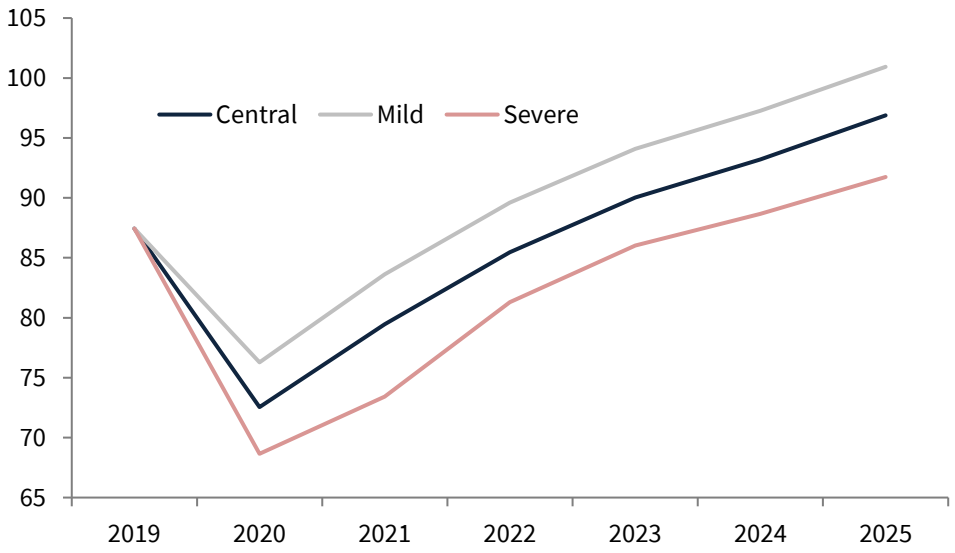
employment income and consumption leads to strong revenue growth (averaging 7.5 per cent over 2021 to 2023). Despite this, general government revenue does not exceed 2019 levels until 2023. Thereafter, revenue growth slows to an average of 3.7 per cent (2024 and 2025).

For the Severe scenario, judgement is applied to the model-based forecasts. This is based on Box G above, which shows that model-based forecasts may not always be unbiased in Severe economic downturns. For income tax, we apply €890 million (5 per cent of receipts) of downward judgement for 2020, €600 million in 2021 and €300 million for 2022. We also apply negative judgement for VAT (€315 million in 2020 (2.5 per cent of receipts), €230 million in 2021 and €100 million in 2022). As this judgement is unwound, it creates a sharper fall in receipts initially, but does not affect the long-run level of receipts.

General government revenue falls sharply in 2020 under the Severe scenario (€18.8 billion). The slow economic recovery thereafter is reflected in general government revenue, which does not exceed 2019 levels until 2024 (Figure 3.12). The lower potential growth rate in the Severe scenario (0.5 percentage points lower relative to the Central or Mild cases) is reflected in slower revenue growth in 2024 and 2025.

Figure 3.12: General government revenue under three scenarios

€ billion



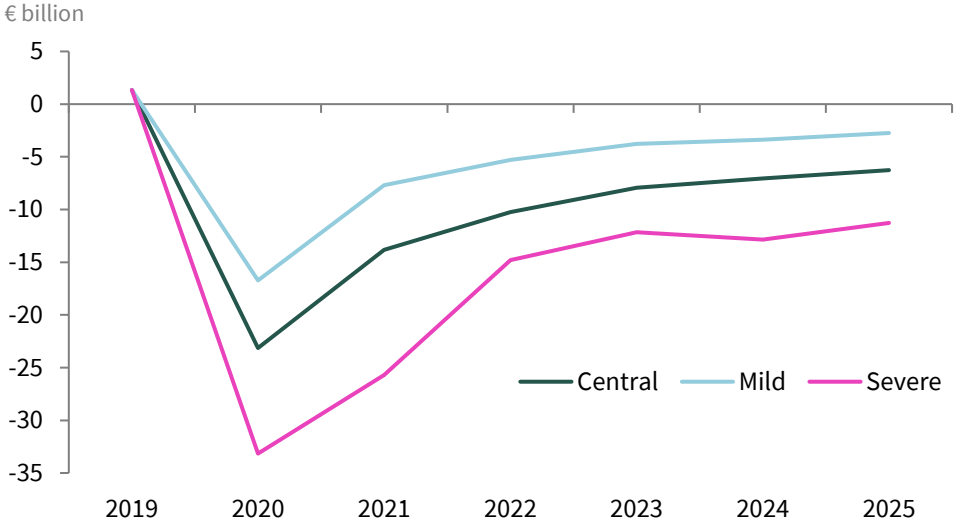
Sources: *SPU 2020* and Fiscal Council workings.

Balance

Figure 3.13 shows the general government balance under the three scenarios. As outlined earlier, these scenarios assume no major tax policy changes. Spending over the medium term reflects Covid-19 expenditures and the likely costs of holding service levels constant and accommodating price pressures. Were a significant fiscal stimulus package introduced in the coming years, this would likely result in higher spending and a deterioration of the balance (see Table 1.2), while fiscal adjustment in later years could improve the balance.[46]

In each scenario there is a rapid deterioration in the public finances in 2020, albeit with different degrees of severity. All three scenarios show a gradual improvement thereafter. In the later years, the main differences in the balance are driven by general government revenue. For 2025, the deficit varies between €3 billion and €11 billion.

Figure 3.13: General government balance under three scenarios



Sources: *SPU 2020* and Fiscal Council workings.

General government debt

While the *Stability and Growth Pact* reference value of 60 per cent is set in terms of debt-to-GDP, it is worth remembering that for Ireland this 60 per cent of GDP

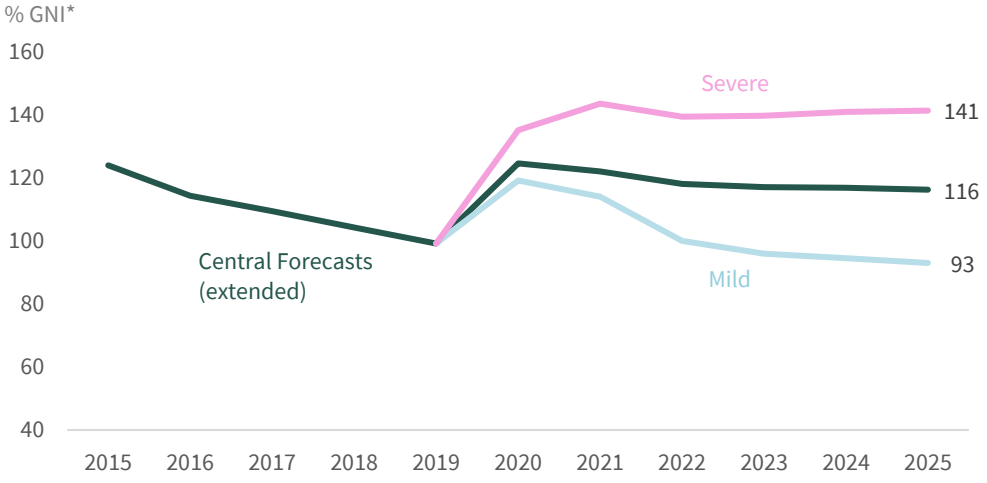
[46] Increases in spending above those needed to maintain service levels would also have negative implications for the general government balance (relative to those shown here).

reference value would be equivalent to 98.5 per cent of GNI* (using 2018 nominal outturns for both variables).[47]

SPU 2020 forecasts debt to rise in 2020 due to the large deficit adding to the existing debt stock. In addition to the absolute level of debt increasing, national income is forecast to fall in 2020. Both numerator and denominator effects contribute to the debt to GNI* ratio increasing sharply in 2020. While the absolute level of debt is set to increase in 2021, the impact of a recovery in GNI* more than outweighs this, with the debt to GNI* ratio forecast to fall.

Figure 3.14 shows general government debt to GNI* for the Mild, Central and Severe Scenarios out to 2025. These are consistent with the different scenarios for the general government balance shown in Figure 3.13. In the Mild scenario, after an initial increase in 2020, the ratio declines, reaching a lower level in 2025 (93 per cent) than in 2019 (99 per cent). The Central scenario mirrors *SPU 2020* forecasts for 2020 and 2021. Thereafter, the ratio is projected to fall steadily. In the Severe scenario, the debt to GNI* ratio increases in 2020 and 2021, reaching a high of over 140 per cent. The ratio then stays stuck at levels close to 140 per cent out to 2025. While the Severe scenario does not show an explosive (ever increasing) path for debt levels, it does imply higher funding requirements and debt servicing costs on an annual basis.

Figure 3.14: General government debt



Sources: *SPU 2020* and Fiscal Council workings.
Notes: Scenarios are outlined in Boxes D and I.

[47] Gross general government debt fell below 60 per cent of GDP in 2019.

Box J: Net debt and contingent liabilities

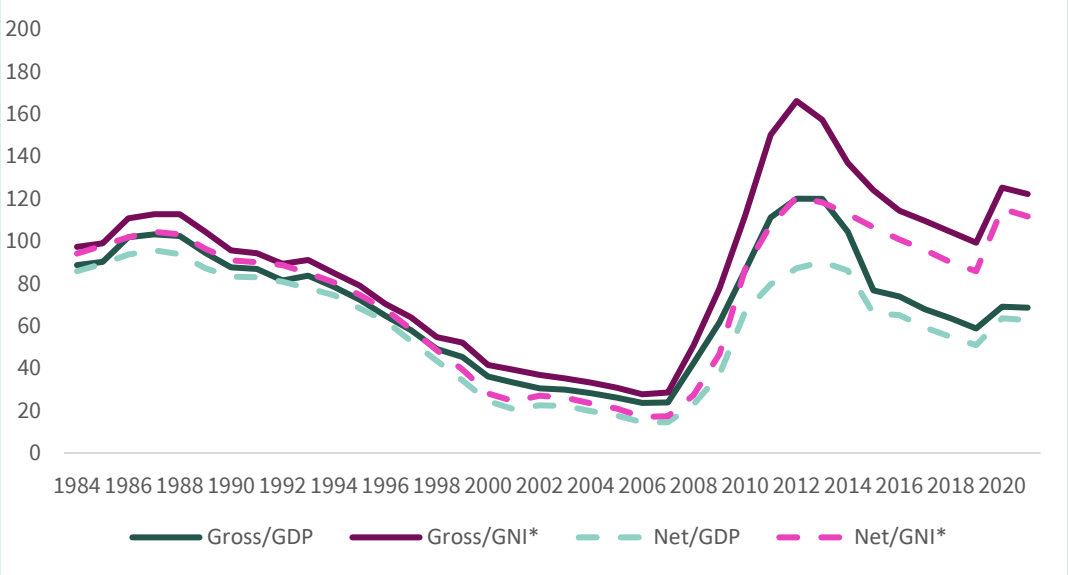
This box examines the relationship between net debt and gross debt in a historical context and also assesses the extent to which government guarantees may affect the government's debt position in the future.

Gross debt is defined as financial liabilities of loans, currency and deposits, and securities (excluding shares and financial derivatives).[48] Net debt is defined as gross debt minus financial assets corresponding to debt instruments. These measures do not take into account physical capital, such as infrastructure, that are part of government net worth.

Net debt is a more appropriate measure of the government's debt burden as it takes into account liquid assets that can be either used to fund a deficit or to further roll-over debt. Historically there can be substantial differences between the two series. This often arises during crisis periods due to the precautionary holding of cash balances.

Figure J.1 shows the gross and net debt ratios as a per cent of both GDP and GNI* from 1984-2021. In 1987 gross debt peaked at 113 per cent of GNI*, while net debt peaked at 103 per cent of GNI*. As a result of the financial crisis, gross debt peaked at 166 per cent of GNI* in 2012. However, net debt only peaked at 121 per cent of GNI*. This gap reflected a large amount of cash reserves that the NTMA had maintained as a precautionary measure (see Fitzgerald & Kenny, 2018).

Figure J.1: Debt ratios 1984-2021



Sources: CSO; Department of Finance; IMF; Fitzgerald & Kenny (2018); and Fiscal Council workings.
Note: CSO data is used for GDP, GNI* and gross debt from 1995-2018. Gross debt from 1984-1994 is from Fitzgerald & Kenny (2018). CSO data for Net debt is used from 2000-2019. The general government balance is used as a proxy for the change in net debt from 1984-1999 (the change in net debt tracks the general government balance closely. Discrepancies arise between the two due to debt adjustment effects and statistical discrepancies). Data from the IMF April 2017 WEO is used for the general government balance from 1984-1995.

The *SPU 2020* forecast for net debt is that it will peak at 115 per cent of GNI* in 2020, below the 2012 peak but above the 1987 peak. This is an increase of 29 percentage points in the net debt ratio in 2020 compared with 2019. In contrast, gross debt is forecast to increase by 26

[48] Maastricht definition. See *Measuring net government debt: theory and practice* (Eurostat, 2014): https://ec.europa.eu/eurostat/web/products-statistical-working-papers/-/KS-TC-14-005.

percentage points. The difference mostly relates to a planned run down in cash balances by the NTMA (see Figure 1.9 for details on how the exchequer deficit will be funded in 2020).

Contingent liabilities

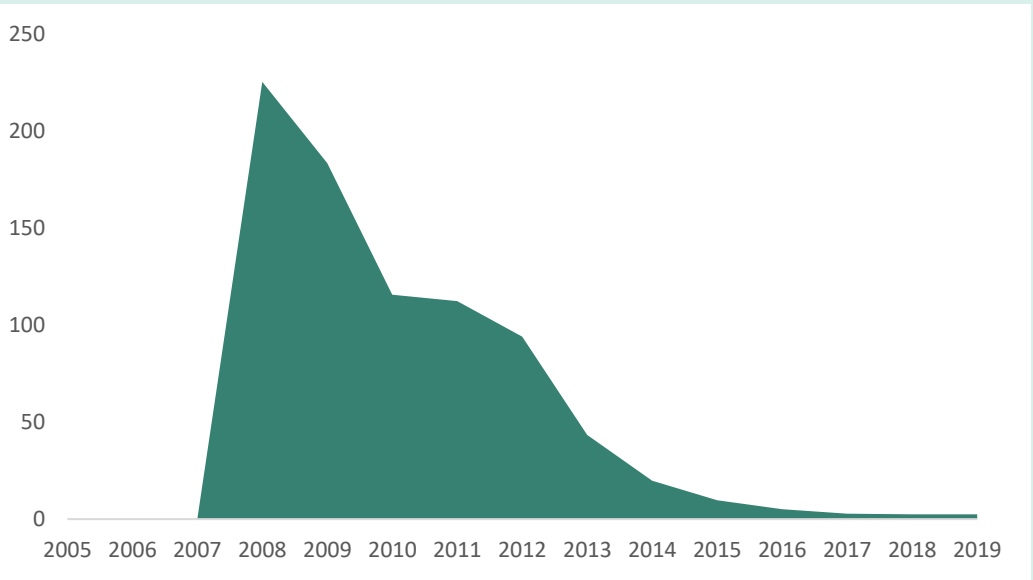
Government guarantees are often used as a way of leveraging the government's balance sheet in order to provide support to the economy in a time of crisis. Shown in Figure J.2 is the general government contingent liabilities from 2005-2019 as a per cent of GNI*. This represents the maximum possible exposure to the Irish State of these liabilities.[49]

The banking guarantee scheme introduced in 2008, which covered €375 billion of banking liabilities, created a very large potential exposure for the government (Barnes & Smyth, 2013). As a result, the contingent liabilities peaked at 225 per cent of GNI* in 2008 but since then it has steadily declined and at the end of 2019 amounted to 2.5 per cent of GNI*.

In response to the Covid-19 pandemic, the Government has again turned to leveraging the government's balance sheet and has introduced a credit guarantee scheme of €2 billion (see Box F). As far as the Council is aware, this is the only new measure introduced by the Government in response to Covid-19 that creates a potential contingent liability for the State.[50] As a result, the potential cost the State may incur from contingent liabilities is not on a comparable scale to that arising from the financial crisis.

Figure J.2: The financial crisis led to a large increase in the government's contingent liabilities

% of GNI*



Sources: CSO; and internal Fiscal Council workings.
Note: Contingent liabilities are presented in terms of their maximum possible exposure.

[49] Often, the probability of realising the cost on the contingent liabilities is low. While contingent liabilities are often expressed in terms of the maximum possible exposure, a more appropriate way to assess contingent liabilities would be on the basis of expected present discounted value.

[50] Up to 80 per cent of the loan is guaranteed, with a 50 per cent cap on a lender's portfolio. The scheme requires legislation, and the legislation will ultimately determine the amount of the contingent liability for the State.

Chapter 4

Assessment of Compliance with the Fiscal Rules

4. Assessment of Compliance with the Fiscal Rules

Key Messages

- The Medium-term Budgetary Objective (MTO) was achieved in 2019 under the Council's principles-based assessment. The structural balance of -0.2 per cent of GDP was above the MTO of a structural balance of -0.5 per cent of GDP. Net expenditure grew by 4.9 per cent in 2019, just below the Expenditure Benchmark limit. However, taking 2019 and 2018 together, there was a deviation of 0.2 per cent of GNI* from the Expenditure Benchmark limit. In 2019, Ireland was fully compliant with the Debt Rule.

- Due to the Covid-19 pandemic, the Council deems that "exceptional circumstances" exist for 2020. This allows for the deviation from the requirements under Ireland's Domestic Budgetary Rule. In addition, the European Commission has activated the "general escape clause" of the Stability and Growth Pact (SGP), which allows for deviation from the EU fiscal rules for 2020. This leeway in the rules is both welcome and warranted, in order to allow a response to both the public health emergency and the severe economic downturn.

- Despite the activation of the "general escape clause", the European Commission may open an Excessive Deficit Procedure (EDP) as the Commission has found that the deficit criterion for 2020 has not been fulfilled. Ireland's general government deficit-to-GDP ratio is forecast to be 7.4 per cent in 2020 and will exceed the 3 per cent deficit limit in the SGP. Furthermore, in 2020, Ireland's debt-to-GDP ratio is forecast to return above the 60 per cent limit in the SGP.

- Depending on the future path of the Covid-19 pandemic, the Council may decide that "exceptional circumstances" continue to exist for 2021. Separately the European Commission may deem the "general escape clause" still active for 2021, in which case, deviation would be allowed from any requirements for 2021 under the Domestic Budgetary Rule and the EU fiscal rules. Absent "exceptional circumstances" and the "general escape clause" continuing into 2021, if an EDP is opened, requirements for the general government deficit for 2021 would be set under the EDP. These

requirements would be formulated in both nominal and structural terms. An improvement in the general government deficit is forecast for 2021, with the deficit falling to 4.1 per cent of GDP. Under these projections, complying with potential EDP recommendations may not require any further discretionary fiscal adjustment.

4.1 Introduction

The Council's mandate includes assessing compliance with Ireland's Domestic Budgetary Rule, as set out in the Fiscal Responsibility Act 2012 (FRA), and the EU fiscal rules, as set out in the Stability and Growth Pact (SGP).

This chapter assesses the *ex-post* compliance of the 2019 outturns and the *ex-ante* consistency of the projections laid out in *SPU 2020* with Ireland's Domestic Budgetary Rule and with both the preventive arm and the corrective arm of the SGP. In particular, it examines compliance with the Medium-term Budgetary Objective (MTO), the Expenditure Benchmark, the Deficit Rule and the Debt Rule.

The Fiscal Responsibility Act 2012 makes provision for deviation from Ireland's Domestic Budgetary Rule if "exceptional circumstances" exist (see Box K). The Council's mandate includes assessing whether "exceptional circumstances" exist or have ceased to exist. In light of the Covid-19 pandemic, the Council is of the opinion that "exceptional circumstances" exist for 2020. In addition, the European Commission has activated the "general escape clause" in the SGP to allow Member States to depart from their budgetary requirements under the EU fiscal rules for 2020.[51]

The assessment in this chapter examines compliance with Ireland's Domestic Budgetary Rule, based on the Council's "principles-based approach" to the budgetary rule, using the Department of Finance's GDP-based estimates of potential output in *Budget 2020* (for 2019 only) and considering the Council's own assessment of one-off/temporary measures. While legal compliance with the EU fiscal rules is assessed based on the *Vade Mecum on the Stability & Growth Pact (2019)*—using the EU's Commonly Agreed Methodology (CAM) for estimating the output gap—the Council and the Department have identified a number of shortcomings with this methodology. Therefore, the Council has opted to base its assessment of the Domestic Budgetary Rule on a framework that is more appropriate for Ireland.[52]

[51] See the *Communication from the Commission to the Council on the activation of the General Escape Clause of the Stability and Growth Pact* (March, 2020): https://ec.europa.eu/info/sites/info/files/economy-finance/2_en_act_part1_v3-adopted_text.pdf.

[52] For more information on the Council's principles-based approach see Appendix D of this report and Box A of the Fiscal Council's *Ex-post Assessment of Compliance with the Domestic Budgetary Rule 2018* (Fiscal Council, 2019a).

Table 4.1: Assessment of compliance with the fiscal rules[1, 2, 3]

% of GDP unless otherwise stated. For deviations, negative values = non-compliance

	2019	2020	2021
Corrective Arm			
General government balance excl. one-offs (% GNI*)[4]	0.7	-13.3	-7.3
General government balance excl. one-offs	0.4	-7.4	-4.1
General government balance Limit	-3.0	-3.0	-3.0
General government debt (% GNI*)[4]	99.2	124.6	122.1
General government debt	58.8	69.1	68.4
1/20th Debt Rule Limit	67.4	60.0	63.9
Debt Rule met?	Y	Y	-
Preventive Arm & Domestic Budgetary Rule			
Structural balance adjustment requirement			
MTO for the structural balance	**-0.5**	**-0.5**	**-0.5**
Structural balance	-0.2	-	-
MTO met?	Y	-	-
Minimum change in structural balance required	**0.0**	**0.0**	-
Change in structural balance	-0.4	-	-
1yr deviation (€ bn)	-	-	-
1yr deviation (p.p.)	-	-	-
2yr deviation (€ bn)	-	-	-
2yr deviation (p.p.)	-	-	-
Expenditure Benchmark			
(a) Reference rate of potential growth (% y/y)	3.4	-	-
(b) Convergence margin	0.0	-	-
(a-b) Limit for real net expenditure growth (% y/y)	3.4	-	-
GDP deflator used	1.5	-	-
Limit for nominal net expenditure growth (% y/y)	**5.0**	-	-
Net expenditure growth (% y/y)	4.6	5.8	0.7
Net expenditure growth (corrected for one-offs) (% y/y)	4.9	5.8	1.4
1yr deviation (corrected for one-offs) (€ bn)	0.0	-	-
1yr deviation (corrected for one-offs) (% GNI*)	0.0	-	-
2yr deviation (corrected for one-offs) (€ bn)	-0.5	-	-
2yr deviation (corrected for one-offs) (% GNI*)	-0.2	-	-
Limit for nominal net expenditure growth (€bn)	**3.7**	-	-
Net expenditure increase (€bn)	3.5	4.6	0.6
Net expenditure increase (corrected for one-offs) (€bn)	3.7	4.6	1.2
Current Macroeconomic Aggregates			
Real GDP growth (% y/y)	5.5	-10.5	6.0
Potential GDP growth (% y/y)	4.0	-	-
GDP output gap	1.0	-	-
GDP deflator used (% y/y)	1.5	1.2	1.5

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

Notes: [1]All figures are presented on a general government basis. Assessments examine the *SPU 2020* revenue and expenditure plans, using the Council's principles-based approach to the Domestic Budgetary Rule and considering the Council's views on one-off/temporary measures. Potential output and output gap estimates for 2019 are taken from *Budget 2020*. Due to the exceptional uncertainty surrounding estimates of potential output and output gap, no estimates of these variables have been calculated by the Department of Finance for 2020-2021. For more information on the Council's principles-based approach see Appendix D of this report and Box A of Fiscal Council's *Ex-post Assessment of Compliance with the Domestic Budgetary Rule 2018* (Fiscal Council, 2019a). [2]The 1/20th Debt Rule requires that the debt-to-GDP ratio should make annual progress toward the reference value of 60 per cent of GDP. Once the debt-to-GDP ratio falls below 60 per cent, the requirement is to maintain a ratio below 60 per cent. [3]Figures in red indicate a significant deviation from the limit. Figures in amber indicate some deviation from the limit. [4]The general government balance and general government debt are shown here as a per cent of GNI* for reference purposes only. Legal compliance with the corrective arm of the SGP is assessed based on GDP ratios. These GNI* ratios are based on the earlier Nominal GNI* figures provided by the Department for SPU 2020. The estimates were corrected in a later version of the report, yet the differences are relatively minor.

4.2 *Ex-post* assessment of 2019

This section reviews the Council's *ex-post* assessment of 2019 which is published alongside this FAR.[53] This section assesses the compliance of fiscal outturns for 2019 with the domestic budgetary rule. In particular, it examines compliance with the MTO, the Expenditure Benchmark and the Debt Rule. The assessment is based on the Council's Principles-based approach to the Domestic Budgetary Rule using the Department's GDP-based estimates of potential output.[54]

MTO and structural balance adjustment requirements

As the MTO was achieved in 2018, the requirement for 2019 was to remain at the MTO. The MTO was achieved in 2019, with a structural balance of -0.2 per cent of GDP, above the MTO of a structural balance of no lower than -0.5 per cent of GDP (Table 4.1). However, the structural balance deteriorated by 0.4 per cent of GDP over 2019.

Expenditure Benchmark

Net expenditure (excluding one-offs) grew by 4.9 per cent in 2019, just below the Expenditure Benchmark limit of 5.0 per cent. Net expenditure growth was 1.2 percentage points higher than was forecast in *Budget 2020.* A downward revision, by the CSO, to the level of expenditure in 2018 accounts for 0.4 percentage points of the unanticipated growth in net expenditure. The remaining 0.8 percentage points can be attributed to the level of net expenditure in 2019 being higher than planned in *Budget 2020.*

[53] See https://www.fiscalcouncil.ie/publications/ for further details.

[54] *SPU 2020* did not include updated estimates of potential output and the output gap due to the heightened uncertainty about such estimates for the current year, at this time. Therefore, this section uses estimates of potential output for 2019 that were included in *Budget 2020.* These estimates were on the basis of forecasts for a no-deal Brexit at the end of October 2019. To the extent that this did not materialise, estimates of potential output growth for 2019 would be relatively higher, implying a smaller positive output gap than estimated in *Budget 2020* all else equal. As this section will show, the MTO was achieved and net expenditure grew below the Expenditure Benchmark limit. The smaller positive output gap and higher potential output would imply a more positive structural balance estimate, and a higher limit for the Expenditure Benchmark for 2019, so the conclusion about compliance with the Domestic Budgetary Rule would be unchanged were a smaller positive output gap and higher potential output estimate used. There is no reason to believe the Covid-19 pandemic would alter the "actual" potential or sustainable growth rate of the economy for 2019. Whether the Covid-19 pandemic would alter the "estimate" of potential output for 2019, due to the filtering techniques used to derive these estimates, is a separate matter.

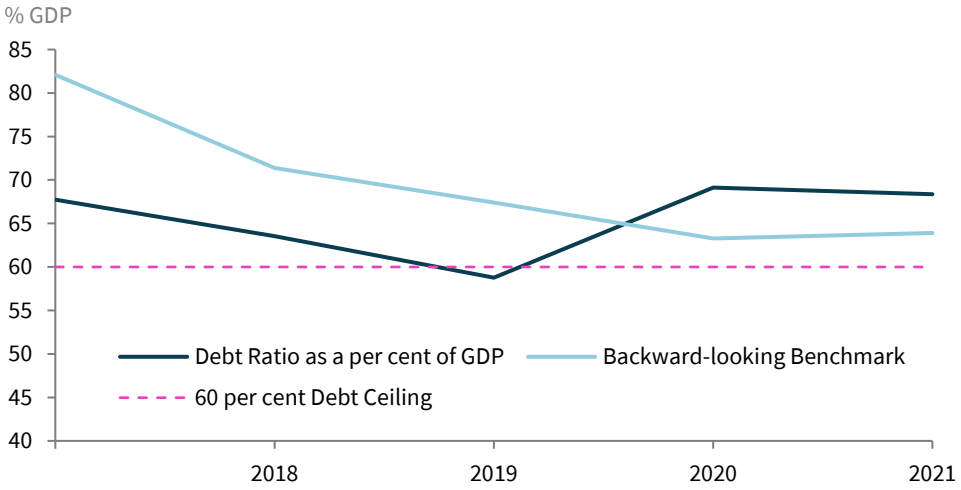
On a two-year basis, taking 2018 and 2019 together, there was a breach of the Expenditure Benchmark, with net expenditure growing by 0.2 per cent of GNI* more than allowed. However, this breach is not considered significant deviation from the Expenditure Benchmark.[55]

Debt Rule

The Debt Rule applied in full in 2019, following the end of a three-year transition period from 2016-2018. The requirement for 2019 was that the debt-to-GDP ratio be below the 1/20th Debt Rule limit.[56]

Ireland was fully compliant with the rule in 2019, as debt-to-GDP ratio fell to 58.8 per cent of GDP, below both the 1/20th Debt Rule limit and the 60 per cent of GDP reference value in the SGP (Figure 4.1). However, if measured against a more appropriate estimate of the domestic economy, like GNI*, the debt ratio was significantly higher at 99.2 per cent.[57]

Figure 4.1: The debt ratio is forecast to exceed the 60 per cent debt limit in 2020



Sources: CSO; Department of Finance; and Fiscal Council workings.
Note: As there are currently no estimates for the debt-to-GDP ratio beyond 2021, the forward-looking benchmark for the Debt Rule cannot be calculated at this time.

[55] Under the Council's principles-based approach to Ireland's Domestic Budgetary Rule, a significant deviation from the Expenditure Benchmark is a deviation of more than 0.5 per cent of GNI* on a one-year basis, and 0.25 per cent of GNI* on a two-year basis.

[56] If the debt-to-GDP ratio is above 60 per cent of GDP, the Debt Rule requires that the ratio falls by, on average one-twentieth of the excess between the actual debt-to-GDP ratio and 60 per cent of GDP. This requirement is expressed as a benchmark debt-to-GDP ratio. See Box F of the November 2018 FAR for further details (Fiscal Council, 2018e).

[57] The FRA specifies that compliance with the Debt Rule is judged on the basis of a debt-to-GDP ratio. However, Ireland's GDP figures are distorted due to the globalisation activities of a few large multinational corporations and is therefore not an appropriate metric to judge Ireland's debt burden against.

4.3 In-year assessment of 2020

Due to the unprecedented Covid-19 pandemic, the Council is of the opinion that "exceptional circumstances" exist for 2020 (see Box K). The Covid-19 pandemic is a major unprecedented and unforeseen shock to the economy and to the public finances. It therefore falls under the definition of exceptional circumstances and it is appropriate that leeway is provided under the rules to manage it. The existence of exceptional circumstances allows for a deviation from the requirements under Ireland's Domestic Budgetary Rule. In addition, the European Commission has activated the "general escape clause" in the SGP for 2020. This allows for a deviation from the requirements under the SGP for 2020.

However, the activation of the general escape clause does not suspend the procedures of the SGP. As such, the European Commission has issued an Article 126(3) as a result of the general government balance breaching the -3 per cent SGP limit in 2020.[58] However, despite finding that Ireland is non-compliant with the deficit criterion for 2020, the European Commission has said, in light of the exceptional uncertainty caused by the Covid-19 pandemic, a decision on launching an *Excessive Deficit Procedure* (EDP) (for all Member States found non-compliant) should not be taken at this time.[59] The European Commission has said they will reassess the situation on the basis of the Commission's Autumn 2020 Economic Forecast and the *Budget 2021* forecasts.

The Department's current forecast is for a general government deficit of 7.4 per cent of GDP for 2020 (Figure 4.2). Approximately €6.5 billion is included as measures under the general escape clause for 2020.[60] Excluding this from the general

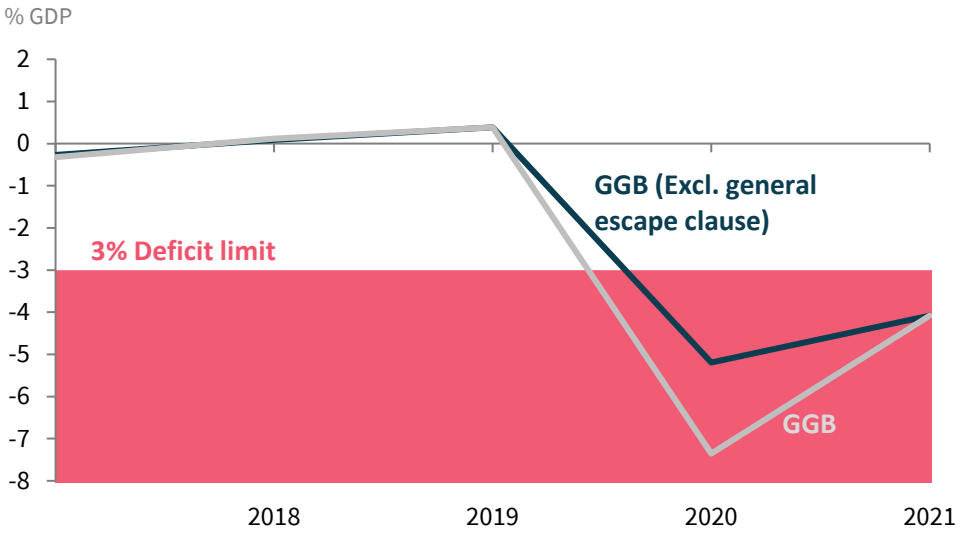
[58] Under the SGP, the European Commission is required to prepare an Article 126(3) report if the 3 per cent deficit limit is breached, or is forecast to be breached (the forecast can be from the Member State or the European Commission forecasts). This report considers a series of factors and assesses whether an EDP should be launched. An Article 126(3) report was issued for all Member States (except for Romania, who were already in an EDP) as all Member States are forecast to breach the 3 per cent deficit limit in 2020.

[59] For Article 126(3) report for Ireland see: https://ec.europa.eu/economy_finance/economic_governance/sgp/pdf/30_edps/126-03_commission/com-2020-541-ie_en.pdf. See Box 1 of the *2020 European Semester: Commission Communication on Country Specific Recommendations* for an outline of the rationale behind not launching an EDP for Member States at this time: https://ec.europa.eu/info/publications/2020-european-semester-commission-communication-country-specific-recommendations_en.

[60] The expenditure and revenue measures included under the general escape clause are only those which specifically relate to the Government's response to the Covid-19 pandemic.

government balance gives a deficit of 5.2 per cent of GDP. The European Commission currently has a much more benign forecast for the general government balance, with the deficit forecast to be 5.6 per cent of GDP. Were the €6.5 billion excluded, the general government deficit would be 3.4 per cent under the Commission's forecast. The debt-to-GDP ratio for 2020 is forecast to be 69.1 per cent of GDP, which is above the 60 per cent of GDP limit in the SGP (Figure 4.1).[61]

Figure 4.2: The general government balance is forecast to exceed the 3 per cent deficit limit



Sources: CSO; Department of Finance; and Fiscal Council workings.
Note: The headline general government balance is shown in grey. Approximately €6.5 billion is included under the general escape clause for 2020 and this is incorporated into the General Government balance excluding general escape clause series shown in navy.

Box K: Exceptional Circumstances and the General Escape Clause

Ireland is subject to domestic fiscal rules, as set out in the Fiscal Responsibility Act 2012 (FRA), and the EU fiscal rules. Both sets of rules envision scenarios in which the Government needs to use fiscal resources to respond to circumstances beyond its control or alternatively, respond to a severe economic downturn.

Exceptional Circumstances under Ireland's Domestic Budgetary Rule

Ireland's Domestic Budgetary Rule allows for deviation from the budgetary rule if exceptional circumstances exist. As specified in the FRA, the Council's mandate includes assessing whether exceptional circumstances exist or have ceased to exist. Exceptional circumstances are defined in the FRA as:

[61] Once below the 60 per cent debt-to-GDP limit, breaching this limit also automatically triggers an Article 126(3) report from the European Commission, unless the debt ratio falls below the 60 per cent limit over the Commission's forecast horizon. Unlike the deficit limit, a breach of the Debt Rule can only be confirmed on the basis of outturn data and not on forecasts. As such, an Article 126(3) report is not required to be issued on the debt criterion at this time.

"(a) a period during which an unusual event outside the control of the State has a major impact on the financial position of the general government, or

(b) a period of severe economic downturn,

within the meaning of the Stability and Growth Pact".

Under the SGP, a severe economic downturn is defined as a negative real GDP growth or a period of low real GDP growth relative to potential.[62] While only one criterion is necessary for exceptional circumstances to exist, clearly the Covid-19 pandemic and its impact on both the public finances and the economy mean that both criteria are satisfied in 2020. As a result, **the Council deems that exceptional circumstances exist for 2020.**

Based on current forecasts, criterion (b), outlined above, would not be satisfied for 2021. However, depending on the future path of the Covid-19 pandemic, it may transpire that criterion (a) will be met in 2021 (or, for a potentially longer period in a worst-case scenario).[63] In this case, exceptional circumstances will continue to exist in 2021 and deviations from the budgetary requirements for 2021 will be allowed.

The General Escape Clause in the EU Fiscal Rules

On 13th March, the European Commission activated the general escape clause in the SGP. This clause allows for temporary deviation from the budgetary requirements for all Member States in a situation of generalised crisis caused by a severe economic downturn in either the euro area or the EU. The application of the general escape clause does not suspend the procedures of the SGP, but instead allows for temporary deviation from its requirements for as long as the general escape clause is active.

The European Commission has said the general escape clause will remain in place for as long as necessary for Member States to contain the Covid-19 outbreak and mitigate its negative socio-economic effects.[64] This leaves open the option to extend the application of the general escape clause beyond 2020.

Exiting the General Escape Clause and the Cessation of Exceptional Circumstances

Once the general escape clause no longer applies and exceptional circumstances cease to exist, under the EU fiscal rules, Ireland must adopt a corrective plan.[65] This plan will have a minimum pace of structural adjustment (usually 0.5 per cent of GDP) and will be binding over the budgets covered by the correction period.

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[62] This definition is potentially problematic for Ireland. While GDP is an appropriate estimate of the size of the domestic economy in most EU countries, due to well-documented issues relating to the multinational sector, GDP is not an appropriate measure of the size of Ireland's domestic economy and is currently an inflated estimate of the productive capacity of the domestic economy. This feature of Ireland's GDP figures may at times flatter Ireland's compliance with the fiscal rules as ratios are often specified as a per cent of GDP (i.e. deficit-to-GDP and debt-to-GDP; the inflated GDP figures lead to a larger denominator and therefore a smaller ratio than might otherwise be the case). However, it also causes Ireland's GDP growth rates to be distorted. This may lead to a disparity between GDP growth and the underlying growth of the domestic economy. A scenario may arise in which the underlying growth of the domestic economy is negative, but GDP growth is positive, in which case, while the underlying growth rate of the domestic economy may warrant the classification as a period of severe economic downturn. However, this would not be classified as such under the SGP, solely on the basis of the distortion in Ireland's GDP figures. In this instance exceptional circumstances cannot be deemed to exist under the definition used ins criterion (b).

[63] Criterion (b) may also be met in 2021 in a more severe scenario.

[64] For further details, see: https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_500.

[65] For further details, see *Common Principles on National Fiscal Correction Mechanisms* https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52012DC0342.

4.4 *Ex-ante* assessment of 2021

If exceptional circumstances and the general escape clause continue into 2021, deviation from the fiscal rules will be allowed again for 2021, provided that any deviation does not endanger long-run sustainability of the public finances. As outlined in Box K, once the general escape clause ceases to be in effect, Ireland must adopt a corrective plan. As the European Commission has deemed that Ireland has not fulfilled the deficit criterion for 2020, it is likely that this plan will be outlined as part of the EDP. Were an EDP launched, Ireland would be under the corrective arm of the SGP.

If the general escape clause and exceptional circumstances do not continue into 2021, and were an EDP to be launched, requirements for the fiscal rules for 2021 would then be given under the EDP. Under an EDP a deadline would be set for the correction of the excessive deficit.[66] The EDP would set annual targets for both the nominal and structural balance. Under normal circumstances, an annual fiscal effort of at least 0.5 per cent of GDP, defined in structural terms, would be required under an EDP. In nominal terms, Ireland's general government balance is forecast to improve by more than 3.3 per cent of GDP in 2021. The European Commission forecasts that the structural balance will improve by 1.0 per cent of GDP in 2021. If the minimum fiscal adjustment were set, and the European Commission's forecasts were to transpire, this improvement of the structural balance would meet the minimum adjustment requirement. In this case, no discretionary fiscal adjustment would be required to adhere to the fiscal rules for 2021.

[66] The existence of "exceptional circumstances" would allow for this deadline to be extended.

Appendices

Appendix A: Timeline for Endorsement of *SPU 2020* Projections

Date	
6 March	CSO releases *Quarterly National Accounts* estimates for Q4 2019.
11 March	The Secretariat and Department of Finance met the CSO to clarify technical details of latest *Quarterly National Accounts* estimates.
19 March	The Secretariat received Department of Finance technical assumptions underpinning *Budget 2018* forecasts.[67]
30 March	After consideration by the Council, Benchmark projections were finalised by the Secretariat prior to receiving preliminary forecasts from the Department of Finance.
6 April	The Council received preliminary forecasts from the Department in line with *Memorandum of Understanding* requirements.
6 April	The Secretariat requested clarifications of a factual nature from the Department, but no meeting took place as a result of containment measures due to Covid-19.
7 April	The Council met remotely to discuss the Department of Finance forecasts.
7 April	The Council received final forecasts from the Department in line with *Memorandum of Understanding* requirements.
8 April	A remote meeting took place between the Department of Finance staff and the full Council and Secretariat. The Department presented their latest forecasts and answered questions. The Council then finalised a decision on the endorsement.
10 April	The Chair of the Council wrote a letter to the Secretary General of the Department of Finance endorsing the set of macroeconomic forecasts underlying *SPU 2020*.
21 April	The Department's forecasts are published in *SPU 2020.*

[67] These included assumptions related to oil prices, exchange rates, and sources of forecasts for the growth of major trading partners. They did not include assumed real and nominal growth rates for net expenditure by central and local government on current goods and services.

Appendix B: The Council's Benchmark Projections

Benchmark projections for 2019–2025

% change in volumes unless otherwise stated

	2019	2020	2021	2022	2023	2024	2025
Demand							
GNI*[a]	3.1	-2.1	8.4	2.6	1.4	1.2	1.0
…of which (p.p. contributions)							
Underlying domestic demand[b] (p.p.)	3.2	-6.4	9.9	1.8	1.7	1.8	2.0
Stocks (p.p.)	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Adjusted net exports[b] (p.p.)	-0.7	4.5	-1.5	0.8	-0.3	-0.6	-1.0
Underlying domestic demand[a]	3.2	-8.2	12.2	2.1	2.1	2.2	2.4
GDP	5.6	1.0	8.2	3.6	3.2	3.0	3.1
Consumption	2.9	-11.2	12.7	2.1	2.1	2.5	2.8
Government	5.3	6.2	4.0	3.0	3.0	3.0	3.0
Underlying investment[a]	2.2	-12.6	20.7	1.2	1.0	0.3	0.5
Exports	11.1	7.2	3.7	4.3	4.0	3.4	3.4
Underlying imports[a]	13.6	5.1	3.0	3.9	3.9	3.3	3.3
Supply							
Potential output	4.3	-5.2	4.7	1.3	1.8	1.4	1.2
Output gap (% potential output)	0.2	-3.5	-2.2	-1.5	-1.3	-0.8	-0.3
Labour Market							
Labour force	2.0	1.1	1.3	0.8	1.7	1.7	1.6
Employment	2.9	-2.5	3.8	2.2	1.4	1.2	1.5
Unemployment rate (% labour force)	5.0	8.3	6.4	5.1	5.2	5.4	5.4
Prices							
HICP	0.9	-0.6	0.4	1.1	1.1	1.0	1.1
Personal consumption deflator	1.8	-0.5	0.7	1.7	1.7	1.6	1.7
GDP deflator	1.3	1.0	1.4	1.8	1.9	2.1	2.3
GNP deflator	2.0	2.5	2.1	2.2	2.3	2.4	2.6
Other							
Nominal GNI*	5.2	-1.8	8.7	3.8	2.3	2.2	2.5
Nominal GNI* (€ billion)	207.7	203.9	221.6	230.1	235.4	240.6	246.7
Nominal GDP	7.2	2.0	9.8	5.4	5.1	5.1	5.4
Nominal GDP (€ billion)	347.4	354.3	389.0	409.9	430.8	452.8	477.2
Modified current account (% GNI*)	9.0	14.2	10.4	10.2	8.7	7.1	5.5

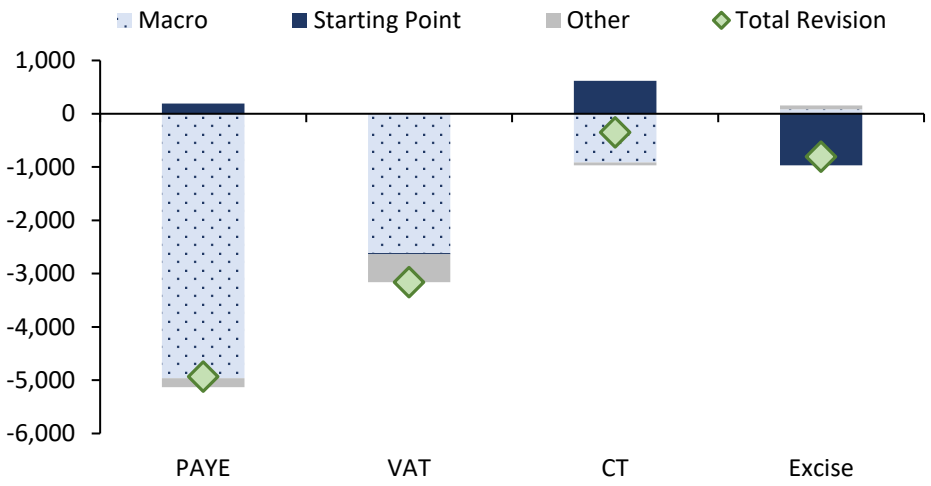
Sources: CSO; and internal Fiscal Council calculations.

Notes: [a]Underlying (final) domestic demand, underlying investment, and underlying imports exclude "other transport equipment" (mainly aircraft) and intangibles. [b]Underlying contributions to real GNI* growth rates in percentage points—here adjusted net exports excludes investment in aircraft and intangible assets, net factor income from abroad, factor income of re-domiciled PLCs, and depreciation on aircraft leasing, R&D services imports and trade in IP.

Appendix C: Tax Forecasts Decomposed

The first part of this Appendix explores the revisions to forecasts of the main tax heads for 2020. It shows how the 2020 forecasts in *SPU 2020* have changed relative to *Budget 2020.* Three categories are identified in this analysis as drivers of these revisions: (i) an update to the 2020 "**macro**" economic outlook relevant for each tax head; (ii) the error arising from an incorrect "**starting point**" estimate of 2019, which biases the 2020 forecast (a positive starting point means that the 2019 outturn was actually higher than expected at budget time); and (iii) an "**other**" source of revision, caused by use of incorrect estimates of any other component of the forecast. It is the residual of the "macro" and "starting point" errors.

Appendix Figure C.1: Tax Forecast Revisions in 2020: *SPU 2020* versus *Budget 2020*
€ million, *SPU 2020 – Budget 2020*



Sources: Department of Finance; and internal Fiscal Council workings.
Note: The chart breaks down the total revision into the macro component, a starting point component and an "other" component.

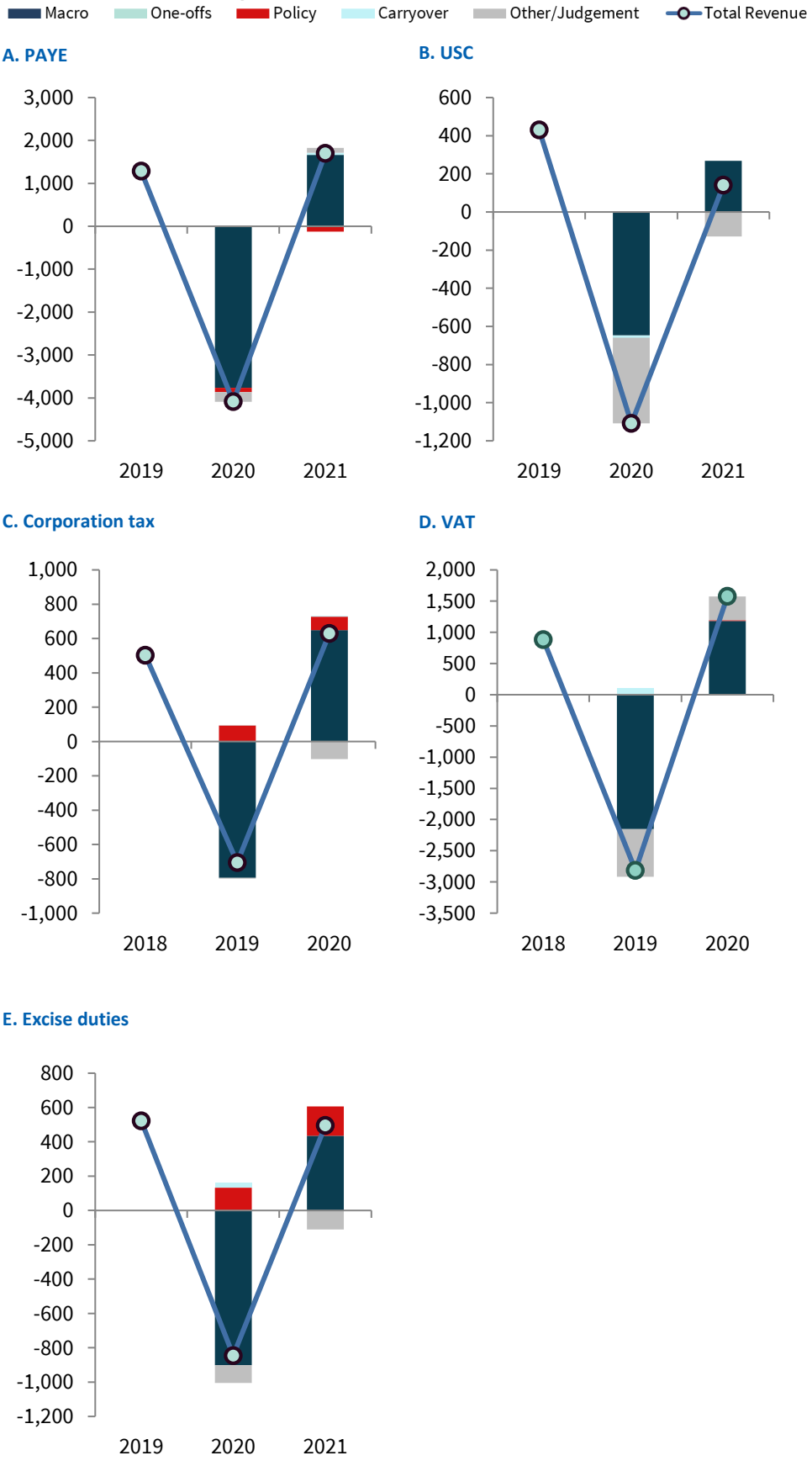
The second part of this Appendix examines the latest tax revenue forecasts produced by the Department of Finance in *Budget 2020* for the projection horizon 2020–2021. In particular, it shows the yearly changes in the forecasts of VAT, corporation tax, excise duties, and the PAYE and USC components of income tax (see Appendix Figure C.1).[68] For a detailed description of the Fiscal Council's forecast replication model, see Hannon (2014).

The changes on the tax forecasts (year-on-year) are attributed to a number of components: (i) "**macro**" is the part of the forecast driven by the growth in the relevant macro driver (e.g. wage growth and its corresponding elasticity when analysing income tax); (ii) "**one-offs**" refer to non-recurring items that impact on expected tax receipts; (iii) "**policy**" impacts account for the estimated impacts from policy changes in a given year (e.g., discretionary tax cuts); (iv) "**carryover**" effects account for policy impacts carried over from previous years; (v)"**other**" represents potential elements affecting the forecasts (calculated as the difference between the Fiscal Council's internal forecasting exercise and that carried out by the Department of Finance), including judgement applied by the Department of Finance.

[68] The generic formula applied by the Department of Finance to forecast revenue is given by: $\mathrm{Rev}_{t+1} = (\mathrm{Rev}_t - \mathrm{T}_t) * (1 + \mathrm{B}_{t+1} * \mathrm{E}) + \mathrm{T}_{t+1} + \mathrm{M}_{t+1} + \mathrm{M}_t + \mathrm{J}_{t+1}$,
where revenue forecasts (Rev_{t+1}) depend on their lag stripped of one-off items (T_t), one-off items in the current period (T_{t+1}), the macro drivers (B_{t+1}) and their associated elasticity (E), current policy (M_{t+1}) and carryover policy impacts (M_t), and judgement (J_{t+1}). See Hannon (2014) for a discussion of this approach. Rewriting the formula in terms of annual changes yields: $\Delta\mathrm{Rev}_{t+1} = \mathrm{Rev}_t * \mathrm{B}_{t+1} * \mathrm{E} - \mathrm{T}_t * \mathrm{B}_{t+1} * \mathrm{E} + \Delta\mathrm{T}_{t+1} + \mathrm{M}_{t+1} + \mathrm{M}_t + \mathrm{J}_{t+1}$. In this way, yearly revenue changes for each tax head are attributed to the addition of: (i) the macro driver, which covers the parts of the formula affected by B_{t+1}; (ii) changes in one-off items, as shown in ΔT_{t+1}; (iii) current and previous policy changes ($M_{t+1}$and M_t, respectively); and other adjustments, mainly judgement, as covered in the component J_{t+1}.

Appendix Figure C.2: Tax forecasts decomposed

€ million, year-on-year change



Sources: Department of Finance; and internal Fiscal Council workings.

Appendix D: The Council's Principles-Based Approach to the Budgetary Rule

Table D.1: Outline of the Council's principles-based approach to the Budgetary Rule

Criteria	Fiscal Council Approach	European Commission Approach
Potential Output and the Output Gap	The Department's GDP-based estimates of potential output and the output gap.	The European Commission's own CAM-based estimates of potential output and the output gap.
Reference Rate for Expenditure Benchmark	Based on the Department's latest estimates of GDP-based potential output growth (i.e. not frozen).	Based on the European Commission's CAM-based estimates of potential output, frozen in spring of year *t-1.* No reference rate is set for *t+2* or later years.
Deflator for Expenditure Benchmark	Based on the Department's latest estimates of the demand-side GDP deflator (i.e. not frozen).	Based on the European Commission's estimates of the GDP deflator, frozen in spring of year *t-1.*
Adjustment Requirement and Convergence Margin	Based on the latest estimates of distance from the MTO in year *t-1* (i.e. not frozen). No negative convergence margin applied.	Based on the European Commission's estimates of distance from the MTO that are frozen in either spring or autumn of year *t-1* (whichever is more favourable). For ex-post assessment, requirements can be unfrozen in spring of year *t+1* if these are more favourable in terms of compliance. Negative convergence margin allowed.
NAWRU	Assumed constant at 5.5%.	The Commission's latest CAM-based estimates of the NAWRU.
Margin of Tolerance	No margin of tolerance.	0.25% of GDP from the MTO.
Significant Deviation from the Expenditure Benchmark	0.5% and 0.25% of GNI* for 1-year and 2-year assessment respectively.	0.5% and 0.25% of GDP for 1-year and 2-year assessment respectively.
Budgetary Semi-Elasticity	0.588	0.522

Note: For a full explanation of the Council's Principles-based Approach (PBA) to the Domestic Budgetary Rule see Box A of Ex-post assessment of compliance with the Domestic Budgetary Rule 2018 (Fiscal Council, 2019a) and Box M of the November 2019 Fiscal Assessment Report.

Glossary

Automatic stabilisers: Features of the tax and spending regime which react automatically to the economic cycle and reduce its fluctuations. As a result, the budget balance in per cent of GDP tends to improve in years of high growth, and deteriorate during economic slowdowns.

Budget balance: The balance between total public expenditure and revenue in a specific year, with a positive balance indicating a surplus and a negative balance indicating a deficit. For the monitoring of Member State budgetary positions, the EU uses General Government aggregates.

Cyclical component of budget balance: That part of the change in the budget balance that follows automatically from the cyclical conditions of the economy, due to the reaction of public revenue and expenditure to changes in the output gap.

Discretionary fiscal policy: Change in the budget balance and in its components under the control of government. It is usually measured as the residual of the change in the balance after the exclusion of the budgetary impact of automatic stabilisers.

Discretionary Revenue Measures (DRMs): The estimated current year impact of any discretionary revenue raising/decreasing measures (e.g., tax increases/cuts).

Excessive Deficit Procedure (EDP): A procedure according to which the Commission and the Council monitor the development of national budget balances and public debt in order to assess and/or correct the risk of an excessive deficit in each Member State.

Exchequer: The Central Fund of Ireland. It is the Irish central government's main treasury account and it is recorded on a cash basis. The Exchequer represents only a portion of the total government financial position. Receipts into the Central Fund consist of Exchequer tax and non-tax revenues, EU receipts and other capital receipts. Central Fund expenditure includes Departmental spending, wages and pensions of the President, the C&AG, and the judiciary, running costs of the Oireachtas, debt servicing costs, and EU Budget payments.

Expenditure rules: A subset of fiscal rules that target (a subset of) public expenditure.

Fiscal consolidation: An improvement in the budget balance through measures of discretionary fiscal policy, either specified by the amount of the improvement or the period over which the improvement continues.

General government: As used by the EU in its process of budgetary surveillance under the Stability and Growth Pact and the excessive deficit procedure, the General Government sector covers national government, regional and local government, as well as social security funds. Public enterprises are excluded, as are transfers to and from the EU Budget.

Maastricht reference values for public debt and deficits: Respectively, a 60 per cent General Government debt-to-GDP ratio and a 3 per cent General Government deficit-to-GDP ratio. These thresholds are defined in a protocol to the Maastricht Treaty on European Union.

Medium-Term Budgetary Framework: An institutional fiscal device that lets policymakers extend the horizon for fiscal policymaking beyond the annual

budgetary calendar (typically 3-5 years). Targets can be adjusted under Medium-Term Budgetary Frameworks (MTBF) either on an annual basis (flexible frameworks) or only at the end of the MTBF horizon (fixed frameworks).

Medium-Term Budgetary Objective (MTO): According to the reformed Stability and Growth Pact, stability programmes and convergence programmes present a Medium-Term Objective for the budgetary position. It is country-specific to take into account the diversity of economic and budgetary positions and developments as well as of fiscal risks to the sustainability of public finances, and is defined in structural terms.

Modified current account balance (CA*): The current account balance adjusted to subtract (1) net factor income of re-domiciled PLCs, as well as depreciation of R&D imports, traded intellectual property, and leased aircraft; and (2) to add back the cost of imported investment in net aircraft related to leasing, R&D-related intellectual property, and the imports of R&D services. The adjustments in (1) apply to net primary income, whereas those in (2) affect net exports of merchandise and services. The idea is to better reflect domestic activities/resources rather than those related to foreign-equity owners. Depreciation of foreign-owned domestic capital is an operating cost of foreign-owned firms, and therefore does not affect the resources generated by domestic residents.

Modified gross national income (GNI*): Gross national income (gross domestic product less net factor income from the rest of the world, and taxes net of subsidies) adjusted for foreign-owned primary income in the balance of payments, which affects net factor income from the rest of the world. The adjustments to primary income subtract the impact of net factor income of re-domiciled PLCs (as this income reflects future dividend payments to foreign-equity owners that will not accrue to Irish residents); depreciation of R&D-related service imports and trade in intellectual property; and depreciation of aircraft for leasing (depreciation of foreign-owned domestic capital is an operating cost of foreign-owned firms, and therefore does not affect the resources generated by domestic residents).

Minimum benchmarks: The lowest value of the structural budget balance that provides a safety margin against the risk of breaching the Maastricht reference value for the deficit during normal cyclical fluctuations. The minimum benchmarks are estimated by the European Commission. They do not cater for other risks such as unexpected budgetary developments and interest rate shocks. They are a lower bound for the Medium-Term Budgetary Objectives (MTO).

Net Policy Spending: A measure of government expenditure which reflects the level of spending that is under the control of government, and which takes into account any offsetting tax changes (be they discretionary revenue-raising or revenue-decreasing measures). Interest spending, cyclical unemployment spending, and one-off and temporary measures (as assessed by the Council), are all largely considered to be beyond the control of government.

Net Expenditure: A measure of government expenditure used to assess compliance with the Expenditure Benchmark. Net Expenditure takes into account any offsetting tax changes (be they discretionary revenue-raising or revenue-decreasing measures), interest spending, cyclical unemployment spending, and one-off and temporary measures (as assessed by the Council), are all largely considered to be beyond the control of government. In addition, net expenditure smooths the impact of government investment in large scale projects by using a four year average of government investment instead of the one-year impact of government investment.

One-off and temporary measures: Government transactions having a transitory budgetary effect that does not lead to a sustained change in the budgetary position.

Output gap: The difference between actual output and estimated potential output.

Potential output: The maximum level of economic output that is sustainable in the medium to long run, where "sustainable" implies that output, when at its potential, is not unduly influenced in any particular direction by imbalances in the economy, be they external, internal or financial. An alternative definition, often used by Central Banks, is that potential output is the level of economic output that is consistent with a stable rate of inflation. If actual output rises above its potential level, then constraints on capacity begin to bind and inflationary pressures build; if output falls below potential, then resources are lying idle and inflationary pressures abate.

Primary budget balance: The budget balance net of interest payments on General Government debt.

Primary structural budget balance: The structural budget balance net of interest payments.

Principles-based approach: The approach that the Council takes when assessing compliance with Ireland's domestic Budgetary Rule. The principles-based approach differs to the European Commission's approach to assessing compliance with the EU fiscal rules across a number of strands (removing some layers of complexity; availing of the Department of Finance's alternative method for estimating potential output and the output gap; and drawing on the latest available information to a greater extent).

Pro-cyclical fiscal policy: A fiscal stance which amplifies the economic cycle by increasing the structural primary deficit during an economic upturn, or by decreasing it in a downturn. A neutral fiscal policy keeps the cyclically-adjusted budget balance unchanged over the economic cycle but lets the automatic stabilisers work.

Public debt: Consolidated gross debt for the General Government. It includes the total nominal value of all debt owed by public institutions in Member States, except that part of debt owed to other public institutions in the same Member State.

Significant deviations: "Significant deviations" are defined in the EU framework as referring to any deviation in structural balance adjustments toward MTO where the deviation is equivalent to at least 0.5 percentage points of GDP in a single year or at least 0.25 percentage points on average per year in two consecutive years. The same thresholds apply for the Expenditure Benchmark (i.e., for deviations in expenditure developments net of discretionary revenue measures impacting on the government balance). When assessed, significant deviations can lead to a Significant Deviation Procedure, which itself can result in sanctions. Under the Council's principles-based approach to the Domestic Budgetary Rule, the thresholds of at least 0.5 percentage points of GNI* in a single year or at least 0.25 percentage points on average per year in two consecutive years apply.

Sovereign bond spread: The difference between risk premiums imposed by financial markets on sovereign bonds for different states. Higher risk premiums can largely stem from (i) the debt -service ratio, also reflecting the countries' ability to raise their taxes for a given level of GDP, (ii) the fiscal track record, (iii) expected future deficits, and (iv) the degree of risk aversion.

Stability and Growth Pact (SGP): Approved in 1997 and reformed in 2005 and 2011, the SGP clarifies provisions of the Maastricht Treaty regarding the surveillance of Member State budgetary policies and the monitoring of budget deficits during the third phase of EMU. The SGP consists of two Council Regulations setting out legally binding provisions to be followed by the European Institutions and the Member States and two Resolutions of the European Council in Amsterdam (June 1997).

Stability programmes: Medium-term budgetary strategies presented by those Member States that have already adopted the Euro. They are updated annually, according to the provisions of the Stability and Growth Pact.

Bibliography

Auerbach, A., Gorodnichenko, Y., (2012). Measuring the Output Responses to Fiscal Policy. American Economic Journal: Economic Policy, 4(2), pp. 1-27. May 2012. Available at: https://www.aeaweb.org/articles?id=10.1257/pol.4.2.1

Bańbura, M., Giannone, D. and L. Reichlin, (2010). Large Bayesian vector auto regressions. Journal of applied Econometrics, 25(1), pp. 71-92.

Barnes, S., and Casey, E., (2019). Euro Area Budget Rules on Spending Must Avoid the Pro-cyclicality Trap. VOX Cepr Policy Portal. June 2019. Available at: https://voxeu.org/article/euro-area-budget-rules-spending-must-avoid-pro-cyclicality-trap

Barnes, S., and Smyth, D., (2013). The Government's Balance Sheet after the Crisis: A Comprehensive Perspective. Irish Fiscal Advisory Council Working Paper. Dublin: Irish Fiscal Advisory Council. Available at: https://www.fiscalcouncil.ie/the-governments-balance-sheet-after-the-crisis-a-comprehensive-perspective/

Beirne, K., Doorley, K., Reagan, M., Roantree, B., and D. Tuda, (2020). The Potential Costs and Distributional Effect of COVID-19 Related Unemployment in Ireland. April 2020, Dublin: Economic and Social Research Institute. Available at: https://www.esri.ie/system/files/publications/BP202101.pdf

Benetrix, A., and Lane, P., (2009). The Impact of Fiscal Shocks on the Irish Economy. The Economic and Social Review, 40(4), pp. 407-434. Winter, 2009. Available at: http://www.tara.tcd.ie/handle/2262/58757

Bergin, A., Garcia Rodriguez, A., Economides, P. and Murphy, G., (2019). Ireland and Brexit: modelling the impact of deal and no-deal scenarios. Special Article in Quarterly Economic Commentary, Spring 2019. QEC Special Article, pp. 67-100. Dublin: Economic and Social Research Institute. Available at: https://www.esri.ie/system/files/publications/QEC2019SPR_SA_Bergin.pdf

Carroll, K., (2019). Irish Fiscal Advisory Council Analytical Note No. 12, Budgetary Semi-Elasticity, June 2019. Dublin. Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Casey, E., (2019). Inside the "Upside Down": Estimating Ireland's Output Gap. The Economic and Social Review, 50(1), pp. 5-34. Dublin: Economic and Social Review. Available at: https://www.esr.ie/article/view/1117

Casey, E., N. Conroy, Osés-Arranz, A., and K. Timoney, (2018). Designing a Rainy Day Fund to Work within the EU Fiscal Rules. Irish Fiscal Advisory Council Working Paper No. 6, June 2018. Dublin: Irish Fiscal Advisory Council. Available at: https://www.fiscalcouncil.ie/wp-content/uploads/2018/06/Designing-a-Rainy-Day-Fund-to-Work-Within-the-Fiscal-Rules-1.pdf

Casey, E., and Hannon, A., (2016). Challenges Forecasting Irish Corporation Tax. Irish Fiscal Advisory Council Analytical Note No. 10, September 2016. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Central Bank of Ireland (2020). Quarterly Bulletin Q2 2020. Dublin: Central Bank of Ireland. Available at: https://www.centralbank.ie/publication/quarterly-bulletins/quarterly-bulletin-q2-2020

Central Bank of Ireland, (2019). Quarterly Bulletin Q2 2019. Dublin: Central Bank of Ireland. Available at: https://www.centralbank.ie/docs/default-source/publications/quarterly-bulletins/qb-archive/2019/quarterly-bulletin-q2-2019.pdf?sfvrsn=14

Central Statistics Office, (2020). Business Impact of COVID-19 Survey 16 March to 19 April 2020. 1 May. Dublin: Central Statistics Office. Available at: https://www.cso.ie/en/csolatestnews/pressreleases/2020pressreleases/pressstatementbusinessimpactofcovid-19survey16marchto19april2020/

Central Statistics Office, (2018a). Estimates of Irish Pension Liabilities 2015. April 2018. Dublin: Central Statistics Office. Available at: http://www.cso.ie/en/releasesandpublications/ep/p-eipl/eipl2015/eipl/

Central Statistics Office, (2018b). Modified Gross National Income. July 2018. Dublin: Central Statistics Office. Available at: https://www.cso.ie/en/releasesandpublications/ep/p-nie/nie2017/mgni/

Central Statistics Office, (2018c). Methodological Note: 2017 Register of Public Sector Bodies (including General Government Bodies) in Ireland. April 2018. Dublin: Central Statistics Office. Available at: https://www.cso.ie/en/media/csoie/methods/nationalaccountsoutputandvalueaddedbyactivity/Register_of_Public_Sector_Bodies_in_Ireland_2018_April.pdf

Central Statistics Office, (2016). Report of the Economic and Statistics Review Group. December 2016. Dublin: Central Statistics Office. Available at: https://www.cso.ie/en/media/csoie/newsevents/documents/reportoftheeconomicstatisticsreviewgroup/Economic_Statistics_Review_(ESRG)_Report_Dec_2016.pdf

Clancy, D., M. Cussen, and R. Lydon, (2014). Housing Market Activity and Consumption: Macro and Micro Evidence. Research Technical Papers 13/RT/14 Dublin: Central Bank of Ireland. Available at: https://ideas.repec.org/p/cbi/wpaper/13-rt-14.html

Conefrey, T., McCarthy, Y., and M. Sherman, (2020). Re-employment Probabilities for Unemployed Workers in Ireland. Central Bank of Ireland Economic Letter. Dublin: Central Bank of Ireland. Available at: https://centralbank.ie/docs/default-source/publications/economic-letters/economic-letter---vol-2013-no-6.pdf?sfvrsn=10

Conroy, N., (2019). Irish Fiscal Advisory Council Working Paper No. 10, June 2019. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Conroy, N. and Casey, E., (2017). Producing short-term forecasts of the Irish Economy: A suite of Models Approach. Irish Fiscal Advisory Council Working Paper No. 4, May 2017. Dublin: Irish Fiscal Advisory Council. Available at:

https://www.fiscalcouncil.ie/wp-content/uploads/2015/03/Producing-Short-Term-Forecasts-of-the-Irish-Economy.pdf

Corsetti, G., Meier, A., and G. Müller., (2012). What Determines Government Spending Multipliers?. IMF Working Paper, 12(150), June 2012. Washington: International Monetary Fund. Available at: https://www.imf.org/external/pubs/ft/wp/2012/wp12150.pdf

Connolly, M., (2017). Global Production and Economic Globalization - an Irish perspective. Available at: https://pdfs.semanticscholar.org/5660/8cdfd48d259ad2926e1632bc87fb241361cf.pdf

Curtin, J. (2016). How much of Ireland's "fiscal space" will climate inaction consume? IIEA blog, September 2016. Available at: https://www.iiea.com/climateand-sustainability/how-much-of-irelands-fiscalspace-will-climate-inactionconsume/

Deane, P. (2017). Missing climate and energy targets will cost Ireland millions, RTÉ opinion piece, November 2017, available at: https://www.rte.ie/eile/brainstorm/2017/1124/922516-missing-climate-andenergytargets-will-cost-ireland-millions/

Department of Finance, (2020a). Stability Programme Update. April 2020. Dublin: Department of Finance. Available at: https://www.gov.ie/en/publication/43a6dd-stability-programme-update-2020/

Department of Finance, (2020b). Medium-Term Fiscal Strategy. January 2020. Dublin: Department of Finance. Available at: https://www.gov.ie/en/publication/98449d-medium-term-fiscal-strategy-slide-deck/

Department of Finance, (2019a). Review of Local Property Tax. The report of the Interdepartamental Group - March 2019. Dublin: Department of Finance. Available at: https://s3-eu-west-1.amazonaws.com/govieassets/7465/91ccbd3ddc97461898211710e2d7ec55.pdf

Department of Finance, (2019b). Stability Programme Update. April 2019. Dublin: Department of Finance. Available at: https://assets.gov.ie/8305/88ffede238074f2cb88fc996854a12b3.pdf

Department of Finance, (2019c). Summer Economic Statement 2019, June 2019. Dublin: Department of Finance. Available at: https://assets.gov.ie/10498/79569b9ea87b4be5bd077bb622c2d1ff.pdf

Department of Finance, (2019d). Addressing Fiscal Vulnerabilities. October 2019. Dublin: Department of Finance. Available at: http://www.budget.gov.ie/Budgets/2020/Documents/Budget/Fiscal%20Vulnerabilities.pdf

Department of Finance, (2019e). Budget 2020. October 2019. Dublin: Department of Finance. Available at: http://www.budget.gov.ie/Budgets/2020/2020.aspx

Department of Finance, (2019f). Modelling Recent Developments in Corporation Tax. November 2019. Dublin: Department of Finance. Available at: https://assets.gov.ie/40629/6e8b86ab8a734c298e9f975fbf18b92c.pdf

Department of Finance, (2018a). Stability Programme Update. April 2018. Dublin: Department of Finance. Available at: http://www.finance.gov.ie/wp-content/uploads/2018/04/20180417-SPU-2018-for-website.pdf

Department of Finance, (2018b). Summer Economic Statement 2018, June 2018. Dublin: Department of Finance. Available at: https://www.finance.gov.ie/wp-content/uploads/2018/06/20180622-SES-2018.pdf

Department of Finance, (2018c). Review of the 9% VAT Rate. Analysis of Economic and Sectoral Developments. July 2018. Dublin: Department of Finance. Available at: https://www.finance.gov.ie/wp-content/uploads/2018/07/9-Percent-Report-Final.pdf

Department of Finance, (2018d). Budget 2019. October 2018. Dublin: Department of Finance. Available at: http://www.budget.gov.ie/Budgets/2019/2019.aspx

Department of Finance, (2018e). Population Ageing and the Public Finances in Ireland. September 2018. Dublin: Department of Finance. Available at: https://www.finance.gov.ie/wp-content/uploads/2018/09/Population-Ageing-and-the-Public-Finances-1.pdf

Department of Finance, (2017a). Annual Report on Public Debt in Ireland. June 2017. Dublin: Department of Finance. Available at: http://opac.oireachtas.ie/AWData/Library3/Findocslaid120617_133424.pdf

Department of Finance, (2017b). Stability Programme Update. April 2017. Dublin: Department of Finance. Available at: http://finance.gov.ie/wp-content/uploads/2017/07/170502-Final-SPU-2017.pdf

Department of Finance, (2017c). Summer Economic Statement 2017, July 2017. Dublin: Department of Finance. Available at: https://www.finance.gov.ie/wp-content/uploads/2017/07/170712-Summer-Economic-Statement-2017.pdf

Department of Finance, (2017d). Rainy Day Fund – Consultation Paper, October 2017. Dublin: Department of Finance. Available at: http://www.budget.gov.ie/Budgets/2018/Documents/Rainy_Day_Fund_Consultation_Paper.pdf

Department of Finance, (2017e). Budget 2018, October 2017. Dublin: Department of Finance. Available at: http://www.budget.gov.ie/Budgets/2018/2018.aspx

Department of Finance, (2016). Budget 2017, October 2016. Dublin: Department of Finance. Available at: http://www.budget.gov.ie/Budgets/2017/2017.aspx

Department of Public Expenditure and Reform, (2018a). National Development Plan. February 2018. Dublin: Department of Finance. Available at: http://www.per.gov.ie/wp-content/uploads/NDP-strategy-2018-2027_WEB.pdf

Department of Public Expenditure and Reform, (2018b). Mid-Year Expenditure Report. July 2018. Dublin: Department of Public Expenditure and Reform. Available at https://www.per.gov.ie/wp-content/uploads/MYER-2018_-web-version.pdf

Department of Public Expenditure and Reform, (2017a). Spending Review 2017, July 2017. Dublin: Department of Public Expenditure and Reform. Available at: http://www.per.gov.ie/en/spending-review/

Department of Public Expenditure and Reform, (2017b). Mid-Year Expenditure Report. July 2017. Dublin: Department of Public Expenditure and Reform. Available at http://www.per.gov.ie/ga/spending-review-2017/

Department of Public Expenditure and Reform, (2017c). Review of the Capital Plan 2016–2021. August 2017. Dublin: Department of Public Expenditure and Reform. Available at http://www.per.gov.ie/en/review-of-the-capital-plan-2016-2021/

Department of Public Expenditure and Reform, (2017d). Actuarial Review of Public Service Occupational Pensions in Ireland as Required by the EU Regulation 549/2013. November 2017. Dublin: Department of Public Expenditure and Reform. Available at https://www.per.gov.ie/wp-content/uploads/Accrued-Liability-Report.pdf

Department of Public Expenditure and Reform, (2015). Building on Recovery. September 2015. Dublin: Department of Public Expenditure and Reform. Available at: https://www.per.gov.ie/wp-content/uploads/Capital-Plan.pdf

European Commission, (2019a). Vade Mecum on the Stability and Growth Pact. Institutional Paper 101. Brussels: European Commission. Available at: https://ec.europa.eu/info/sites/info/files/economy-finance/ip101_en.pdf

European Commission, (2019b). Country Report Ireland 2019. Brussels: European Commission. Available at: https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-ireland_en.pdf

European Commission, (2018a). Vade Mecum on the Stability and Growth Pact. Institutional Paper 057. Brussels: European Commission. Available at: https://ec.europa.eu/info/publications/economy-finance/vade-mecum-stability-and-growth-pact-2018-edition_en

European Commission, (2018b). European Economic Forecast – Spring 2018, Institutional Paper 77. Brussels: European Commission. Available at: https://ec.europa.eu/info/publications/economy-finance/european-economic-forecast-spring-2018_en

European Commission, (2018c). Council Recommendation on the 2018 National Reform Programme of Ireland and Delivering a Council Opinion on the 2018 Stability Programme of Ireland. Brussels: European Commission. Available at: http://europa.eu/rapid/press-release_IP-18-3845_en.htm

European Commission, (2018d). The 2018 Ageing Report: Economic and Budgetary Projections for the EU 28 Member States (2016-2070). Brussels: European Commission. Available at: https://ec.europa.eu/info/sites/info/files/economy-finance/ip079_en.pdf

European Commission, (2017a). Vade Mecum on the Stability and Growth Pact. Institutional Paper 052. Brussels: European Commission. Available at: https://ec.europa.eu/info/publications/economy-finance/vade-mecumstabilityand-growth-pact-2017-edition_en

European Commission, (2017b). European Economic Forecast – Spring 2017, Institutional Paper 53. Brussels: European Commission. Available at: https://ec.europa.eu/info/publications/economy-finance/europeaneconomicforecast-spring-2017_en

European Commission, (2017c). European Economic Forecast – Autumn 2017, Institutional Paper 63. Brussels: European Commission. Available at: https://ec.europa.eu/info/sites/info/files/economy-finance/upd_ip063_en.pdf

European Commission, (2017d). Proposal for a Council Directive laying down the provisions for strengthening fiscal responsibility and the medium budgetary orientation in the Member States. Brussels: European Commission. 6.12.2017. COM (2017)824 final. 2017/0335(CNS)

Economic Statistics Review Group, (2016). Report of the Economic Statistics Review Group (ESRG). Dublin: Economic Statistics Review Group. December 2016. Available at: https://www.cso.ie/en/media/csoie/newsevents/documents/reportoftheeconomicstatisticsreviewgroup/Economic_Statistics_Review_(ESRG)_Report_Dec_2016.pdf

Fiscal Council, (2019a). Assessment of Compliance with the Domestic Budgetary Rule in 2018, May 2019. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2019b). Stand-Still Scenario for Government Spending in the Medium Term - 2019-2023, May 2019. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2019c). Fiscal Assessment Report, June 2019. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2019d). Pre-Budget 2019 Statement. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2018a). Assessment of Compliance with the Domestic Budgetary Rule in 2017, May 2018. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2018b). Stand-Still Scenario for Government Spending in the Medium Term - 2019-2023, June 2018. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2018c). Fiscal Assessment Report, June 2018. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2018d). Pre-Budget 2019 Statement. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2018e). Fiscal Assessment Report, November 2018. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2017a). Ex-Post Assessment of Compliance with the Domestic Budgetary Rule in 2016, May 2017. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2017b). Ex-Post Assessment of Compliance with the Domestic Budgetary Rule in 2016, May 2017. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2017c). Fiscal Assessment Report, June 2017. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2017d). Pre-Budget 2018 Statement. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2017e). Fiscal Assessment Report, November 2017. Dublin. Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2016a). Fiscal Assessment Report, June 2016. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2016b). Pre-Budget 2017 Statement. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2016c). Fiscal Assessment Report, November 2016. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2015a). Fiscal Assessment Report, June 2015. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2015b). Fiscal Assessment Report, November 2015. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2014a). Fiscal Assessment Report, June 2014. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2014b). Fiscal Assessment Report, November 2014. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fiscal Council, (2013). Fiscal Assessment Report, November 2013. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Fitzgerald, J., and S. Kenny, (2018). Managing a Century of Debt. Trinity College Dublin, Trinity Economics Papers. Dublin: Trinity College Dublin. Available at: https://ideas.repec.org/p/tcd/tcduee/tep0118.html

Giordano, R., Momigliano, S., Neri, S., and R. Perotti. (2007). The Effects of Fiscal Policy in Italy: Evidence from a VAR Model. European Journal of Political Economy, 23, pp. 707-733. January 2007. Available at: https://pdfs.semanticscholar.org/3c80/2064f6cadc0275b41ead4fae5df631332a65.pdf

Government of Ireland, (2020). COVID-19 (Coronavirus). May 2020. Dublin: Government of Ireland. Available at: https://www.gov.ie/en/campaigns/c36c85-covid-19-coronavirus/

Gupta, R., and A. Kabundi, (2010). Forecasting Macroeconomic Variables in a Small Open Economy: A Comparison Between Small-and Large-scale Models. Journal of Forecasting, 29(1-2), pp. 168-185. Available at: https://onlinelibrary.wiley.com/doi/abs/10.1002/for.1143

Hall, R.E., (2010). Fiscal Stimulus. Daedalus, Fall 2010, pp. 83-94. Available at: https://web.stanford.edu/~rehall/Daedalus%20Fiscal%20Stimulus%20Published.pdf

Hannon, A., (2014). Tax Forecasting Error Decomposition. Irish Fiscal Advisory Council Analytical Note No. 3, June 2014. Dublin: Irish Fiscal Advisory Council. Available at: https://www.fiscalcouncil.ie/wp-content/uploads/2015/03/Website-AN3.pdf

Hopkins, H., and Sherman, M., (2020). How has the COVID-19 Pandemic Affected Daily Spending Patterns?. Central Bank of Ireland Statistical Publication. Dublin: Central Bank of Ireland. May 2020. Available at: https://www.centralbank.ie/statistics/statistical-publications/behind-the-data

Howlin J., (2015). Controlling the Health Budget: Annual Budget Implementation in the Public Health Area. Irish Fiscal Advisory Council Analytical Note No. 8, August 2015. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Howlin J., (2014). Future Implications of the Debt Rule. Irish Fiscal Advisory Council Analytical Note No. 5, June 2014. Dublin: Irish Fiscal Advisory Council. Available at: http://www.fiscalcouncil.ie/publications/

Ilzetzki, E., Mendoza, E., and C. Végh, (2011). How Big (Small?) are Fiscal Multipliers?. IMF Working Paper, 11(52), Washington: International Monetary Fund. March 2011. Available at: https://www.imf.org/external/pubs/ft/wp/2011/wp1152.pdf

International Monetary Fund, (2020). Global Financial Stability Report, April 2020. Washington: International Monetary Fund. Available at: https://www.imf.org/en/Publications/GFSR/Issues/2020/04/14/global-financial-stability-report-april-2020

International Monetary Fund, (2019a). World Economic Outlook, October 2019 Global Manufacturing Downturn, Rising Trade Barriers. Washington: International Monetary Fund. Available at: https://www.imf.org/en/Publications/WEO/Issues/2019/10/01/world-economic-outlook-october-2019

International Monetary Fund, (2019b). Global Financial Stability Report: Lower for Longer, October 2019. Washington: International Monetary Fund. Available at: https://www.imf.org/en/Publications/GFSR/Issues/2019/10/01/global-financial-stability-report-october-2019

International Monetary Fund, (2017a). Technical Assistance Report – Public Investment Management Assistance. July 2017. Washington: International Monetary Fund. Available at: http://www.per.gov.ie/en/ministerdonohoe-publishes-the-imf-public-investment-management-assessment-pima-report/

International Monetary Fund, (2017b). World Economic Outlook, October 2017. Washington: International Monetary Fund. Available at: https://www.imf.org/en/Publications/WEO/Issues/2017/09/19/world-economic-outlook-october-2017

International Monetary Fund, (2016). Analyzing and Managing Fiscal Risks -Best Practices. June 2016. Washington: International Monetary Fund. Available at: https://www.imf.org/external/np/pp/eng/2016/050416.pdf

Ivory, K., Casey, E., and N. Conroy, (2020). Ireland's Fiscal Spending Multipliers. The Economic and Social Review, Policy Section Articles, 51(1), pp. 133-172. Dublin: Economic and Social Research Institute. Spring 2020. Available at: https://www.esr.ie/issue/view/57

Keogh-Brown, M., Wren-Lewis, S., Edmunds, J., Beutels, P., and R. Smith., (2010). The Possible Macroeconomic Impact on the UK of an Influenza Pandemic. Health Economics, 19, pp. 1345-1360. Available at: https://onlinelibrary.wiley.com/doi/10.1002/hec.1554

Lawless, M., and Morgenroth, E., (2019). The Product and Sector Level Impact of a Hard Brexit across the EU. Journal of the Academy of Social Sciences, Contemporary Social Science, 14(2), pp. 189-207. Available at: https://doi.org/10.1080/21582041.2018.1558276

McGuinness G., and Smyth, D., (2019). Modelling recent developments in Corporation Tax. Department of Finance Working Paper, November 2019. Dublin: Department of Finance. Available at: https://assets.gov.ie/40629/6e8b86ab8a734c298e9f975fbf18b92c.pdf

McQuinn, K., (2019). Modelling Irish Consumer Sentiment - The Potential Impact of Brexit. Box in Quarterly Economic Commentary, Summer 2019. ESRI Forecasting Series. Dublin: Economic and Social Research Institute, pp. 32-35. Available at: https://www.esri.ie/system/files/publications/QEC2019SUM_1.pdf

National Treasury Management Agency, (2020). Ireland: Good Starting Point to Fight Crisis. Investor Presentation April 2020. Dublin: National Treasury Management

Agency. Available at: https://www.ntma.ie/uploads/general/Investor-Presentation-April-2020.pdf

Revenue Commissioners, (2019a). Corporation Tax 2018 Payments and 2017 Returns. Dublin: Revenue Commissioners. May 2019. Available at: https://www.revenue.ie/en/corporate/documents/research/ct-analysis-2019.pdf

Revenue Commissioners, (2019b). Evaluation of Budget 2018 Compliance Measures. Dublin: Revenue Commissioners. October 2019. Available at: http://www.budget.gov.ie/Budgets/2020/Documents/Budget/Evaluation%20of%20Budget%202018%20Compliance%20Measures.pdf

Revenue Commissioners, (2018a). Excise Trends 2017. April 2018. Dublin: Revenue Commissioners. Available at: https://revenue.ie/en/corporate/documents/research/excise-trends-2017.pdf

Revenue Commissioners, (2018b). Ready Reckoner, Post-Budget 2019. October 2018. Dublin: Revenue Commissioners. Available at: https://www.revenue.ie/en/corporate/documents/statistics/ready-reckoner.pdf

Revenue Commissioners, (2018c). Evaluation of Budget 2017 Compliance Measures. October 2018. Dublin: Revenue Commissioners. Available at: http://www.budget.gov.ie/Budgets/2019/Documents/15.%20Evaluation%20of%20Budget%202017%20Compliance%20Measures%20(1).pdf

Stock, J. H., and Watson, M.W., (2003). How Did Leading Indicator Forecasts Perform during the 2001 Recession? FRB Richmond Economic Quarterly, 89(3), Summer 2003, pp. 71-90. Available at: https://ssrn.com/abstract=2184936

Timoney, K., and Casey, E., (2018). A "Heat Map" for Monitoring Imbalances in the Irish Economy. Irish Fiscal Advisory Council Analytical Note, 11, September 2018. Dublin: Irish Fiscal Advisory Council. Available at: https://www.fiscalcouncil.ie/wp-content/uploads/2018/09/A-Heat-Map-for-Monitoring-Imbalances-in-the-Irish-Economy.pdf

Walker, E., and Ryan, C., (2019). Public Service Employment & Expenditure Modelling. Department of Public Expenditure and Reform Spending Review 2019, October 2019. Dublin: Department of Public Expenditure and Reform. Available at: http://budget.gov.ie/Budgets/2020/Documents/Budget/Public%20Service%20Employment%20and%20Expenditure%20Modelling%20(B).pdf

World Health Organization, (2020). Draft Landscape of COVID-19 Candidate Vaccines. May 2020. Geneva: World Health Organization. Available at: https://www.who.int/who-documents-detail/draft-landscape-of-covid-19-candidate-vaccines

Wren-Lewis, S., (2017). Austerity as Concept and Practice, in Heffernan, E., McHale, J., and N. Moore-Cherry, *Debating Austerity in Ireland: Crisis, Experience and Recovery*, pp. 17-36. Dublin: Royal Irish Academy. Available at: https://www.jstor.org/stable/j.ctt1x76dck

Varthalitis, P., (2019). FIR-GEM: A SOE-DSGE Model for fiscal policy analysis in Ireland. Economic and Social Research Institute, Working Paper, 620, March 2019. Dublin: Economic and Social Research Institute. Available at: https://www.esri.ie/pubs/WP620.pdf