Chapter 3

Assessment of Budgetary Forecasts

3. Assessment of Budgetary Forecasts

Key Messages

- The general government budget (excluding one-off items) was broadly balanced in 2018, an improvement compared to 2017. This was aided by several favourable factors such as strong revenue growth, falling unemployment and declining interest payments. The primary balance (excluding one-off items) stayed relatively constant in 2018, with revenue and non-interest spending growing at close to 7 per cent.

- The general government balance (excluding one-off items) is forecast in *SPU 2019* to improve in 2019 to a surplus of €0.6 billion. This improvement is driven by a forecast slowdown in underlying expenditure growth compared to last year. Significant upside risks to 2019 expenditure forecasts are apparent, particularly from potential health overruns and payment of the Christmas Bonus, which has again not been budgeted for.

- Corporation tax receipts as a share of tax revenue in 2018 reached record levels (18.7 per cent of Exchequer tax revenue), aided by an unexpected boost in receipts of €1.9 billion relative to *Budget 2018* forecasts. This tax head is very volatile and is strongly concentrated in a small number of companies. This, together with potential changes in the international tax environment, leaves government revenue particularly exposed to shocks.

- For 2020–2023, the general government balance is forecast to improve, with surpluses increasing in every year. The expenditure forecasts are not credible: they are based on technical assumptions which do not reflect either likely future policies or the future cost of meeting existing commitments. The technical assumptions used imply an implausible slowdown in expenditure growth, overstating the likely budget balance. Other than for corporation tax, revenue forecasts as a whole have been reasonably accurate in recent years.

3.1 Introduction

This chapter assesses recent data from the CSO and the latest set of fiscal forecasts produced by the Department of Finance in *SPU 2019*.

For 2018, the general government budget balance recorded a surplus of €46 million, an improvement from 2017. Excluding one-off receipts of €0.4 billion in corporation tax and €0.2 billion of expenditure, gives an underlying deficit of €91 million.[29]

In 2019, the general government balance (excluding one-off items) is forecast to improve to a surplus of €0.6 billion. However, there are significant upside risks to expenditure forecasts, such as overruns in the health sector (which have averaged €500 million in recent years) and the payment of the Christmas bonus (full payment last year cost €265 million), which has again not been budgeted for.

After 2019, expenditure projections are based on technical assumptions, which are not credible. Voted current expenditure is assumed to grow by only 2.5 per cent per annum for 2020–2023. This implies a significant slowdown in expenditure growth, likely overstating surpluses in later years. These assumptions are unlikely to match future policies and outcomes.

General government revenue growth is forecast to remain strong in the coming years, but at a slower pace than in recent years. Over 2020–2023, revenue (excluding one-off items) is projected to grow by 4.0 per cent on average, compared to 6.8 per cent in 2018 and 5.2 per cent 2019.

The *SPU 2019* plans allocate €0.5 billion each year from 2019 to 2023 to a Rainy Day Fund (also known as the National Surplus Reserve Fund) from the Central Fund. In addition, a €1.5 billion transfer from the Ireland Strategic Investment Fund (ISIF) to the Rainy Day Fund is planned this year. Although the annual €0.5 billion contributions will count as Exchequer spending (non-voted capital expenditure), they will not impact the general government spending or the balance, because these are transfers that remain within the general government sector.

[29] The one-off expenditure item in 2018 relates to a €213 million settlement for pay arrears to medical consultants. A one-off payment of corporation tax (€350 million) in 2018 relates to the adoption of a new accounting standard (IFRS15).

Table 3.1: Summary of Fiscal Outturns and Forecasts (2017–2023)

€ billion, unless stated

	2017	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*
General Government Balance	-0.8	0.0	0.6	1.2	2.5	3.8	5.3
General Government Balance (excluding one-offs) [1]	-0.7	-0.1	0.6	1.2	2.5	3.8	5.3
Total Revenue	76.5	82.0	86.0	88.8	92.2	96.1	100.4
Total Revenue excl. one-offs [1]	76.5	81.7	86.0	88.8	92.2	96.1	100.4
Total Revenue excl. one-offs (% change) [1]	4.9	6.7	5.2	3.4	3.8	4.2	4.5
Total Expenditure	77.4	82.0	85.3	87.6	89.7	92.3	95.0
Total Expenditure excl. one-offs [1]	77.2	81.8	85.3	87.6	89.7	92.3	95.0
Total Expenditure excl. one-offs (% change) [1]	2.7	5.9	4.4	2.6	2.4	2.9	3.0
Interest Expenditure	5.8	5.2	4.8	4.3	4.1	4.4	4.6
Primary Expenditure	71.6	76.8	80.6	83.3	85.6	87.9	90.4
Primary Expenditure excl. one-offs [1]	71.4	76.5	80.6	83.3	85.6	87.9	90.4
Primary Expenditure excl. one-offs (% change) [1]	3.4	7.2	5.3	3.3	2.8	2.7	2.8
Primary Balance	5.0	5.3	5.4	5.6	6.6	8.2	10.0
Primary Balance excl. one-offs [1]	5.1	5.1	5.4	5.6	6.6	8.2	10.0
Nominal GNI* Growth (% change)	3.0	6.1	4.9	4.9	3.9	3.9	4.1

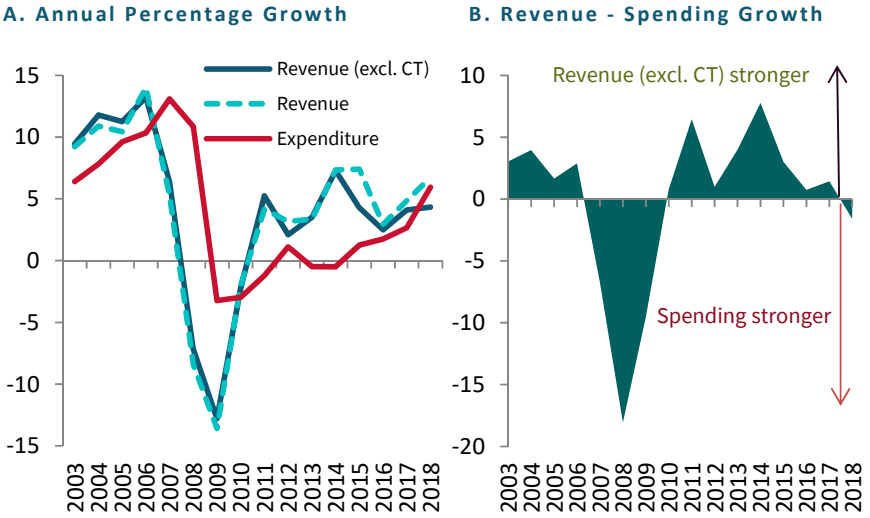
Sources: CSO; Department of Finance; and internal IFAC calculations.

Note: [1] One-off items/temporary measures are as assessed by the Council to be applicable, as per Table 1.1, Chapter 1. These one-offs are removed from variables to get a sense of the underlying fiscal position. Rounding can impact on totals. Figures in grey indicate that the Council assesses these forecasts as largely the result of technical assumptions on expenditure, which are unlikely to reflect future developments.

3.2 Assessment of 2018 Outturns and 2019 Estimates

The headline **general government balance** for 2018 was a surplus of €46 million, an improvement on forecasts from *Budget 2019* (which forecasted a deficit of €0.3 billion). Excluding one-off receipts of €0.4 billion in corporation tax and €0.2 billion in expenditure, however, gives an underlying balance close to zero (deficit of €91 million) for 2018, an improvement relative to 2017. This was aided by strong cyclical revenue growth, declining unemployment-related expenditures and falling interest payments (€0.6 billion lower than 2017). Figure 3.1 shows underlying revenue and expenditure trends. The growth of general government expenditure has been rising since 2013 and in 2018 outpaced revenue growth (excluding the highly volatile corporation tax revenue), a reversal of the previous eight years.

Figure 3.1: Expenditure Growth Accelerating, Outstripping Non-Corporation Revenue



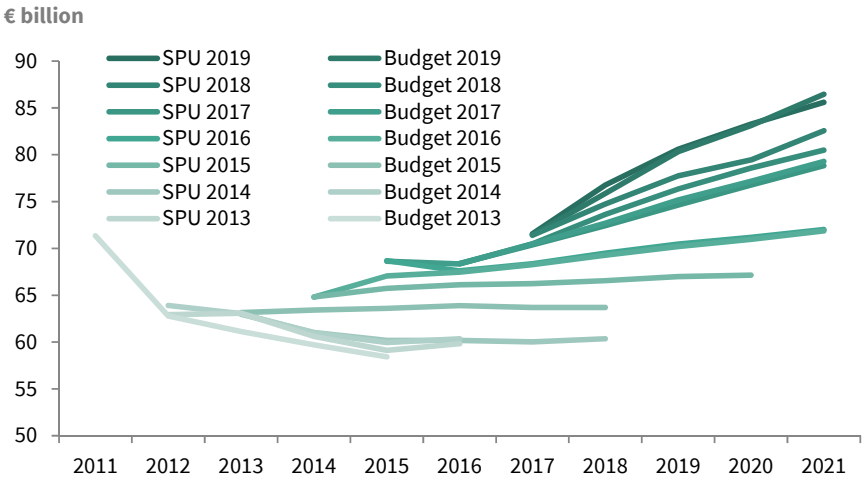
Sources: CSO; Department of Finance; and internal IFAC calculations.
Note: Revenue and expenditure in general government terms. They exclude one-offs assessed by the Council as applicable.

The **primary balance** (excluding one-off items) was largely unchanged in 2018 relative to 2017. Non-interest spending grew at a faster pace (7.2 per cent) than total revenue (6.7 per cent). General government **primary expenditure** (excluding one-off items) grew by €5.2 billion in 2018. The main items driving this growth were compensation of employees (€1.5 billion), gross fixed capital formation (€1.2 billion), and intermediate consumption (€1.0 billion). Underlying primary expenditure growth has been accelerating in recent years and this continued in 2018 reaching 7.2 per cent growth.

Primary spending in 2018 was €0.9 billion higher than forecast in *Budget 2019*. Of this, €0.2 billion was a one-off pay settlement for pay arrears to medical consultants that is not expected to recur, and €0.1 billion relates to a reclassification of pension payments from Eircom and Coillte pension funds.[30] The remaining €0.5 billion is spending on a general government basis shown by the CSO for 2018, which the Department had not included in its *Budget 2019* estimates for 2018.[31]

This further upward revision to primary spending is consistent with the pattern of revisions to spending seen at budget times and within-year in recent years. Figure 3.2 shows various vintages of forecasts of primary spending; one can see there has been a tendency for spending to drift up as the cyclical recovery takes hold.[32]

Figure 3.2: Vintages of General Government Primary Spending Forecasts



Sources: Department of Finance.
Note: Primary expenditure excludes interest payments. Prior to *Budget 2016*, spending forecasts were made on the unrealistic assumption of fixed nominal spending for most items. Since then, forecasts have been made on a more realistic basis, and so upward revisions to spending more clearly show the upward drift in spending plans.

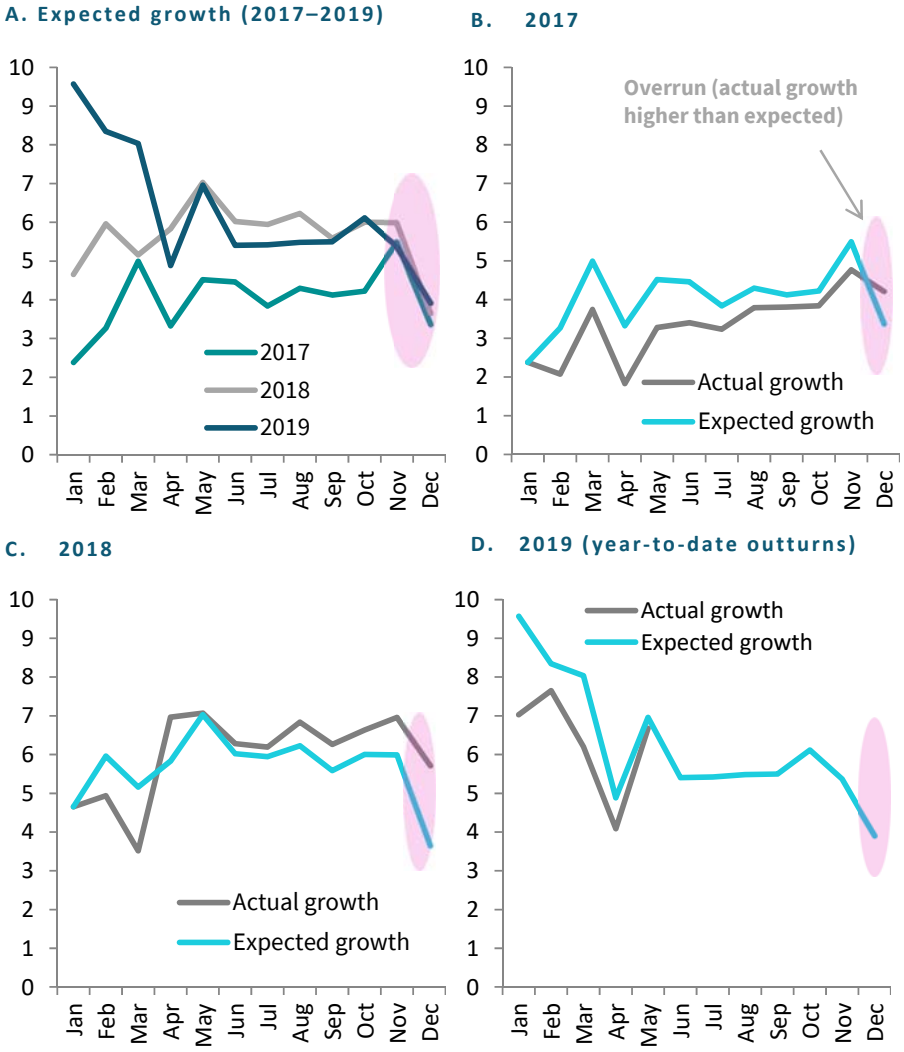
[30] Pension funds were reclassified retroactively in the sector of general government (CSO, 2019).

[31] In part, this is driven by anticipated underspends in non-health areas not having materialised having been factored into the budget day estimates for 2018. Much of the additional €0.5 billion appears to relate to higher-than-expected social payments including health service, housing assistance, and other social protection schemes.

[32] Forecasts for spending at the end of the forecast horizon may have been somewhat unrealistic (i.e., low) prior to *Budget 2016*, which may exaggerate the extent of upward revisions.

Figure 3.3: Monthly Exchequer Spending Profiles Assume a Sharp Fall in December that Leads to Overruns if Not Achieved

Percentage growth (year-on-year), cumulative



Sources: Department of Finance (Fiscal Monitor); and internal IFAC calculations.
Note: Gross voted current spending in cumulative terms. Expected growth refers to the change in the current year's forecast relative to the outturn of the previous year.

In terms of recent developments on expenditure, the outturns for the year to date (end-May) are slightly below monthly forecasts, but past patterns would suggest that this is not a reliable guide to the final outturn.[33] Figure 3.3A explores the patterns of monthly spending forecasts for 2017, 2018 and 2019. [34] For all three years, a clear trend emerges: the expected growth rate in December of each year

[33] For example, in May 2019, gross voted current spending in the Department of Health was 0.7 per cent below profile, but the annual growth was very strong at 9.0 per cent.

[34] This is calculated as the growth rate of the current year's forecast relative to the previous year's outturn, in cumulative terms.

assumes a sharp fall relative to previous months.[35] In 2017 and 2018, the actual growth rate did not fall as rapidly as had been forecast, resulting in overruns in both years (Figure 3.3 Panels B–C). In 2017, the actual growth was lower than forecast for the first eleven months of the year, so signals of overruns were not apparent over the course of the year. However, the final outturn for the year resulted in an overrun. For 2018, while there had been overruns for the second half of the year, the overrun widened significantly in December, with the end-year overrun becoming substantial.

Turning to capital spending, some ongoing investments are experiencing significant overruns, as discussed in Box F.

Box F: Capital Project Overruns in Ireland

A common feature of big capital investments in Ireland and internationally is that initially-set budgets tend to escalate over time, leading to overruns that can put pressure on the public finances. This Box examines the general drivers of this trend and provides an overview on the Irish experience, focusing on the case of the National Children's Hospital.

Internationally, investment in infrastructure megaprojects (i.e., projects worth over $1 billion) has gained momentum in recent years. Yet, nine out of ten megaprojects incur cost overruns (Flyvberg, 2014), largely caused by: (1) weak leadership by planners who lack experience in large projects, which can lead to major changes throughout the project cycle; (2) conflicts of interest in decision making by different stakeholders in the public and private domains; and (3) the long-term nature of the project, which increases the extent of potential risks. Exceeding initial budgets can have important consequences in the public finances, including resorting to in-year cuts in other spending areas or the use of temporary revenue gains.

Scale of Overruns in Ireland and their Impact

Ireland is not an exception to this systematic pattern of overruns in infrastructure projects (Table F.1). The construction of the Dublin Port Tunnel, for example, involved an overrun of 160 per cent of the initial budget. While lessons should have been learnt from past experience, some ongoing capital projects are still incurring substantial overruns. The National Broadband Plan, which has been approved by the Government, has seen the estimated cost increase from an initial €500 million to an estimated €3 billion (an increase of 500 per cent).

Table F.1: Examples of Capital Investment Overruns in Ireland

Approximate increases from initial budget to final cost/latest estimate

	Overrun (€ million)	*Overrun (%)*
National Broadband Plan	2,500	500
National Children's Hospital	983	94
Luas Line [1]	578	289
Dublin Port Tunnel	495	160

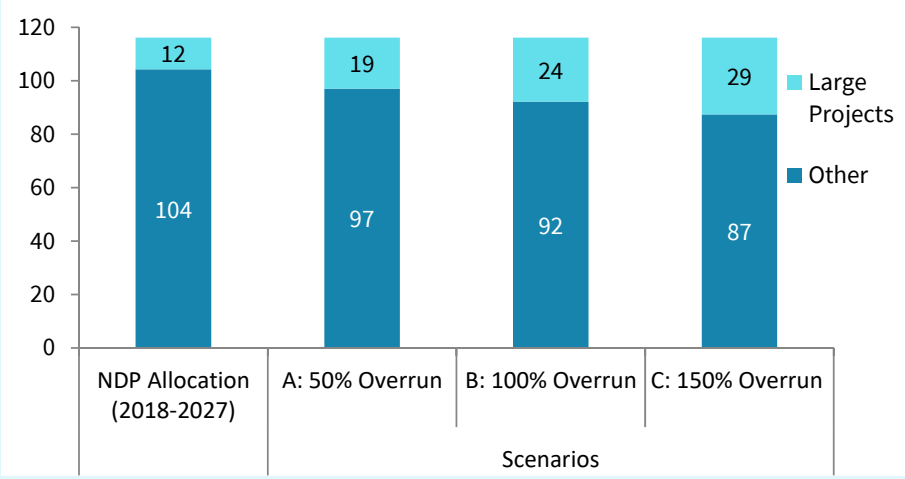
Sources: Internal IFAC calculations.
Note: [1] This refers to the first construction phase of the Luas line. The extension that followed, however, performed well in sticking to initially-budgeted costs.

[35] From an average expected growth of 5.6 per cent in November to 3.7 per cent for the end-year.

Deviating from initially planned budgets can have wider implications. As an illustration, Figure F.1 shows how overruns in the largest projects would squeeze the budget for the other investments set out in the National Development Plan (Department of Public Expenditure and Reform, 2018a) assuming that the overall envelope was maintained.[36,37] Under the baseline scenario from the National Development Plan, the large projects would imply an average annual cost of €1.3 billion, leaving on average €11.6 billion per annum for other projects. However, if these large projects overran by 150 per cent (except for the National Children's Hospital and the National Broadband Plan, for which the latest overrun estimates are incorporated), this would imply that the allocation for the large projects would increase to €3.2 billion annually, reducing the scope for the rest of the projects to €9.7 billion.[38]

Figure F.1: Overruns in Large Projects Can Reduce the Scope for Other Investments

€ billion



Sources: Department of Public Expenditure and Reform (2018a); and internal IFAC calculations.
Note: The National Development Plan (NDP) allocation is adjusted to take account of the outturn for 2018. Scenarios A, B and C assume overruns of 50 per cent, 100 per cent and 150 per cent, respectively, for the large projects considered in the exercise (except for the National Children's Hospital and the National Broadband Plan, for which the latest overrun estimates are considered final).

Case study: the National Children's Hospital

The National Children's Hospital is the largest capital investment programme ever undertaken in Ireland's healthcare system. Since the project was established six years ago, the estimated cost of the investment has doubled, as shown in Figure F.2. In 2013, the estimated budget for the construction of the hospital was €790 million. In April 2017, the estimation increased to €983 million, which included costs related to the construction and equipment of the hospital

[36] The projects identified as "large" in this exercise refer to: the National Children's Hospital, the National Broadband Plan, the Dart Expansion, the Metro Link, the M20 Cork-Limerick, the BusConnects Programme, and the Eastern and Midlands Water Supply Project. For the National Children's Hospital and the National Broadband Plan, the latest overrun estimates are incorporated in the exercise, and no further assumptions are applied to these.

[37] The overall envelope from the National Development Plan refers to the total allocation committed for 2018–2027. This has been adjusted to take account of the 2018 outturns.

[38] The annual average, shown for illustrative purposes, should not be taken literally since it assumes that the cost of the projects is spread equally over the nine-year horizon (2019–2027), while this is not necessarily the case (e.g., the duration of some projects is below nine years) .

and the two satellite centres. In December 2018, the associated cost increased to €1.43 billion. After this, a further €293 million is expected to be needed to cover additional items (e.g., IT systems), increasing the latest estimate to €1.73 billion.

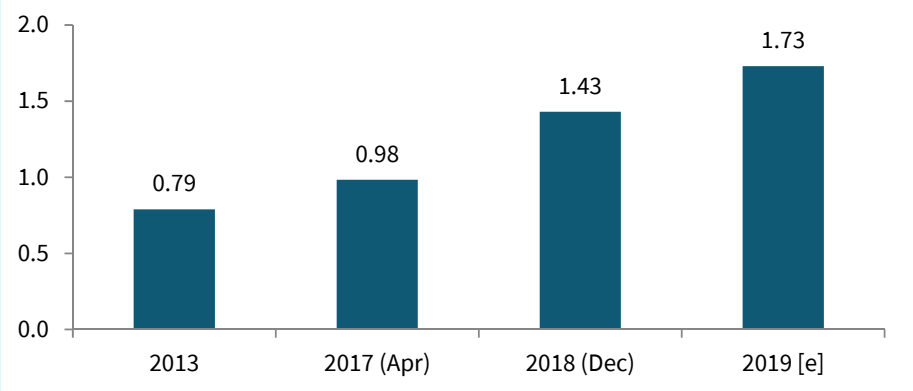
For 2019, cost developments in the Children's Hospital are expected to be covered through savings in other departments/capital projects. The Minister for Finance outlined in February that €99 million will be needed this year for timely provision of the National Children's Hospital.[39] This amount is planned to be accommodated as follows: €24 million arises from a scheduled draw-down in Health across 2019 and 2020; the remaining €75 million will be met through a number of savings elsewhere, the largest being a re-scheduling of €27 million arising in relation to the A5 Motorway in Northern Ireland.

A review by PwC (2019) helps understand the rationale for the cost-escalation up to end-2018. Three key deficiencies were identified as driving such re-estimations of the costs:

1. Planning. This relates to the lack of a solid cost-benefit analysis being undertaken prior to the construction process. This includes an underestimation of potential risks, besides the absence of robust planning to identify a guaranteed maximum price (i.e., a ceiling to the investment cost).
2. Execution. Once the investment had been committed, there was poor coordination and control of the guaranteed maximum price.
3. Governance. The body in charge of overseeing the project (the National Paediatric Hospital Development Board) did not adequately put into question the deficiencies of the project, allowing it to progress "too quickly" and without being challenged regularly.

Figure F.2: The Estimated Cost of the Children's Hospital Has Doubled

€ billion



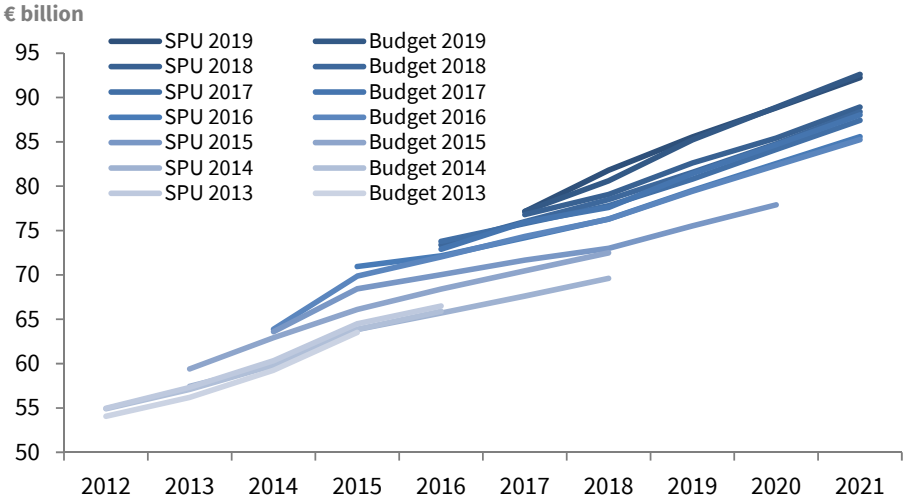
Sources: PwC (2019).
Note: The 2019 figure refers to the latest estimate of the investment cost. However, this figure does not include additional costs that may well arise, including accommodation costs or inflation.

Key failures associated with health spending overruns were identified in Box D of IFAC (2018e). There are clear parallels between those failures, the conclusions noted in the review of the National Children's Hospital, and some deficiencies identified in Flyvberg (2014). These refer to: (i) unrealistic forecasts; and (ii) weak spending controls. This gives rise to the "soft budget constraint" problem, whereby the budgeted cost is surpassed repeatedly. In turn, this creates future problems by reinforcing the belief that upward revisions to the ceiling are very likely to be facilitated, hence weakening spending controls further. The interaction between unrealistic forecasts and a subsequent relaxation of ceilings can put the public finances at risk.

[39] Minister for Finance public statement on 12 February 2019, available here.

Turning to **general government revenue** for 2018, this amounted to €82.0 billion. This is €1.2 billion higher than anticipated in *Budget 2019*, which was published just three months before the end of the year. This outperformance was largely driven by taxes on income and wealth arising from higher-than-expected corporation tax receipts. IFAC (2018c) highlighted how revenue projections have been revised procyclically. Figure 3.4 updates this analysis. For 2019, revenue projections—adjusted for discretionary revenue changes—are now some €10.4 billion stronger than first forecast in *SPU 2015.* This underlines the likely cyclical characteristics of some part of forecast revenue growth (part of which is driven by higher corporation tax receipts, which are also likely to be cyclical rather than structural increases in tax revenues).

Figure 3.4: Vintages of General Government Revenue Forecasts



Sources: Department of Finance; and internal IFAC calculations.
Note: Data are adjusted to account for discretionary tax policy changes (not including the impact of non-indexation of tax bands and credits).

Box G: Sources of Revenue Surprises Over Recent Years

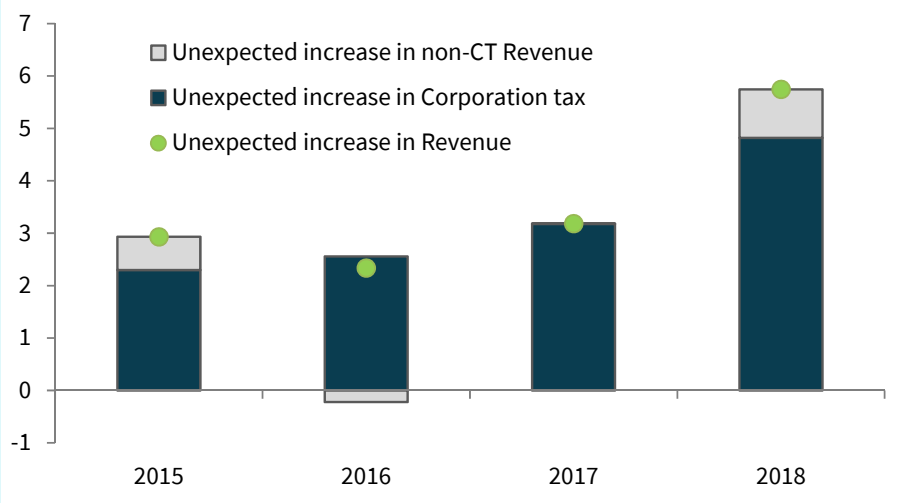
This Box examines the recent performance of general government revenue relative to previous forecasts. Over the past four years, general government revenue has been much stronger than was predicted. As an illustrative exercise, we use the *Budget 2015* forecasts of general government revenue for the years 2015–2018 and compare them to the outturns.[40] As some of the difference between the levels of outturns and levels of forecasts may be due to revisions or reclassifications, this Box focuses on the year-to-year growth in general government receipts. This means that such reclassifications are less likely to impact on the analysis presented here.[41]

One important aspect is the role of corporation tax receipts, which more than doubled from 2014 to 2018. *Budget 2015* did not include explicit medium-term corporation tax forecasts. However, medium-term corporation tax forecasts by the Department of Finance typically project from the current level using nominal GNP growth.[42] This approach is applied to the 2015 forecast using GNP forecasts at the time.[43] We take the nominal GNP growth rate forecast in *Budget 2015* and apply that to the 2015 forecast to get forecasts for 2016–2018.

Figure G.1 shows that almost all of the over performance of revenue in this four-year period can be attributed to the stronger-than-anticipated growth in corporation tax. The largest forecast errors came in 2015 and 2018, mainly due to unexpected increases in corporation tax receipts. With this in mind, it appears that the Department has been relatively accurate in forecasting general government revenue excluding corporation tax.

Figure G.1: Revenue Surprises Driven by Corporation Tax Receipts

€ billion, cumulative revenue surprises from 2015



Sources: *Budget 2015*; CSO; and internal IFAC calculations.

[40] For the outturns, we adjust them for policy changes and one-offs, as these would be unlikely to have been incorporated into *Budget 2015* forecasts.

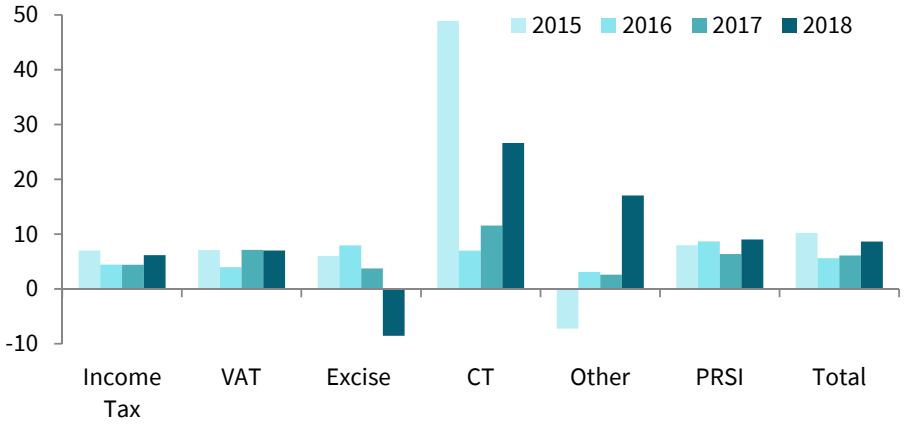
[41] This is because reclassifications are generally applied to the whole time series and hence are less likely to impact on individual year-to-year changes.

[42] While gross operating surplus is used by the Department to forecast corporation tax, GNP growth is used in this exercise as forecasts for GNP were published in *Budget 2015*.

[43] The 2015 forecasts for corporation tax were given in the Exchequer returns, consistent with *Budget 2015* projections.

In terms of **Exchequer tax revenue**, receipts of €55.6 billion were collected in 2018, €1.4 billion higher than forecast in March 2018.[44] While the majority of tax heads and PRSI have followed stable growth in 2018, some other sources have substantially moved away from recent trends (Figure 3.5).[45] The most remarkable growth relates to corporation tax revenue, which grew by 27 per cent in 2018, far ahead of an average growth of 9 per cent in the previous two years. In 2015, however, the growth amounted to 50 per cent, reflecting the highly volatile nature of this tax head (Casey and Hannon, 2016).

Figure 3.5: Tax Revenue and PRSI in 2015–2018
Percentage change (year-on-year)



Sources: Department of Finance; and internal IFAC calculations.
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.

Appendix E.1 shows how the *SPU 2019* estimates for 2019 have been revised relative to the *Budget 2019* forecasts for 2019. Corporation tax forecasts are the only ones that have been revised significantly, with the forecast for 2019 now €500 million higher than in *Budget 2019*. This upward revision is largely driven by an update of

[44] See Exchequer Borrowing Requirement Profiles 2018 available at: https://assets.gov.ie/8259/48ccce88b835414f850d876eee9b751e.pdf.

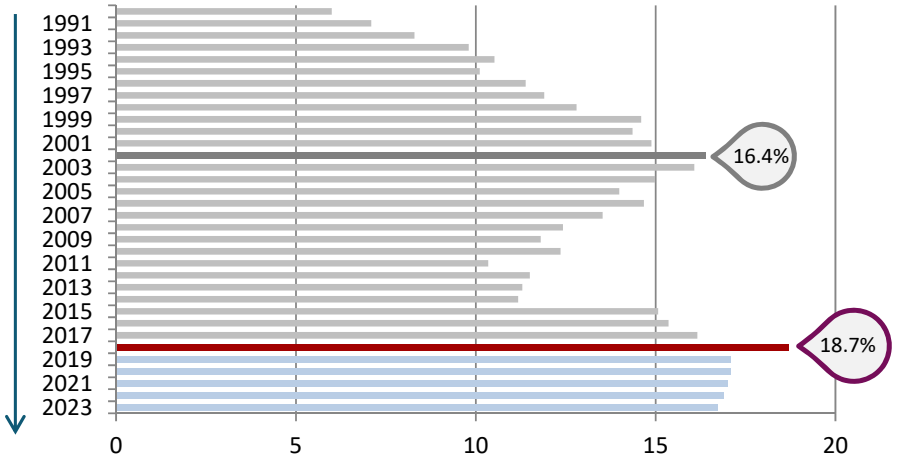
[45] In 2018, excise duties experienced substantial negative growth, largely attributed to the implementation of the plain-packaging of tobacco products. Other tax revenue recorded strong positive growth, largely driven by strong growth in stamp duties (nearly 21 per cent). Despite this, stamp duty revenues were substantially lower than initially forecast for 2018 (by €217 million, or 13 per cent). This is partly due to an over-optimistic yield expected from the increase of stamp duty on commercial property deals from 2 to 6 per cent introduced in *Budget 2019.* The estimated yield was €376 million for 2018, while the actual yield might be close to €289 million.

the 2018 outturn (captured in the "starting point error"), which is taken as the basis of the forecast for 2019.[46]

In 2018, corporation tax revenue represented 18.7 per cent of total Exchequer tax revenue, the highest share ever recorded (Figure 3.6). This tax head is very volatile and is strongly concentrated in a small number of companies (Box H). This, together with potential changes in the international tax environment, leaves government revenue exposed to shocks (see Table 3.6).[47] IFAC (2018c) provided a stylised scenario on the direct impact of a large firm leaving Ireland. This exit was estimated to trigger a reduction of government revenues by over €330 million, close to half a per cent of total revenue in 2016.

Figure 3.6: Corporation Tax (% Revenue) in 2018 at Highest Peak

% of total Exchequer tax revenue (horizontal axis)



Sources: Department of Finance; and internal IFAC calculations.
Note: The shares for 2019–2023 are based on *SPU 2019* estimations/projections.

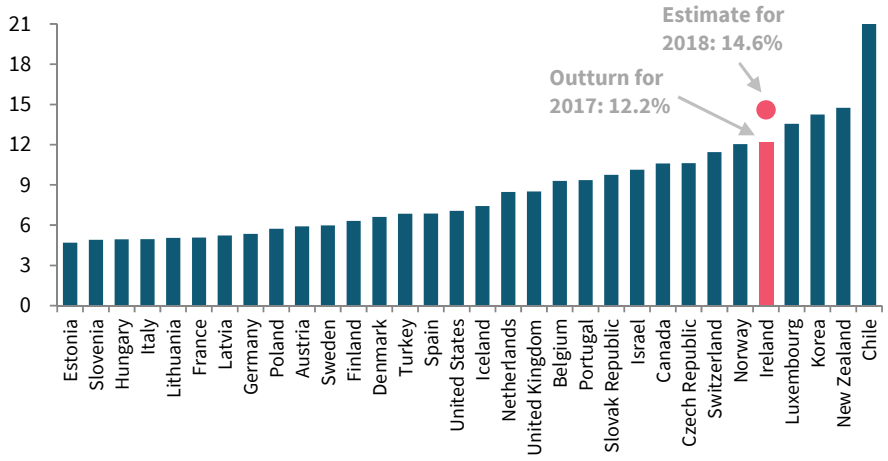
An international comparison suggests that Ireland is one of the countries within the OECD with the highest reliance on corporation tax revenues (Figure 3.7). In 2017, Ireland had one of the highest shares of corporation tax over total taxation (with total taxation including tax revenue from the central government, local government,

[46] At the time of *Budget 2019,* the Department of Finance identified a corporation tax one-off of €700 million for 2018. This was related by the adoption of new accounting standards by some firms (€300 million, later revised to €350 million (Revenue Commissioners, 2019)) and non-recurring improved profitability/trading conditions from other Revenue clients (€400 million). But corporation tax receipts in 2018 were €800 million higher than had been forecast three months before in *Budget 2019.* Of this €800 million, €500 million is assumed to enter in the base for 2019.

[47] The corporation tax increase in recent years could also be a result of hyper-cyclicality, where the elasticity of the Irish corporation tax to the global business cycle has become particularly large in the last decade (Box H).

social security funds and supranational funds). For 2018, this share has grown substantially for Ireland, with corporation tax estimated to now represent 14.6 per cent of total taxation, well over OECD norms.

Figure 3.7: Corporation Tax (% Total Taxation) in the OECD
% of total taxation



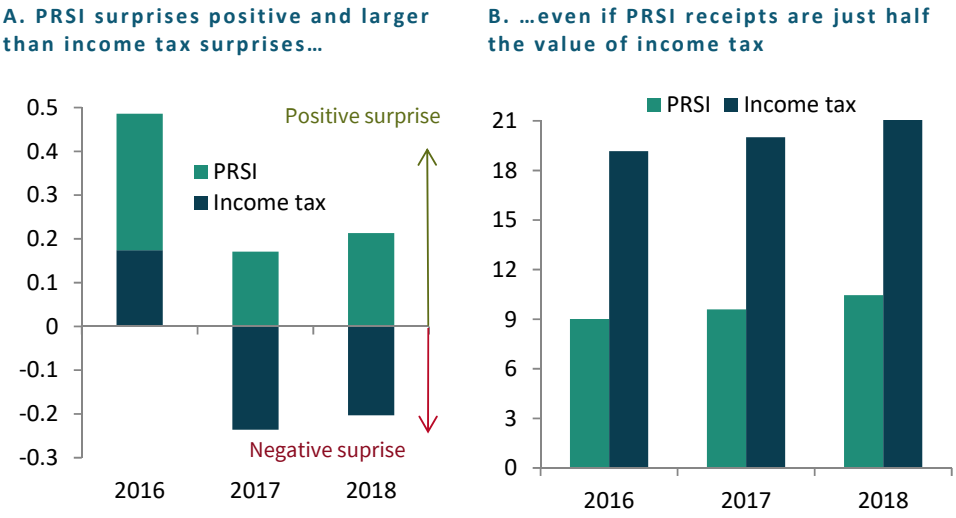
Sources: OECD Corporate Tax Statistics; and internal IFAC calculations.
Note: Data shown for 2017 (circle for Ireland refers to 2018, estimated through internal calculations). Total taxation includes tax revenue from the central government, local government, social security funds, and supranational funds.

In terms of income tax, receipts grew substantially in 2018 (by 6.2 per cent or €1.2 billion), reflecting solid employment and earnings growth. However, receipts were €202 million lower than previously forecast in *Budget 2018*. Relatedly, **PRSI** is another source of government revenue that mirrors labour market conditions. While receipts from this source account for an important part of government revenue, its importance is often not recognised in revenue analyses. As shown in Figure 3.8, PRSI has consistently overperformed in the last three years by €231 million (on average), while income tax has underperformed by €88 million over the same period.[48] This substantial difference comes despite PRSI revenue being equivalent to only half the value of income tax receipts (Figure 3.8B).

[48] The income tax underestimation might be linked to the revenue loss due to income tax changes in some recent budgets.

Figure 3.8: Unexpected PRSI Offsets Income Tax Surprises

€ billion

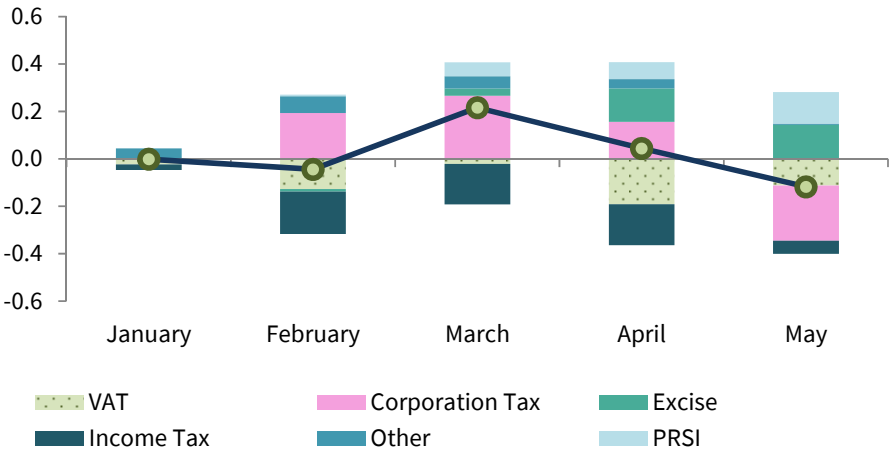


Sources: Department of Finance; and internal IFAC calculations.
Note: PRSI revenue includes its corresponding excess as per the memo items. Panel A shows the difference between the outturn and the profiles as per the Analytical Exchequer Statements.

In terms of the Exchequer developments for the year to end-May (Figure 3.9), tax revenue and PRSI have, as a whole, underperformed. This is the result of lower-than-expected corporation tax, VAT and (to a lesser extent) income tax taking hold. This has not been offset by overperforming PRSI and excise duties. PRSI revenue has been very strong thus far: €399million (or 9.3 per cent) higher than in the same period last year and €133 million (or 2.9 per cent) over profile.

Figure 3.9: Tax Revenue and PRSI Performance (Outturn–Profile) in 2019

€ billion (cumulative)



Sources: Department of Finance; and internal IFAC calculations.
Note: Data as per the monthly Analytical Exchequer Statements. Other includes capital taxes, motor tax and other unallocated tax receipts.

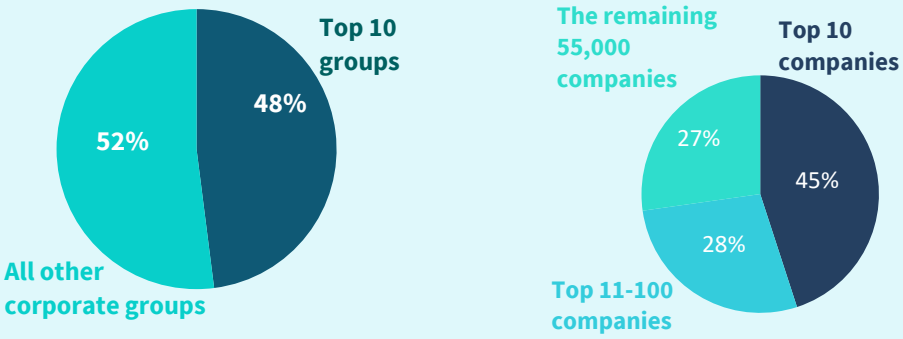
Box H: Corporation Tax Concentration and Volatility

Corporation tax revenue in Ireland is characterised by its high volatility and strong concentration in a few firms. These factors contribute to make it the most challenging of the main tax heads to forecast (Casey and Hannon, 2016). This Box provides new insights into the concentrated and volatile nature of corporation tax in Ireland drawing on the latest data from the Revenue Commissioners (2019).

How concentrated are corporation tax receipts among firms?

A large share of the corporation tax revenue in Ireland is paid by relatively few companies. In 2018, corporation tax receipts amounted to €10.4 billion. Of this, the top ten largest corporate groups paid €5 billion, virtually a half of all receipts (Figure H.1). This concentration is evident over the last five years for which data are available, with the largest top ten companies contributing 37–45 per cent of receipts each year since 2014. The following top 11–100 companies have contributed to total corporation tax even more than the remaining 101–55,000 companies, with a share close to 25 per cent of total receipts.

Figure H.1: Only 10 Groups Paid Almost Half of Corporation Tax (2018)
Percentage of total corporation tax receipts



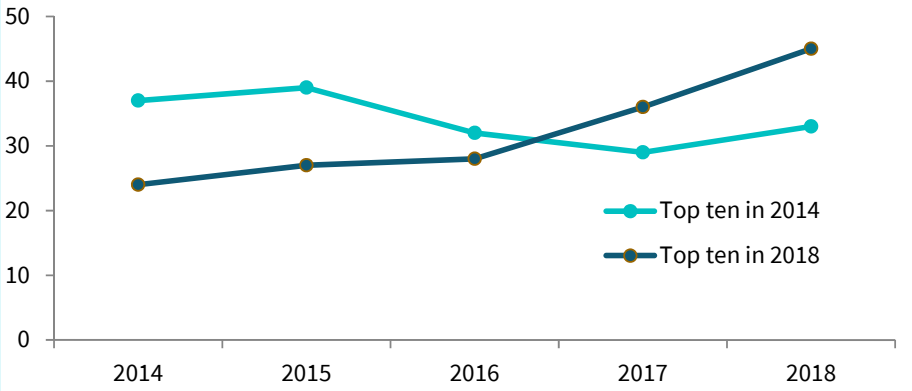
Sources: Revenue Commissioners (2019); and internal IFAC calculations.

When thinking of concentration risks, it is important to identify whether the top ten companies vary over time. If the top ten companies tend to be made up of the same ten firms every year, and their payments are significantly larger than the following top 11–100, then the concentration risk might be said to be greater. The risks might be lower if firms in the top ten vary regularly and do not account for a much greater share than firms just outside the top ten.

Recent analysis from the Revenue Commissioners (2019) suggests that the composition of the top ten companies varies somewhat. Figure H.2 shows that the top ten companies in 2014 paid 37 per cent of total corporation tax in 2014, while those same ten companies paid 33 per cent of total revenue in 2018. By contrast, the top ten companies in 2018 paid 45 per cent in 2018, while their 2014 share was only 24 per cent. This kind of movement might lead one to conclude that concentration risks are less severe. In other words, part of what is happening from year to year may simply be that some firms do well in a given year, with others taking their place the next year. Yet some top ten companies for 2014 might also reside in the top ten for 2018. It is not possible to tell from the Revenue analysis how stable the composition of the top ten is and, hence, how severe the concentration risk is.

Figure H.2: Top Ten Companies Can Change Over Time

Percentage of total corporation tax revenue



Sources: Revenue Commissioners (2019); and internal IFAC calculations.

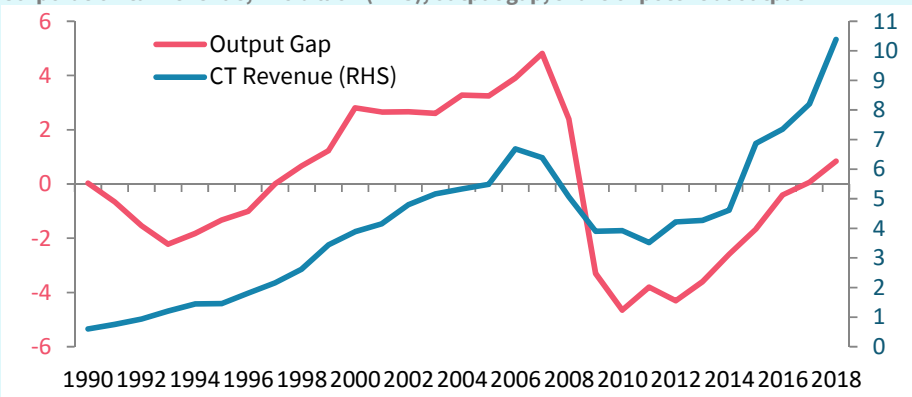
How volatile are corporation tax receipts?

A feature of corporation tax receipts in Ireland is that they have tended to be volatile. A way to quantify this is examining how the data deviates from its mean for a given period (i.e., the standard deviation). When analysing the annual growth over 1990–2018, it is evident that corporation tax has the highest degree of volatility of all the tax heads. This is the case both when using actual revenue collected (standard deviation of 17.6 per cent) and when adjusting that revenue for policy measures (15.8 per cent).[49]

Another relevant issue is whether the volatile nature of corporation tax is related to the cycle. Figure H.3 explores the correlation of corporation tax revenue and the cyclical position, with a relatively procyclical pattern emerging over the last decades. During 1995–2007, when the output increased somewhat above its potential, corporation tax revenue increased steadily. After reaching the peak of the boom period, the advent of the crisis triggered a sharp decline in nominal corporation tax, which has followed a strongly increasing trend again as the economy has recovered. The corporation tax increase in recent years could also be a result of hyper-cyclicality, where the elasticity of the Irish corporation tax to the global business cycle has become particularly large in the last decade.

Figure H.3: Procyclicality of Corporation Tax Receipts

Corporation tax revenue, in € billion (RHS); output gap, share of potential output



Sources: Department of Finance; and internal IFAC calculations.
Note: IFAC's output gap estimates are based on Casey (2018).

[49] By way of contrast, this is substantially higher than the volatility of VAT, with a standard deviation of 8.3 per cent on a headline basis, and 8.5 per cent in the policy-adjusted measure.

3.3 *SPU 2019* Forecasts (2019–2023)

2019–2023 general government balance

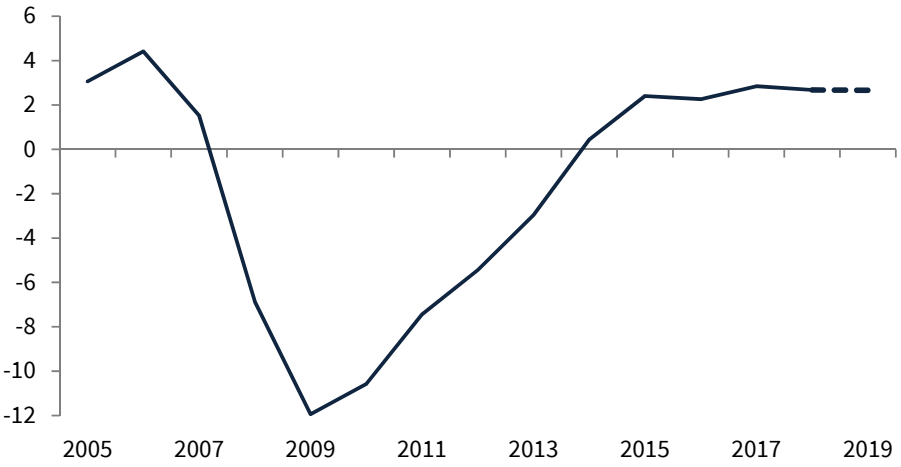
SPU 2019 forecasts the **general government balance** to improve in 2019 by €0.6 billion (€0.7 billion when one-off items are excluded). This improvement is aided by falling interest payments (€0.5 billion) and a slowdown in primary expenditure growth. This slowdown in primary spending growth would be threatened by upside risks to expenditure highlighted below, such as health overruns or payment of the Christmas bonus (which has not been budgeted for). The underlying primary balance is forecast to improve modestly in 2019 by €0.2 billion, far less than the sharp improvements up to 2015 (Figure 3.10). An acceleration in the growth of expenditure—only partially funded by revenue-raising tax changes and the non-indexation of tax bands and credits—is mainly responsible for the lack of improvement in the underlying primary budget balance in recent years.

In the later years of the projections (2020–2023), the general government balance and the primary balance are projected to improve significantly. However, this is based on expenditure figures which rely on technical assumptions: these assumptions are unlikely to reflect actual policy and are described below. Revenue forecasts for the same years are much more informative as they are based on continuing existing policies in a way that is likely to broadly reflect reality.

Based on the technical assumptions, the general government surplus is projected to increase in every year out to 2023. However, this improvement is likely to be overstated by the unrealistic assumptions being used. Forecasts of the general government surplus in 2021 to 2023 have been revised down slightly since Budget *2019*.

Figure 3.10: Primary Balance

% GNI*, excluding one-off items



Sources: CSO; Department of Finance; and internal IFAC calculations.
Note: Dashed line indicates forecasts from *SPU 2019*.

2019 expenditure

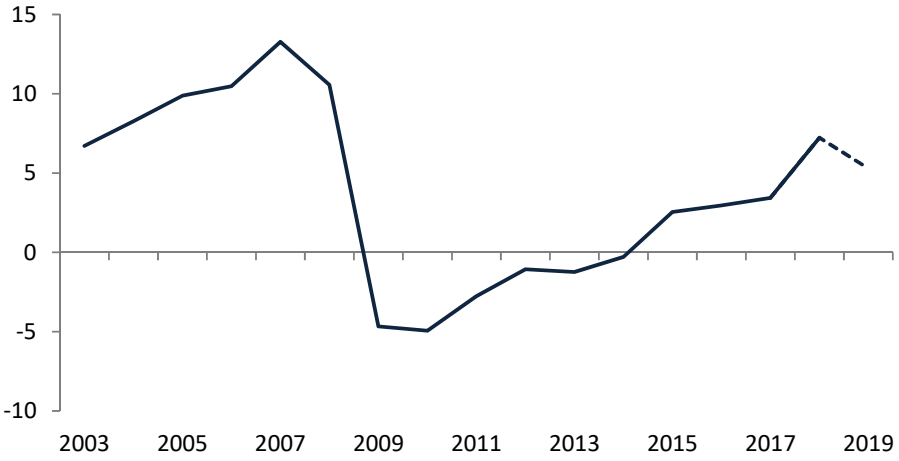
In 2019, general government expenditure is forecast to increase by €3.6 billion (excluding a one-off item in 2018).[50] This comes despite interest payments falling by €0.5 billion. This means that underlying primary expenditure (i.e., expenditure net of interest payments and one-off expenditure items) is forecast to grow by €4.0 billion (5.3 per cent). While this would typically be considered quite strong expenditure growth, if delivered on it would represent a significant slowdown from last year (7.2 per cent; see Figure 3.11). More generally, one can see a clear pattern of underlying expenditure growth accelerating over the past number of years. Intermediate consumption (€2.1 billion) and public gross fixed capital formation (€1.2 billion) are both set to contribute strongly to expenditure growth in 2019. Compensation of employees is set to increase by €0.8 billion this year.

General government expenditure in 2018 was higher than anticipated at budget time (€840 million; see CSO, 2019). Despite this, *SPU 2019* forecasts for 2019 overall expenditure are unchanged from *Budget 2019*, resulting in a slower rate of growth in expenditure this year. The fact that the general government forecasts in *SPU 2019* have not been revised upwards in light of the higher-than-expected 2018 outturn (much of which arises from social payments and public sector pay, which would be expected to recur) means that these are likely to be revised upwards in subsequent

[50] This relates to a €213 million one-off expenditure related to a settlement of pay arrears to medical consultants.

estimates. This is not expected to affect the gross voted current expenditure estimates for 2019, only the general government forecasts.

Figure 3.11: Primary Expenditure Growth
Percentage change (year-on-year), excluding one-off items, general government basis



Sources: CSO; Department of Finance; and internal IFAC calculations.
Note: Primary expenditure equals total expenditure less interest repayments on government debt and one-offs. One-offs are those defined by the Council as applicable.

There are significant upside risks to these forecasts of primary expenditure (as well as possible upward revisions). For example, health spending has exceeded expenditure forecasts for each of the past number of years. While significant increased funding has been provided for in the latest set of forecasts, previous experience suggests overruns are likely.[51,52] Further public sector pay increases outside of the current agreement are also an upside risk to expenditure forecasts.

The Christmas bonus for recipients of weekly payments from the Department of Employment Affairs and Social Protection has, again, not been budgeted for in 2019, despite this payment having been made to varying degrees over the past five years. Throughout this period, the payment has not been budgeted for, with a decision on the scale of the payment being made late in the year. Last year, the bonus was paid for a full week, with a cost of €265 million. In the interest of good budgetary planning and to avoid a pattern of spending decisions based on cyclical developments (as occurred in the past), budget estimates should account for the payment of the bonus unless the Government genuinely does not intend to pay it.

[51] The latest gross current expenditure ceiling for the health group in 2019 is €901 million higher than the 2018 figure, which itself was €625 million higher than originally forecast.

[52] See IFAC (2018e) for analysis on previous health overruns.

Strong expenditure growth forecast for 2019 comes after substantial increases in 2018. Underlying primary expenditure is set to be 12.9 per cent higher in 2019 than in 2017. On this two-year basis, gross fixed capital formation is forecast to record the strongest growth (44.4 per cent), and large contributions from intermediate consumption (31.7 per cent) and compensation of employees (11.3 per cent) are also projected.

2020–2023 expenditure

For the years 2020–2023, expenditure forecasts in *SPU 2019* are not credible as they are based on technical assumptions that do not reflect either current government policy or likely future policies. Gross voted current expenditure is assumed to grow by 2.5 per cent per annum for 2020–2023. In recent years, the Department of Finance had improved its medium-term expenditure forecasts by moving from simply assuming no nominal growth in spending to a more realistic basis that was consistent with stated government policy.

Budget 2019 took a step backwards in this regard, by assuming a fixed (and implausibly low) growth rate in the outer years with no link to existing policies or needs. The forecasts contained in *SPU 2019* have applied the same inadequate methodology. Non-voted current expenditure is forecast to grow by only 0.6 per cent on average over the period, mainly due to falling interest costs. This is highly unrealistic in an economy with a growing population, demands for public services and forecast increases in wages in the economy. There is limited information value in these forecasts as they are based on assumptions rather than on a medium-term policy path or the costs of sustaining existing policies.

However, forecasts for voted capital expenditure are in line with the National Development Plan, with growth averaging 6.4 per cent over 2020–2023. As this is part of stated policy, this forecast is more informative than the other assumptions for spending forecasts.

Table 3.2: General Government Expenditure Forecasts

Percentage change year-on-year, unless otherwise stated

	2018	*2019*	*2020*	*2021*	*2022*	*2023*
General Gov. Expenditure	6.0	4.1	2.6	2.4	2.9	3.0
Compensation of Employees	7.5	3.5	2.3	1.6	0.1	-0.1
Intermediate Consumption	10.0	19.7	0.5	1.9	2.4	2.9
Social transfers	2.5	0.2	1.6	1.0	0.3	0.4
Interest Expenditure	-9.9	-9.0	-9.1	-5.1	6.3	5.6
Subsidies	-7.6	-3.0	0.6	-0.3	-1.8	3.7
Gross Fixed Capital Formation	21.7	18.6	3.9	4.5	5.8	6.7
Capital transfers	15.6	4.3	16.5	8.2	8.4	4.5
Other	20.5	-10.4	11.0	3.6	2.7	2.5
Resources to be allocated, € billion (included in total above)	0.0	0.0	0.6	1.3	2.4	3.6
Primary Expenditure	7.3	5.0	3.3	2.8	2.7	2.8
Primary Expenditure, % of GNI*	39.9	40.0	39.4	39.0	38.5	38.0

Sources: CSO; Department of Finance; and internal IFAC calculations.
Note: Figures in grey indicate that the Council assesses these forecasts as largely the result of technical assumptions on expenditure, which may be unrealistic. Resources to be allocated represents expenditure which is yet to be allocated to a specific item, with a decision as to where this is to be allocated to be made closer to the time. It is not included in "other" expenditure listed above.

In a separate publication (IFAC, 2019b), IFAC presents the Stand-Still scenario, which estimates the cost of maintaining today's level of public services and benefits (in real terms) over the medium term. This is based on relatively conservative assumptions with respect to spending pressures, notably on health. The findings suggest that the level of non-interest spending budgeted for under *SPU 2019* plans would not be sufficient to accommodate the Stand-Still estimates over the period 2020–2023. This implies that expenditure as forecast would not be sufficient to maintain existing levels of service and public investment plans.

At the Budgetary Oversight Committee, the Minister for Finance, Public Expenditure and Reform said that "my view is that as future budgets are done, regardless of whether I or other Ministers have the opportunity to do them, the share of Government expenditure as a percentage of GNI* will at least stay constant, if not grow, and taxation decisions will have to be made in order to do that or decisions will have to be made not to do other things".[53] As discussed above, the plans outlined in the *SPU 2019* show declines in spending as a share of GNI* over the

[53] Committee on Budgetary Oversight, Wednesday 16 January 2019, available at https://data.oireachtas.ie/ie/oireachtas/debateRecord/committee_on_budgetary_oversight/2019-01-16/debate/mul@/main.pdf.

medium-term and hence are not consistent with the view expressed by the Minister (see Table 3.2 and Figure 3.12).

Figure 3.12: General Government Expenditure
% GNI*, excluding one-off items

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

The technical nature of the projections implies that many expenditure items show limited growth. Compensation of employees sees a significant slowdown in growth in 2020 and 2021, and is projected to remain flat in 2022 and 2023. Given the likely increases in staff numbers and wage growth in the economy, it would seem highly unlikely that compensation of employees (for the general government sector) would stay nominally constant in 2022 and 2023. IFAC Stand-Still estimates would indicate that if public sector pay rates were to increase in line with agreed pay deals and in line with private-sector wages thereafter, this would imply additional cost pressures of over €700 million per year.

The Department has left a significant amount of unallocated expenditure in the forecasts. A better practice would be to give an indication of where these resources would be employed, even if this might be adjusted by subsequent policy decisions.

Two alternative illustrative scenarios for general government spending and the resulting balance assuming the same tax policies as the SPU are presented in Table 3.3.[54]

[54] In both cases, general government revenue is adjusted to account for the increased levels of expenditure (relative to *SPU 2019* forecasts). This is done using the Council's Fiscal Feedbacks Model.

The first alternative scenario shows how general government expenditure would evolve were it to remain at its 2019 share of GNI* (42 per cent).[55] *SPU 2019* forecasts of nominal GNI* are used for 2019–2023. This first alternative scenario shows much stronger expenditure growth in the years 2020–2023. The stronger expenditure growth results in a very different path for the public finances. In this illustrative scenario, a deficit emerges in 2020 before improving to a surplus thereafter. The surpluses in the later years are also much smaller than those presented in *SPU 2019*.

Table 3.3: Alternative Scenarios for General Government Expenditure, Revenue and Balance

€ billion

	2018	*2019*	*2020*	*2021*	*2022*	*2023*
Expenditure						
SPU 2019	82.0	85.3	87.6	89.7	92.3	95.0
Alternative: Share GNI*	82.0	85.3	89.5	93.0	96.6	100.6
Alternative: Stand Still	82.0	85.3	87.9	90.6	93.9	97.5
Revenue						
SPU 2019	82.0	86.0	88.8	92.2	96.1	100.4
Alternative: Share GNI*	82.0	86.0	89.3	93.1	97.2	101.6
Alternative: Stand Still	82.0	86.0	88.9	92.5	96.5	100.9
Balance						
SPU 2019	0.0	0.6	1.2	2.5	3.8	5.3
Alternative: Share GNI*	0.0	0.6	-0.2	0.1	0.6	1.0
Alternative: Stand Still	0.0	0.6	1.0	1.9	2.7	3.4

Sources: CSO; *SPU 2019*; and internal IFAC calculations.
Notes: Two scenarios are considered in this exercise. The "Alternative: % GNI*" scenario shows general government expenditure which would arise from holding it constant as a share of GNI*, using GNI* forecasts from *SPU 2019*. The "Alternative: Stand Still" scenario shows the general government expenditure which would arise when adding in the additional IFAC Stand-Still costs for demographics and price pressures over the pre-commitments for these items, carryover costs and unallocated resources in *SPU 2019* forecasts. Figures in grey indicate that the Council assesses these forecasts as largely the result of technical assumptions on expenditure, which may be unrealistic.

As a second illustrative scenario, we use the IFAC Stand-Still scenario to arrive at more realistic spending projections. We take the difference between IFAC Stand-Still estimates of the costs associated with demographic change and price pressures (pay and non-pay) and the pre-committed amounts and unallocated resources in *SPU 2019* expenditure forecasts. This difference is then added to the *SPU 2019* projections for general government expenditure. The SPU pre-commitments used

[55] Although 2019 expenditure is a forecast, rather than an outturn, it is used as the starting point here. This is because most of the policy decisions for expenditure in 2019 have already been made. In addition, starting from 2019 ensures consistency with the Stand-Still approach, which is also used as an alternative scenario for expenditure in Table 3.3.

for this exercise include allocations for demographics, public sector pay and carryover costs. The largest differences between IFAC Stand-Still estimates and *SPU 2019* forecasts of expenditure are in the later years of the forecast. As highlighted above, public sector pay increases are not factored in beyond the year in which the current pay deal ends, which is in 2020. The unallocated resources in *SPU 2019* are not enough to cover the IFAC estimates of pay and non-pay price pressures in the later forecast years. In this second illustrative example, the budget balance remains in surplus throughout the forecast horizon, albeit with smaller surpluses than in *SPU 2019*.

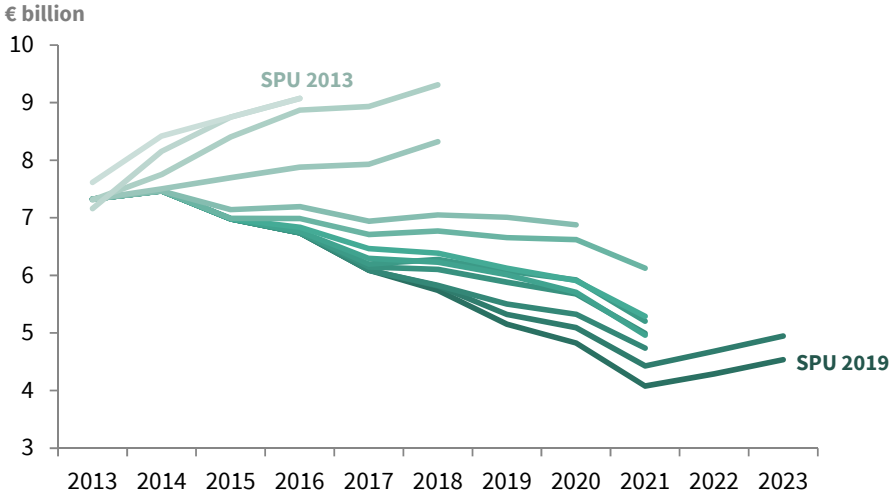
The first illustrative scenario (where spending remains fixed as a share of GNI*), leads to a greater increase in spending compared to the second illustrative scenario (using IFAC Stand-Still estimates). This is due to the growth in nominal GNI* which is forecast over this period, with growth of almost 5 per cent in 2020 and an average of 4 per cent over 2021–2023.

SPU 2019 confirmed a practice of forecasting macroeconomic and fiscal variables over a five year horizon. In spring, the current year is considered a forecast year, so forecasts out to four years ahead are published. In autumn, forecasts are to be published out to five years ahead.

Interest Expenditure

Interest costs on government debt have declined in recent years, and this is forecast to continue until 2021. This is especially true as higher coupon bonds are replaced by bonds with lower rates. Figure 3.13 shows the improvement in forecast and actual interest costs due to: (i) low global interest rates; (ii) agreed reductions in interest rates on official borrowing; (iii) expansionary monetary policy by the ECB, including the Public Sector Purchase Programme; and (iv) the early repayment of IMF loans and other debt restructuring. *SPU 2019* has once again seen a fall in expected interest payments over the period 2019–2023. However, interest costs are forecast to rise somewhat after 2021, due to a forecasted rising average interest rate and a rising level of debt (in absolute terms). The average interest rate is forecast to rise because the bonds due to be refinanced in 2022 have very low rates; hence they are currently forecast to be refinanced at higher rates.

Figure 3.13: Revisions to National Debt Cash Interest Payments



Sources: Department of Finance.
Note: Successive vintages of forecasts of cash interest payments are shown for budget and SPU publications between *SPU 2013* and *SPU 2019* with darker shades showing more recent vintages.

2019–2023 revenue

The outlook for 2019 points to **general government revenues** of €86.0 billion (Table 3.4). This is 5.2 per cent higher than in 2018 on an underlying basis (excluding one-off receipts of €0.4 billion in corporation tax revenue in 2018). The forecast for 2019 is €720 million higher than at *Budget 2019* time, largely driven by upward revisions of current taxes on income and wealth (with the corporation tax forecast being €500 million higher than in *Budget 2019*) and taxes on production and income.[56]

For 2020–2023, general government revenue is forecast to grow by 4.0 per cent, on average (Table 3.4). This is slightly lower than forecast in *Budget 2019,* largely due to downward revisions in "other" revenue not being fully offset by increased forecasts of current taxes on income and wealth and property income.[57,58] As a share of GNI*,

[56] Another important issue relates to local property tax. The revaluation that was due to take place in November 2019 has now been deferred until November 2020. This is despite the fact that the *Review of Local Property Tax* (Department of Finance, 2019a), published in March 2019, strongly recommended that the revaluation take place as planned in November 2019, noting that "further delays in revaluation may present risks to the long-term sustainability of the tax".

[57] The Department of Finance noted that the CSO outturn for "payments or non-market output" was significantly lower than the estimate for 2018 at budget time. Therefore, this was factored into the baseline projections. In addition, the outturn for current and capital transfers' receivable was higher than had been forecast in *Budget 2019*. However, given the "lumpy" nature of this item, this upward revision has not been incorporated in the baseline forecasts.

[58] The revision on taxes on production and imports is largely due to receipts from the National Lottery Fund being reclassified as tax revenue, rather than property income (in line with Eurostat guidance). This reclassification will not impact on general government revenue. The upward

general government revenue is projected to be 42.6 per cent in 2019, and 42.1 per cent in 2020–2023, on average.

Table 3.4: General Government Revenue Forecasts
€ billion, unless stated

	2018	2019	2020	2021	2022	2023
General Gov. Revenue	81.7	86.0	88.8	92.2	96.1	100.4
Taxes on production and imports	25.5	26.8	27.6	28.5	29.3	30.4
Current taxes on income, wealth[1]	34.2	35.9	37.7	39.4	41.4	43.6
Capital taxes	0.5	0.5	0.5	0.5	0.6	0.6
Social contributions	13.4	14.8	15.5	16.3	17.1	18.0
Property income	1.3	1.7	1.4	1.3	1.2	1.1
Other	6.8	6.2	6.1	6.3	6.5	6.7
Macro Indicators						
General Gov. Revenue (% GNI*)	42.5	42.6	42.0	42.0	42.1	42.2
General Gov. Revenue (% GDP)	25.7	25.6	25.2	25.1	25.1	25.1

Sources: Department of Finance; and internal IFAC calculations.
Note: [1] Current taxes on income and wealth for 2018 exclude the €350 million corporation tax one-off item assessed by the Council as applicable.

In **Exchequer** terms, **tax revenue** is estimated to amount to €58.4 billion in 2019, representing annual growth of 5.2 per cent. This strong increase is mainly driven by income tax, followed by VAT and excise duties.[59] These are partly offset by an expected decrease of corporation tax revenue in 2019 (negative growth of 3.9 per cent for the year, see Appendix E). For 2020–2023, Exchequer tax revenue growth is projected to average 4.6 per cent (Table 3.5 and Figure 3.14).

revision of property income is partly due to increased expectations on the Central Bank surplus income and dividends.

[59] Excise duties are estimated to grow strongly in 2019, yet this is largely the result of a low base in 2018. As discussed in IFAC (2018e), the introduction of plain packaging on tobacco products in 2017 triggered a drag in receipts arising from this source. *SPU 2019* notes that these impacts have now unwound in 2019.

Table 3.5: Tax Revenue and PRSI Forecasts
€ billion

	2018	*2019*	*2020*	*2021*	*2022*	*2023*
Tax Revenue	55.6	58.4	61.2	63.9	66.7	70.0
Income tax	21.2	22.9	24.2	25.5	27.1	28.8
VAT	14.2	15.1	15.9	16.4	17.1	18.0
Corporation tax	10.4	10.0	10.5	10.9	11.3	11.7
Excise duties	5.4	5.9	6.1	6.3	6.4	6.6
Other	4.3	4.5	4.6	4.8	4.9	5.0
PRSI	10.5	11.1	11.9	12.5	13.1	13.8
Total	66.1	69.5	73.1	76.4	79.8	83.8

Sources: Department of Finance; and internal IFAC calculations.
Note: Tax revenue in Exchequer terms. Other includes motor tax, customs, capital gains tax and capital acquisitions tax. For PRSI, the gross figures including the excess over expenditure are shown. For 2020–2023, the PRSI figures refer to the total Social Insurance Fund figures, which in recent years have tended to be around €100 million and €200 million greater than the figure for gross PRSI including excess expenditure.

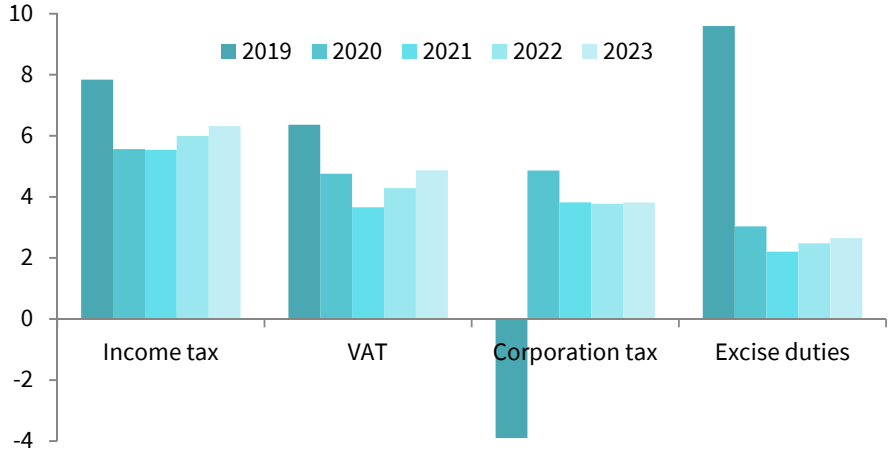
Appendix E provides a detailed overview on the drivers behind the tax forecasts. These include macro growth, policy changes, one-off items and other components such as judgement. It shows that the decelerating pattern of VAT forecasts for 2019–2021 is largely the result of weaker assumptions on the macro driver of VAT—namely the forecast in growth in personal consumption volume—which has been revised downwards since *Budget 2019*. PAYE is forecast to grow strongly, mainly driven by strong non-agricultural earnings and employment growth, while policy effects will negatively impact USC growth. Box I discusses how PAYE and USC forecasts change after applying an alternative assessment of the corresponding elasticities as developed in Conroy (2019).

In terms of **PRSI**, the estimate for 2019 is €11.1 billion, representing an annual growth of 6.2 per cent. For 2020–2023, PRSI revenue is projected to average €12.8 billion, in line with labour market forecasts.[60]

[60] For 2020–2023, the figures refer to the total Social Insurance Fund figures, which in recent years have tended to be around €100 million and €200 million greater than the figure for gross PRSI including excess expenditure.

Figure 3.14: Tax Forecasts

Percentage change (year-on-year)



Sources: Department of Finance; and internal IFAC calculations.

Box I: Forecasting Tax Revenue: a Reassessment of Elasticities

This Box examines the elasticities used in tax forecasting to map from tax bases, such as wage incomes, to tax revenue. Different revenues are forecast by using different macroeconomic drivers. For example, income tax is driven by the amount of income generated in the economy.

The sensitivity of the revenue collected to the macroeconomic driver is reflected in the elasticity of revenue to the tax base. This elasticity measures the endogenous percentage change in revenue following a 1 per cent change in the macroeconomic driver of that revenue source. Elasticities are conventionally estimated empirically using time series data on revenue collected and the associated macroeconomic driver.

A recent paper (Conroy, 2019) re-assesses this relationship by adjusting for the impact of policy changes based on a newly compiled dataset of budget-day estimates of tax policy changes. If policy changes are procyclical and negatively correlated to revenue growth (tax rates are cut in good times), this biases down the tax elasticities compared with the true relationship.

The new results suggest a long-run income tax (income tax combined with USC) elasticity of 1.4, with a short-run elasticity of 1.5 (Table I.1). This compares with conventional elasticities of 1.2 and 2.1 used by the Department to forecast USC and PAYE income tax respectively.

Table I.1: Comparison of Elasticities

	Values
Conroy (2019) estimates, combined income tax and USC	
Policy-adjusted long-run elasticity	1.4
Policy-adjusted short-run elasticity	1.5
Unadjusted long-run elasticity	0.8
Unadjusted short-run elasticity	1.0
Department of Finance estimates	
Income tax elasticity	2.1
USC elasticity	1.2

Sources: Department of Finance; and Conroy (2019).

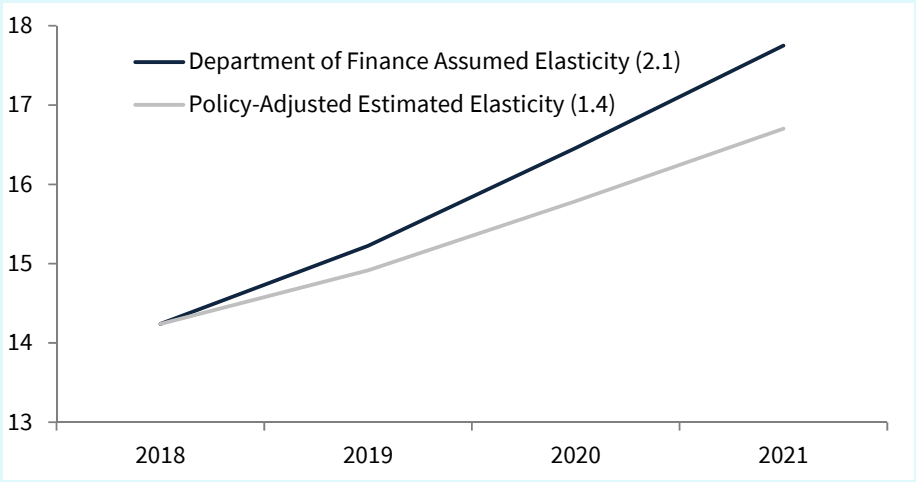
Next, we consider the impact different assumed elasticities would have on the projections for future income tax and USC receipts. As the elasticity estimated in Conroy (2019) refers to USC

and income tax combined, this exercise examines the impact of applying that estimated elasticity to forecasts of both USC and income tax receipts separately. For illustrative purposes the estimated long-run elasticity (1.4) is used, as the estimated short-run elasticity (1.5) is not hugely different this would not substantially alter the results.

For PAYE income tax, the policy-adjusted estimated elasticity (1.4) is lower than that currently assumed by the department (2.1). This means that lower revenue forecasts would result from using the estimated elasticity (in a period of income growth). For 2019, the lower assumed elasticity would result in lower forecast growth in receipts of €310 million. By 2021, PAYE income tax receipts would be €1.0 billion lower if using this lower elasticity.

Looking next at USC, as the policy-adjusted estimated elasticity (1.4) is higher than the one currently used (1.2), this would lead to higher forecast receipts (as income is forecast to grow). For 2019, forecast receipts would be €20 million higher due to this change. In each subsequent year, the growth in USC receipts would be €20 million stronger also due to this change. This means that in 2021, USC receipts would be €61 million higher than would be the case if the lower elasticity were assumed.

Figure I.1: Sensitivity of Forecasts of PAYE Receipts to Differing Elasticities



Sources: Department of Finance; and internal IFAC calculations.
Note: Forecasts for 2019 and beyond differ only in the elasticity applied.

On balance it would appear that using an elasticity of 1.4 for both income tax and USC would lead to lower forecast growth in receipts. In 2021, combined USC and income tax receipts would be almost €1 billion (4.8 per cent) lower if the estimated elasticity of 1.4 was used for both revenue sources. Figure I.1 shows how forecasts of PAYE receipts would diverge depending on the elasticity used, with the differences in forecasts accumulating over the years.

SPU 2019 notes that "a Tax Forecasting Methodology Review Group has been established to assess the Department of Finance's current tax forecasting processes. The Group's report will be published by end-year".

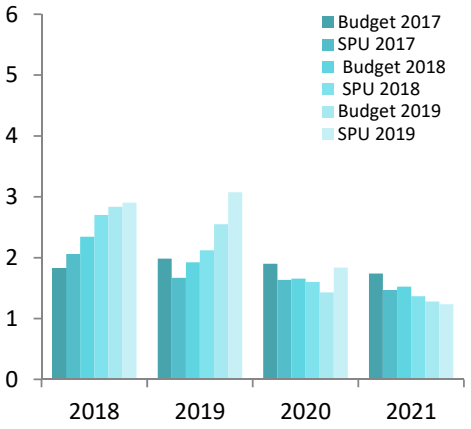
Non-tax revenues are estimated to reach €3.1 billion in 2019 (Figure 3.15). This is €0.5 billion higher than projected in *Budget 2019*, driven by increased expectations

of payments from the Central Bank to the Exchequer.[61] However, a decline in non-tax receipts is forecasted for the outer years, as was the case in previous vintages, to stabilise at around €1.0 billion in 2022 and 2023. It is important to note that almost half of these Exchequer non-tax revenues will not impact the general government accounts (since they are classified as financial transactions).

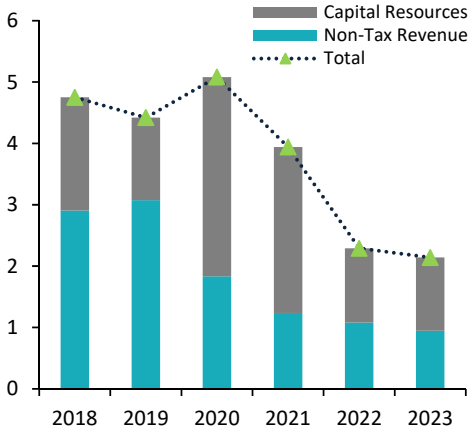
Figure 3.15: Exchequer Non-Tax Revenues and Capital Resources

€ billion

A. Non-tax revenue vintages



B. *SPU 2019* forecasts



Sources: Department of Finance; and internal IFAC calculations.
Note: Almost all of the revenue from capital resources is estimated to not impact the general government balance (since it is treated as a financial transaction under current accounting rules), while the Exchequer cash position will be impacted. For non-tax revenue, this is the case only for almost half of the yearly revenue over 2019–2023.

Capital resources for 2019 are estimated to amount to €1.3 billion, €0.2 billion higher than previously forecast in *Budget 2019*. This is due to the rescheduling of expected receipts from the Irish Bank Resolution Corporation (IBRC), which will benefit the Exchequer position, but will not impact on the general government balance.[62] Over the period 2020–2021, a boost in capital resources is forecast, similar to *Budget 2019* forecasts. This is due to the winding down of the National Asset Management Agency (NAMA), which is expected to distribute its surplus.[63]

[61] This refers to the disposals of Floating Rate Notes (FRNs) by the Central Bank. FRNs were issued to substitute the promissory notes previously issued to recapitalise the Irish Bank Resolution Corporation (or Anglo Irish Bank and Irish Nationwide Building Society). While these exceptional revenues improve the Exchequer position, they are neutral from a general government perspective under the European statistical methodology.

[62] The receipts from the liquidation of IBRC are expected to amount to €225 million in 2019, and €100 million in 2020.

[63] Of the whole surplus that is to be paid into the Exchequer in that period, €0.5 billion will be paid in 2020 instead of 2021, as previously set out in *Budget 2019*.

Receipts from NAMA are projected to reach €2 billion in 2020 and €1.5 billion in 2021. However, NAMA has recently increased its projected lifetime surplus to €4 billion (from the previous forecast of €3.5 billion). After the cessation of the NAMA, capital resources are expected to decline in 2022–2023. While this revenue will impact the Exchequer accounts, the majority of the projected resources will not impact the general government balance (since they are classified as financial transactions).

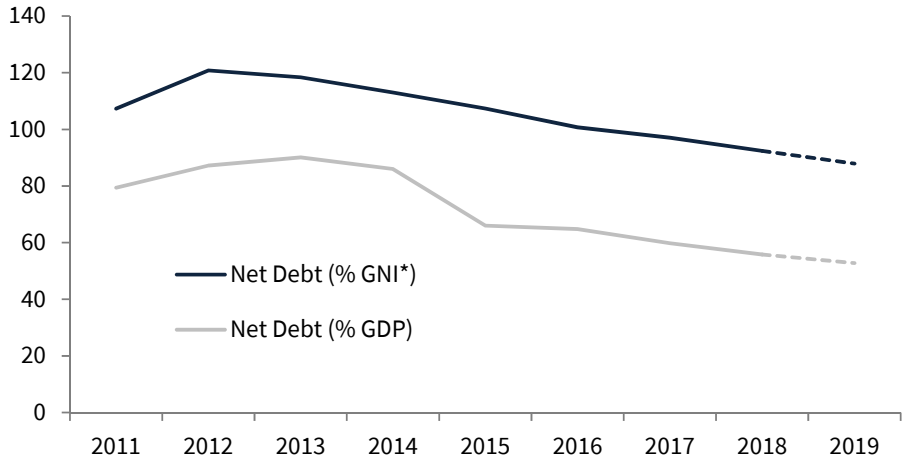
General Government Debt

The gross debt-to-GDP ratio has fallen substantially since 2012. Two factors have played a significant role. The first involves the liquidation of the IBRC, which led to lower liabilities being measured on the Government's balance sheet (in 2011, this had led to an increase in government liabilities of €20.9 billion; stripping out these liabilities, gross debt to GDP would have been 4 per cent lower). The second is related to the high level of measured GDP growth in 2015. 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 reference value would be equivalent to 97.4 per cent of GNI* (using 2017 nominal outturns for both variables).[64] Using GNI* or revenue as a denominator, government debt remains high relative to other OECD countries (see Figure 1.9 in Chapter 1). Given some of these distortions and the relatively high cash balances run by the NTMA, net debt to GNI* is a more informative measure. Using this metric, the decline in debt levels is more gradual since 2012, and debt is expected to fall to 87.9 per cent of GNI* in 2019 (Figure 3.16). The projections imply a steady reduction in the debt/GNI* ratio in the later years, although this is based on unrealistic technical assumptions for spending. The decline in the debt ratio would be shallower with more realistic spending profiles.

[64] Gross general government debt is forecast to fall below 60 per cent in 2020.

Figure 3.16: General Government Debt

% GDP/GNI*



Sources: CSO; Department of Finance; and internal IFAC calculations.
Note: Data for the period 2019–2023 are projections as per *SPU 2019*.

3.4 Long-Term Prospects

At present, Ireland's demographic structure is comparatively more favourable than that of other EU countries, aided by a relatively young population and higher fertility rates. However, this trend is projected to reverse significantly in the coming decades, exerting pressure on the public finances if policy responses are not sufficiently undertaken.

Recent projections for Ireland by the European Commission point to an old-age dependency ratio that will double from 23 per cent in 2020 to almost 46 per cent in 2050 (Ageing Report, 2018), meaning that the share of working-age population capable of sustaining the retirement-age population, even allowing for positive net inward migration, is expected to diminish in the long term.[65] One of the implications is that pension needs will increase in relation to social contributions, significantly impacting overall spending. In particular, pension spending as a share of GNI* is projected to increase from 8.0 per cent in 2020 to 11.7 per cent in 2050 (Department of Finance, 2018e). Relatedly, the ageing of population will directly impact spending in healthcare, which is projected to increase from 6.6 per cent of GNI* in 2020 to 8.0 per cent in 2050. The rest of the spending areas related to ageing (education, long-

[65] The old-age dependency ratio is the share of retirement-age population over the working-age population.

term care and unemployment benefits) are all projected to follow an increasing trend.

While Ireland's total age-related spending is currently lower than the Euro Area average, this is projected to shift in the longer run. For 2020–2050, Ireland's age-related spending (as a share of GNI*) is expected to grow by 6.8 percentage points, whereas this growth for the Euro Area (as a share of GDP) will only amount to 2.3 percentage points. This long-run picture reflects that the ageing of population in Ireland is coming at a comparatively later stage relative to other Euro Area countries.

Anticipating the fiscal consequences of the ageing of population in Ireland, a number of policy measures have been implemented. These include reforms in public service pensions, state pensions and long-term care.[66] The latest *Country-Specific Recommendations* report for Ireland (European Commission, 2019b) outlined several risks of a rapidly-ageing population in the country. To address these ageing-related risks, it recommends: (i) a timely implementation of the presented roadmap for pension reform; and (ii) the implementation of the Sláintecare Programme in the health area. However, the Commission describes the health system as currently inefficient, struggling to meet demand and not delivering coordinated, integrated care. Overall, solid long-term projections are paramount in informing policy of these challenges, which must be addressed through sound policy responses.

3.5 Risks

While *SPU 2019* forecasts point to continuing improvements in the macroeconomic and fiscal outlook, substantial risks to the public finances remain. The most prominent and immediate risk to both the macroeconomic and fiscal outlook is Brexit. Box C details the fiscal costs associated with lower-than-anticipated economic activity due to Brexit. Other aspects of the external environment pose risks to the forecasts. Volatile bond market conditions and possible changes to the international corporation tax environment could pose significant fiscal risks. An additional risk relates to the Irish corporation tax receipts, which are very volatile

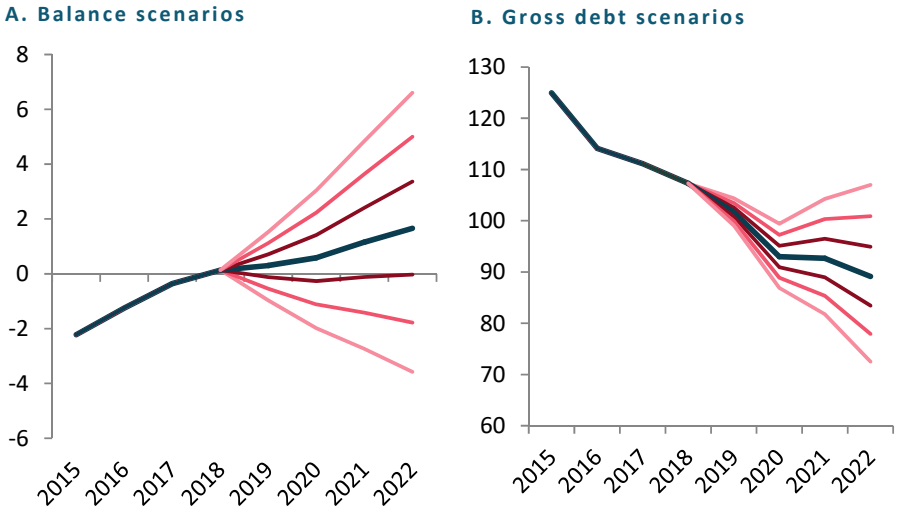
[66] The specific measures are summarised in *SPU 2019* (Chapter 8).

and are likely to fluctuate more with the global business cycle than the domestic one.

The reliance on potentially transient sources of revenue to fund permanent expenditure increases is a significant fiscal risk. In 2018, corporation tax recorded its highest ever share of Exchequer tax revenue (Figure 3.6). These unexpected corporation tax receipts were partially used to fund permanent increases in expenditure last year.

Figure 3.17: Budget Balance and Debt Paths under Different Growth Scenarios

%GNI*, general government basis



Sources: CSO; Department of Finance; and internal IFAC calculations.
Note: Central line depicts the central forecasts from the Department of Finance. The outer lines depict how far the budget balance as a percentage of GNI* would be pushed away from the central forecasts under different shocks to real GDP growth in each year. The outer lines, as one moves further away from the central forecast, are for positive/negative growth shocks of 0.5, 1.0 and 1.5 percentage points, respectively. Positive shocks raise the balance; negative shocks reduce it.

Figure 3.17 shows how shocks to growth would impact on the general government balance and general government debt. A shock to GDP growth of 1.5 percentage points relative to *SPU 2019* forecasts each year from 2019 to 2022 would result in the general government balance being 5.2 percentage points of GNI* lower by 2022. All else being equal, this means that the public finances would remain in deficit out to 2022 as compared to a surplus of 1.7 per cent of GNI*. In the same scenario, the currently high gross government debt-to-GNI* ratio would remain close to current levels, in the absence of corrective policy action. A shock of this magnitude would not be exceptional given the historical volatility of Irish national income growth, for which a typical current year forecast error is close to 2 percentage points.

Table 3.6: Assessing the *SPU 2019* Fiscal Risk Matrix

Likelihood and Impacts from *SPU 2019*, unless stated: high in red; medium in pink; low in grey

Assessment in SPU 2019 (or IFAC risk, when stated) and IFAC comments	*Likelihood*	*Impact*
Health overruns (IFAC risk) Recent years have seen a persistent pattern of large overruns in health spending. Over the period 2014–2018, current spending overruns have averaged €0.6 billion per year. The construction of the National Children's Hospital has involved a revision of the budgeted cost of close to €1 billion (see Box F) since the first estimation took place. A combination of unrealistic forecasts and a repeat of relaxation of ceilings have recurrently led to uncontrolled increases in spending, which can put the public finances at risk.		
Climate change and renewable energy targets Ireland seems unlikely to meet its 2020 emissions targets without purchasing more allowances, which could cost between €148 million and €455 million per year (Deane, 2017). Costs associated with missing later targets (2030) could be substantially higher (Curtin, 2016 estimates €2.7–€5.5 billion).		
Corporation tax concentration risks Corporation tax revenue more than doubled from 2014 to 2018. Given how quickly this revenue source has grown, there is a significant risk it could fall rapidly also. Corporation tax (as a share of Exchequer tax revenue) reached record levels in 2018 (estimated at 18.7 per cent). Given the large share of tax receipts accounted for by corporation tax, falls could be very significant. In addition, this tax is highly volatile and is strongly concentrated in very few companies (Box H), and it can be impacted by potential changes in the international tax environment. Taking all of this into account, ***the Council assesses that a high impact would be more appropriate***.		
Overruns on large projects (IFAC risk) A number of large capital projects in Ireland have encountered significant overruns from initial budgets (Box F). Recent examples include the National Broadband Plan (with a current overrun of €2.5 billion) and National Children's Hospital (with an ongoing overrun of close to €1 billion). These unplanned expenses need to be funded through revenue increases or savings elsewhere, which can put pressure in the public finances.		
Public sector pay (IFAC risk) The current public sector pay agreement is set to expire in 2020. Forecasts in *SPU 2019* do not allocate significant increases in Compensation of Employees after 2020. While some of the "Resources to Be Allocated" could be used on this item, it remains a risk to the public finances.		
Budgetary pressures This pressure refers to the risk of public expectations exceeding budgetary policy. Budgetary pressures may also arise due to demographics, eligibility factors and other demand side pressures. In-year spending increases would also exacerbate the problem. The political cycle may also increase near-term budgetary pressures. Given the pattern of overruns in the Department of Health and the payment of the Christmas bonus not having been budgeted for in 2019, ***the Council assess a high likelihood to be more appropriate***.		

Assessment in SPU 2019 (or IFAC risk, when stated) and IFAC comments	*Likelihood*	*Impact*
Reliance on transient revenues (IFAC risk) Failure to recognise the transient nature of certain sources of revenue could, if repeated, reduce the stability of tax revenues. This is particularly risky if transient revenue resources are used to fund long-term expenditure. For example, in 2018, higher-than-expected corporation tax revenue and interest savings, both of which might be deemed temporary, were largely devoted to funding overruns in the health sector (see Box D in IFAC 2018e).		
Sharper-than-expected growth in tax-rich sectors (IFAC risk) Pent-up demand in the housing sector is forecast to lead to strong growth in the construction sector. Given the tax-rich nature of housing output, due to its labour intensity and capacity for tax collection on new homes and housing transactions, rapid growth could imply a substantial increase in revenue.		
EU Budget contributions There is continuing uncertainty surrounding the impact Brexit will have on the contributions to the EU Budget. In addition, statistical reclassifications impacting on measured Gross National Income in Ireland could impact on EU Budget contributions.		
Changes to tax "drivers" Tax forecasts are dependent upon macroeconomic projections and other components. For example, corporation tax forecasts are driven by forecasts around the Gross Operating Surplus (GOS), and the elasticity associated with this. The GOS forecasts are subject to a high degree of uncertainty, namely that related to international trading conditions and currency markets. Hence, changes in the composition of those macroeconomic components can have important impacts on the tax forecasts.		
Litigation risk This risk refers to an adverse or unexpected outcome of litigation against the State, leading to increased expenditure. Bova *et al.* (2016) estimate that the contingent liability realisations could have an average fiscal cost of 6.1 per cent of GDP.		
Tax forecast and payment timeline asymmetry Timing in relation to certain tax receipts can lead to variation throughout the year. Another concern is posed in the estimation of the cost of tax measures. Although there is a risk of underestimation of the impacts of tax cuts, there is also a risk that estimated yields accruing from revenue-raising measures may be overly optimistic.		
Statistical classifications Ireland's compliance with the EU fiscal rules is measured under the ESA 2010 statistical framework. When statistical revisions take place, or decisions are made around guidance and classification of different items, including Eurostat, this might pose fiscal risks.		
Unexpected one-off revenues (IFAC risk) This risk refers to large, unexpected one-off government revenues being received. A recent example relates to Apple, which was ordered to pay €13 billion (plus €1.3 billion interest) to an escrow account related to unpaid taxes in Ireland. This is equivalent to 7.9 per cent of GNI* in 2017. Given that this one-off receipt is not budgeted for, it represents a positive fiscal risk.		

Assessment in SPU 2019 (or IFAC risk, when stated) and IFAC comments	*Likelihood*	*Impact*
Spending pressures arising from a Hard Brexit (IFAC risk) While a Hard Brexit poses a large fiscal risk via lower economic activity, other fiscal risks arise from a Hard Brexit. Investment in physical infrastructure at the Border may be required in the event of a Hard Brexit. In addition, any government supports to sectors impacted most severely would also lead to additional spending. While some supports may be available from the European Commission, this still represents a risk to the public finances.		
Receipts from resolution of financial sector crisis The budgetary projections in *SPU 2019* do not include any assumed proceeds relating to disposals of the State's shareholding in a number of financial institutions. This provides an upside risk to the fiscal forecasts.		
Dividend payments *SPU 2019* identifies risks in relation to lower-than expected payments of dividends from the State's shareholding in banks and commercial semi-state companies. Such dividends are a function of business performance and outlook, over which the State has little control. If some of these assets are sold, then associated revenue streams would fall.		
Bond market conditions The long maturities and relatively fixed nature of debt (with 94 per cent of gross national debt being at fixed interest rates in June 2017) should insulate the public finances from a typical shock to interest rates on sovereign borrowings. More severe events in Italian or euro area bond markets could be more impactful, however. At high debt levels, external shocks such as a harder-than-expected Brexit could lead to self-reinforcing fears in bond markets.		
Contingent liabilities Contingent liabilities continued to fall in 2018, with the final Eligible Liabilities Guarantees expiring and the National Asset Management Agency redeeming the final €500 million of senior debt in 2017. Given their reduced level, ***the Council assesses a low impact to be more appropriate.***		

Sources: Department of Finance; and internal IFAC assessment.