3.   Assessment of Budgetary Forecasts

Key Messages

- *Budget 2018* increased spending relative to earlier forecasts, and financed this with a number of discretionary revenue-raising measures. The general government balance (excluding one-off items) for 2017 is estimated at -0.4 per cent of GNI*, an improvement of 0.8 percentage points relative to 2016. For 2018, the *Budget 2018* forecasts show the balance largely unchanged, rising to –0.3 per cent of GNI*.

- For 2018, the Department's forecasts show broadly no change in the primary balance (the balance excluding interest payments) following a pattern of slower improvements in this measure in recent years. Growth in general government revenue (excluding one-off items) is forecast at 4.4 per cent in 2018, while non-interest spending growth is expected at 4.7 per cent (excluding one-off items).

- It is unclear whether the estimated yield from revenue-raising measures included in *Budget 2018* can be expected to have the same yield over the long run. For example, estimates of the yield from changes to stamp duty rates appear to be based on an estimation at a high point in the cycle of non-residential development and so the assumptions may be relatively optimistic in terms of their long-run impact. In keeping with the spirit of the new budgetary framework, permanent expenditure increases should be funded by revenue-raising measures that can be considered sustainable over the long run.

- For the medium term (2019-2021), the government balance is forecast to improve marginally in 2019, while over-complying with the fiscal rules. Continued projected over-compliance implies small budget surpluses in 2020 and 2021. However, given these projections are based on not using all available fiscal space, they may overstate the budget balance.

- The Council's illustrative estimate of the cost of providing today's level of public services over the forecast horizon to 2021 – the "Stand-Still" scenario – implies that the spending increases currently budgeted for in *Budget 2018* over 2019–2021 would fully accommodate demographic pressures and the cost of maintaining real public services and benefits.

3.1 Introduction

This chapter assesses the latest set of budgetary forecasts produced by the Department of Finance in *Budget 2018*. Section 3.2 examines the estimates for 2017, Section 3.3 assesses the Budget forecasts for 2018, and Section 3.4 analyses the medium-term forecasts for 2019–2021. Section 3.5 provides an assessment of the fiscal risks.

Table 3.1 summarises the main budgetary aggregates for 2016–2021 and includes *Budget 2018* plans. It shows a slowdown in the improvement in the general government balance relative to previous forecasts, with the balance now forecast to return to surplus only in 2020. Reflecting falling interest costs, the primary balance shows very limited annual improvements until the last two years of the forecast horizon (2020 and 2021).

Table 3.1: *Budget 2018* Fiscal Outturns for 2016 and Forecasts (2017-2021)
% of GNI*, unless otherwise stated

	2016	2017	2018	2019	2020	2021
General Government Balance, € billions	-1.9	-1.0	-0.5	-0.3	0.8	2.9
General government Balance	-1.0	-0.5	-0.3	-0.2	0.4	1.3
General Government Balance, excl. one-off items [1]	-1.2	-0.4	-0.3	-0.2	0.4	1.3
Primary Balance	2.3	2.6	2.6	2.5	2.9	3.5
Primary Balance excl. one-off items [1]	2.1	2.7	2.6	2.5	2.9	3.5
Total Revenue, € billions	72.6	75.4	78.7	81.6	84.8	88.4
Total Revenue excl. one-off items, [1] € billions	72.1	75.4	78.7	81.6	84.8	88.4
Total Revenue excl. one-off items growth y/y [1]	2.1	4.6	4.4	3.6	3.9	4.3
Total Revenue excl. one-off items [1]	38.1	39.6	39.6	39.3	39.3	39.4
Total Expenditure, € billions	74.6	76.4	79.3	81.9	84.0	85.5
Total Expenditure excl. one-off items [1] € billions	74.4	76.2	79.3	81.9	84.0	85.5
Total Expenditure excl. one-off items growth y/y [1]	1.3	2.5	4.0	3.3	2.5	1.9
Total Expenditure excl. one-off items [1]	39.3	40.1	39.9	39.4	38.9	38.1
Interest Expenditure € billions	6.2	5.9	5.6	5.6	5.4	5.0
Primary Expenditure, € billions	68.4	70.5	73.6	76.3	78.6	80.5
Primary Expenditure growth y/y	-0.5	3.1	4.4	3.7	2.9	2.4
Primary Expenditure excl. one-off items [1] € billions	68.2	70.3	73.6	76.3	78.6	80.5
Primary Expenditure excl. one-off items [1] growth y/y	2.4	3.1	4.7	3.7	2.9	2.4
Primary Expenditure excl. one-off items [1]	36.1	37.0	37.0	36.8	36.4	35.8
Nominal GNI* Growth %	9.4	0.6	4.5	4.5	4.0	4.0

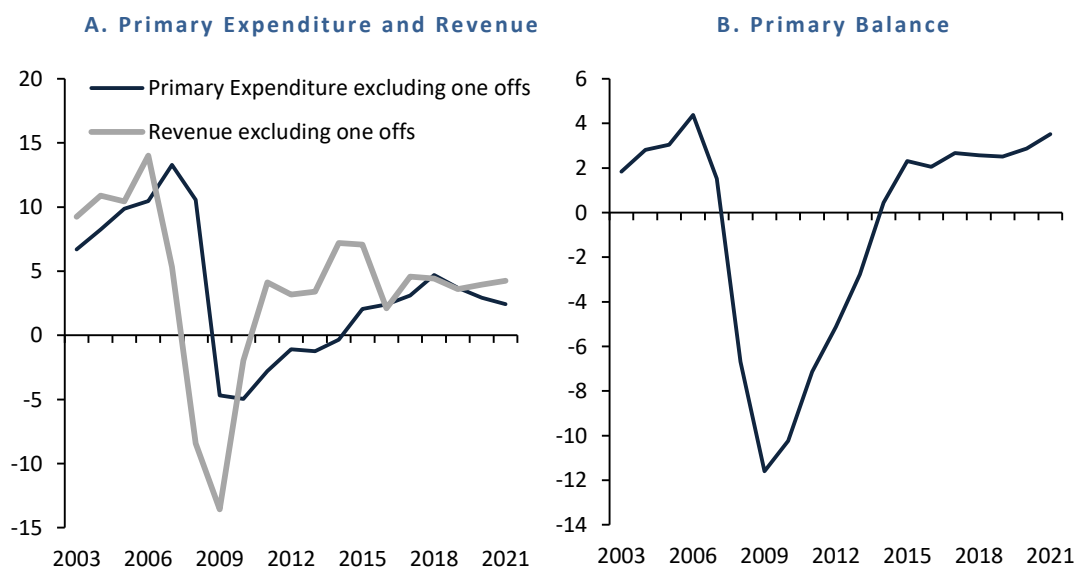*Sources:* CSO; Department of Finance; and internal IFAC calculations.
Note: [1]One-off items/temporary measures are as assessed by the Council to be applicable, as per Table 1.1, Chapter 1. These one-offs are removed from variables to get a sense of the underlying fiscal position.

The forecasts published in *Budget 2018* cover the period 2018-2021, with estimates provided for 2017. Although not formally required, the Department had established a practice of publishing five-year-ahead forecasts, which in this case would be out to 2022. As medium-term forecasts are key

for setting the public finances on a sustainable path, the Council would welcome a return to forecasting on this horizon.

Following relatively high and ultimately unsustainable growth pre-crisis, and considerable consolidation of expenditure during the crisis, primary expenditure is expected to grow at a more sustainable average annual rate of 3.4 per cent over the period 2018–2021, albeit that this hinges on slowing expenditure growth in the later years of the forecast horizon, which may not be realistic (Figure 3.1A). General government revenues also grew considerably pre-crisis, and fell from 2008 before returning to positive growth in 2011. Revenue is expected to grow over the period 2018–2021 by 4.1 per cent per annum. With the average pace of revenue growth exceeding primary expenditure growth, the primary balance is expected to improve in the later years of the forecast period (2020 and 2021), although remaining broadly flat in the near term (2018–2019) as shown in Figure 3.1B.

Figure 3.1: Primary Expenditure, Total Revenue and the Primary Balance
Percentage change year-on-year (Panel A); % of GNI * (Panel B)

A. Primary Expenditure and Revenue

B. Primary Balance

Sources: CSO; Department of Finance; and internal IFAC calculations.
Note: Data are adjusted to exclude one-offs (as in Table 1.1).

3.2 Estimates for 2017

3.2.1 General Government Balance 2017

Budget 2018 estimates that the general government balance for 2017 will be marginally better than previously expected (€0.2 billion higher relative to *SPU 2017* forecasts). The improvement reflects higher-than-expected revenues (+€0.2 billion), and a broadly unchanged estimate of overall spending. Stronger current taxes and social contributions offset a fall in other revenues due to the suspension of water charges, while on the expenditure side public sector pay increases are offset

by decreases in intermediate consumption. Excluding one-off items, the deficit is estimated to be 0.4 per cent of GNI* in 2017.[1]

3.2.2 Revenue 2017

Exchequer taxes are estimated at €50.6 billion for 2017 in *Budget 2018,* unchanged from *SPU 2017* forecasts, while PRSI contributions are expected to reach €9.4 billion. Overall, strong receipts are expected for the end of the year with Exchequer tax revenues forecast to increase by roughly €2.8 billion (5.8 per cent) from 2016 levels. Figure 3.2A shows that receipts including PRSI are €0.2 billion over profile in the year to October. Figure 3.2B compares the performance to October with the 2016 outturns. Among individual tax heads, corporation tax is playing an increasingly important role in terms of the cumulative over-performance relative to forecasts for 2017, while the lower-than-expected income tax receipts are being offset by above-target PRSI contributions.

Figure 3.2A: Tax and PRSI Performance
Cumulative Outturn-Profile (2017), €billion

Figure 3.2B: Tax Revenue 2016-2017
Cumulative change year-on-year, €billion

| Income Taxes | VAT | Excise Duties |
| Corporation Tax | Capital Taxes | Stamp Duties |
| Other | PRSI | Total |
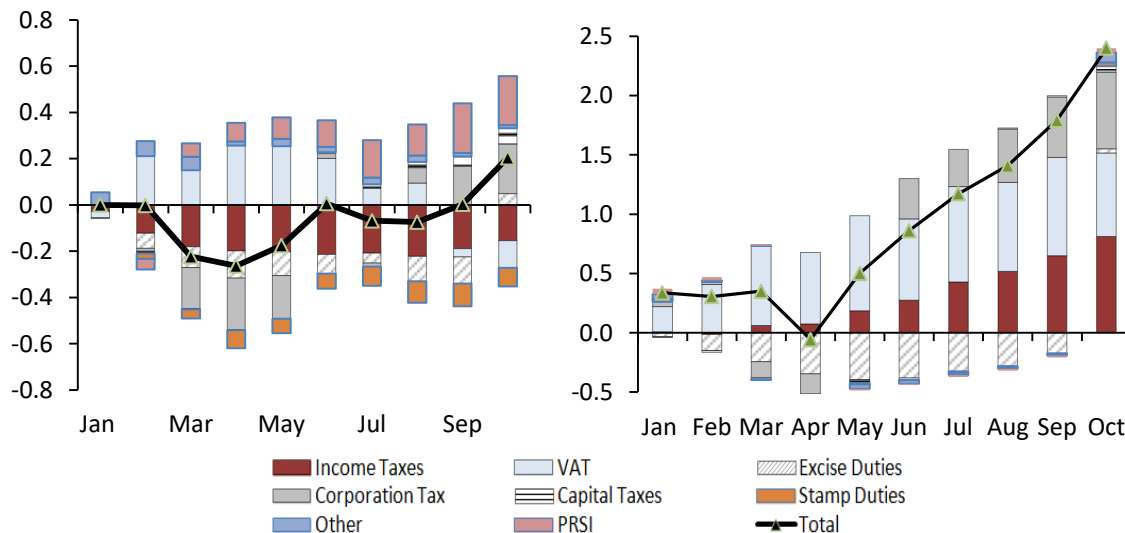
Sources: Department of Finance; and internal IFAC calculations.

Corporation tax receipts have surpassed *Budget 2017* forecasts to end-October by 4.1 per cent on a cumulative basis. The higher-than-expected tax receipts to date support the upward revision of this tax head in *Budget 2018* compared to *SPU 2017* (€250 million)*.* This mainly reflects an outperformance in June, yielding roughly €1,853 million receipts, €205 million over profile (Figure 3.2A). The expectation of a sustained over-performance relates to the strong correlation between June and November receipts, the latter being an important corporation tax month, with receipts expected to account for more than one-quarter of all annual receipts. In particular, from the total €7.7 billion corporation tax receipts forecast for the whole year, €2.1 billion are projected to be paid in November (Figure 3.3).

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[1] One-offs are those identified by the Council as being applicable and may differ from those used by the Department..

Figure 3.3: Corporation Tax Receipts and Profiles for 2016-2017
€ million
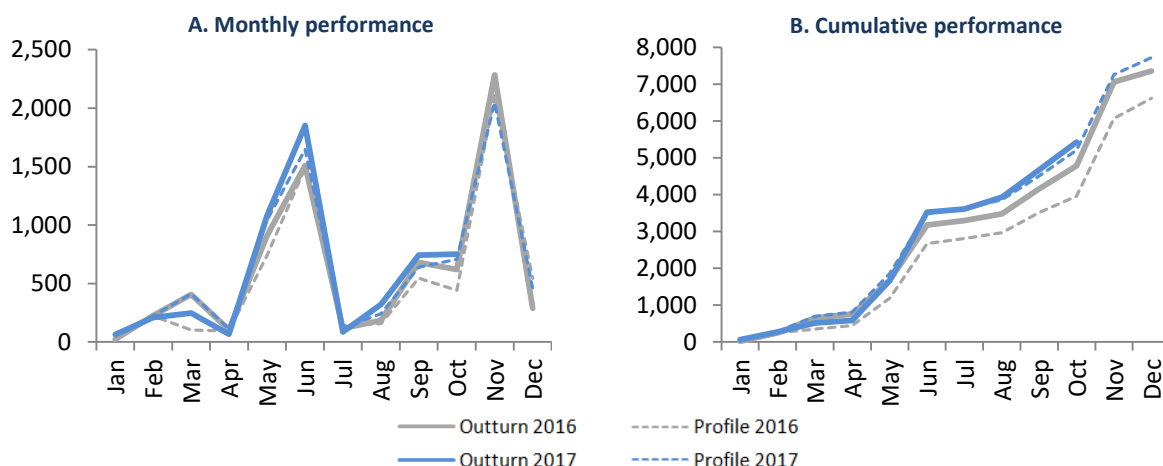
Source: Department of Finance.

Income tax receipts have been lower-than-expected to end-October, with receipts €153 million below expectations. A number of factors have contributed to these lower-than-expected receipts, namely those related to unearned sources of income (DIRT and Life Assurance Exit Tax) and Universal Social Charge (USC). A mis-estimation of the impact of USC reductions introduced in *Budget 2017* may explain some underperformance for the year so far. There are several possible reasons for this: (i) the overall impact of cuts to USC adopted in previous budgets could have been larger than estimated; (ii) the responsiveness of USC revenues to increasing incomes might have been overestimated (Acheson *et al* (2017) find that the elasticity of USC revenue is lower than was initially assumed); (iii) the split between the impact of previous USC reductions on employed and self-employed may have been mis-allocated so that the shortfall to October partly reflects timing issues with respect to when self-employed receipts are filed (mainly in November). Box F covers these issues in more detail.

Figure 3.4: Income Tax and PRSI
Index of 12-month rolling sums of Income Tax and PRSI, January 2014=100
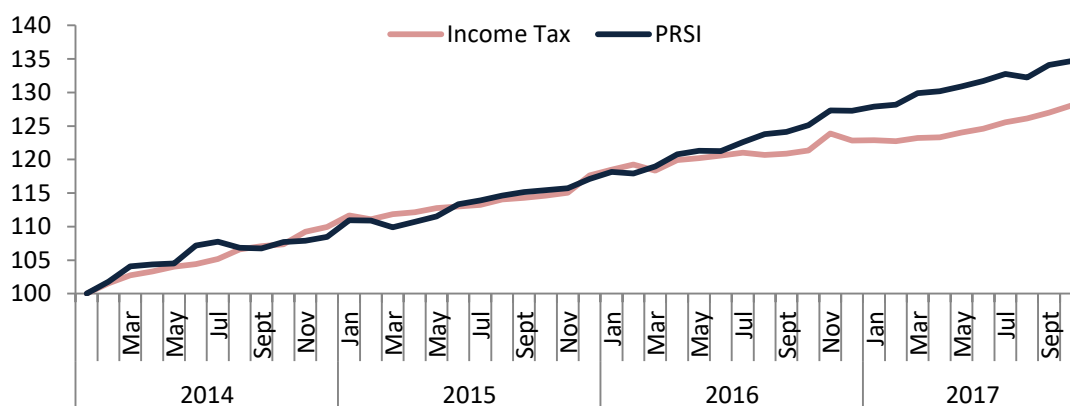
Sources: Department of Finance; and internal IFAC calculations.

It is important to highlight the sustained over-performance of **PRSI** (2.8 per cent over profile in October on a cumulative basis). Figure 3.4 reflects the predominance of PRSI growth, which is outstripping income tax growth since mid-2016.

Looking at the other main taxes, the performance to date has been mixed: **VAT** over-performed in the first half of the year, but is now expected to come more in line with expectations. This is partly due to higher-than-expected repayments in recent months following lower-than-expected repayments in the earlier months. However, receipts to end-October are slightly below profile. **Excise duties** have underperformed to end-September and the Department do not expect them to recover by the end of this year. This has led to a strong downward revision for estimated receipts (€250 million) relative to the *SPU 2017* estimates. However, excise duty receipts have been strongly ahead of profile in October, with yields being 29 per cent higher than expected for the month.

Appendix D outlines the relevant factors impacting *Budget 2018* forecasts for the four main tax heads (VAT, Corporation Tax, Excise Duties and Income tax disaggregated by PAYE and USC). For 2017, the respective macro drivers of each tax head have all had positive impacts on receipts, especially PAYE, reflecting the strong labour market data. Policy-driven effects had a negative influence on USC and PAYE receipts. Other factors, including judgement as defined in Hannon (2014), lead to higher forecasts of VAT and corporation tax and lower forecasts of excise duties.[2]

3.2.3 Expenditure 2017

General government primary expenditure is expected to grow by 3.1 per cent (€2.1 billion) in 2017. The largest expenditure increase is in compensation of employees (5.6 per cent or €1.1 billion), with smaller increases in gross fixed capital formation (8.6 per cent or €0.4 billion) and intermediate consumption (4.2 per cent, €0.4 billion). Public sector pay increases and increased recruitment have boosted growth in compensation of employees, while plans to gradually increase public investment spending from relatively low levels contribute to gross fixed capital formation increases.

In terms of Exchequer spending, gross voted current expenditure has remained below the *Budget 2017* forecast for 2017 to date (Figure 3.5).[3] The Department of Health maintained spending below profile up to July 2017, but was over profile in each month since then. Higher-than-forecast spending has been a recurring issue for the Department of Health, resulting in "in-year" increases and supplementary estimates (Howlin, 2015). A combination of unrealistic forecasting and anticipated upward revisions to available funding is likely to have reinforced the "soft budget

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[2] Judgement is defined as the difference between the forecast published by the Department (the official forecast) and the forecast generated in a replication exercise developed at IFAC. For a detailed description, see the analytical note *Tax Forecasting Error Decomposition* (Hannon, 2014).

[3] General government expenditure refers to both central and local government spending, while exchequer expenditure refers to central government expenditure, voted and non-voted.

constraint" phenomenon, thus undermining the credibility and effectiveness of the expenditure ceilings (Box I *June 2017 FAR,* IFAC, 2017b).[4] Spending by the Departments of Social Protection and Education has been lower than expected for most of the year, while considerable savings in the "other" category (Figure 3.5) have been distributed broadly across the remaining departments.

Figure 3.5: Gross Current Expenditure Relative to *Budget 2017* Profile
€ millions
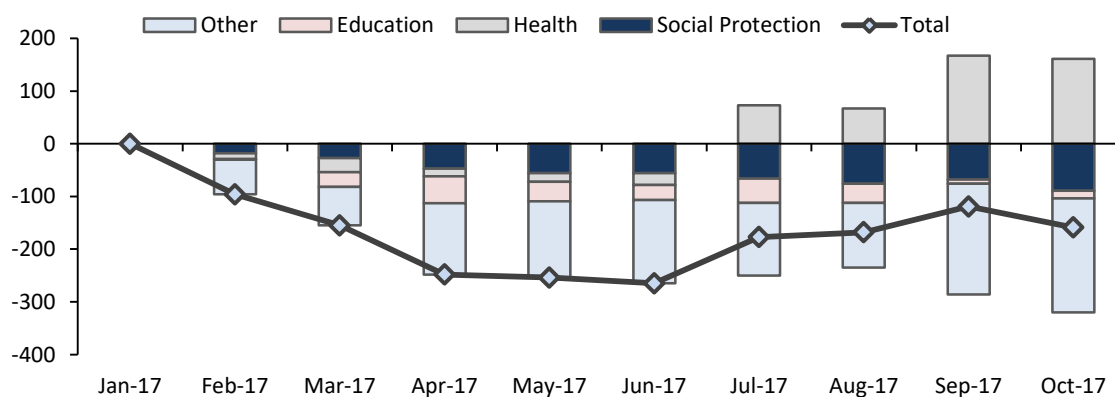
Sources: Department of Finance Exchequer Returns; and internal IFAC calculations.

A number of in-year policy decisions were made which will impact expenditure in 2017. The decision to refund water charges paid is expected to lead to a one-off cost of €179 million in 2017. *Budget 2018* also includes a 2017 provision for the Christmas Bonus of €230 million. This represents an 85 per cent bonus for people in receipt of long-term social protection payments. The measure, which was abolished in 2009, has seen a phased re-introduction since 2014; yet in none of these years has such a payment been budgeted for at the outset. In the interest of good budgetary planning and to avoid a pattern of spending decisions based on cyclical developments, budget estimates should account for the payment of the bonus unless the Government genuinely intends not to pay it.

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[4] The soft budget constraint, as originally formulated (Kornai, 1992), posits that a budget constraint is soft where the decision maker in control of day-to-day expenditure anticipates that the constraint is likely to be relaxed *ex-post* if the original constraint is not met, notwithstanding any ex-ante threats to impose a hard constraint. Where the budget setting process is weak, this may further "soften" the constraint as the manager – knowing plans are poorly set – has less of an incentive to adhere to them.

3.3 Forecasts for 2018

### 3.3.1 General Government Balance 2018

Turning to 2018, the *Budget 2018* forecasts indicate a marginal improvement in the deficit as a share of GNI*, excluding one-off items, of 0.1 percentage points relative to 2017. This gives a deficit of 0.3 per cent of GNI* for 2018. This reflects growth in total revenues of 4.4 per cent and total expenditure of 4 per cent (both excluding one-off items). *Budget 2018* increased expected spending relative to earlier forecasts, financed by discretionary tax increases. The measures impacting on the fiscal position in 2018 include expenditure measures of €1.1 billion (including the previously agreed Lansdowne Road Agreement), revenue-raising measures of an estimated €0.8 billion and tax reductions costing €0.3 billion.[5]

3.3.2 Revenue 2018

On an Exchequer basis, tax revenue for 2018 is projected at €53.7 billion. This implies growth of 6 per cent (or €3 billion) relative to 2017 (Figure 3.6). This includes the carryover effect of tax measures introduced in *Budget 2017* measures which has an impact of –€0.1 billion. *Budget 2018* introduced further tax reductions (–€0.3 billion) which offset revenue-raising measures (+€0.8 billion) to give a net increase of €0.5 billion.

Figure 3.6: Exchequer Tax Revenue 2016-2018
Percentage growth, year-on-year
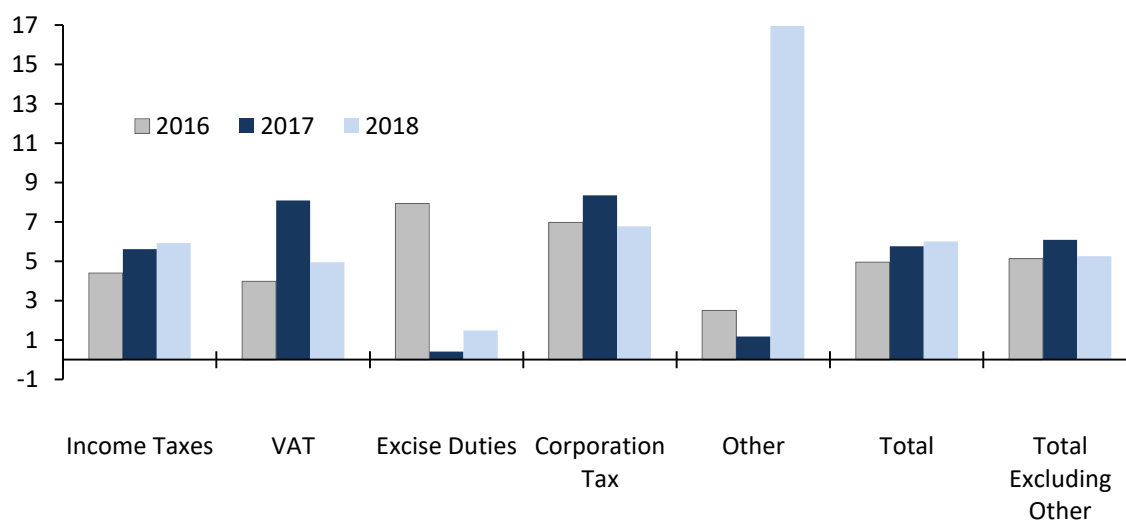
Source: Department of Finance; and internal IFAC calculations.
Note: "Other" is the sum of Stamp Duties, Local Property Tax, Customs, Capital Gains and Capital Acquisitions.

VAT, corporation tax and income tax are all expected to grow strongly reflecting *Budget 2018* forecasts for robust growth in profits, employment and consumer spending. The strong growth in

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[5] Figures as per Table 9 *Budget 2018.* The *Budget 2018* package in total amounted to €1.2 billion, excluding the Lansdowne Road Agreement. €0.8 million was generated from revenue raising measures. This €1.2 billion was split between expenditure €0.8 billion and tax €0.3 billion.

"other" – as shown in Figure 3.6 – mainly reflects stamp duty receipts, which are projected to grow from €1.2 billion to €1.7 billion (40 per cent). This largely reflects the increase in the rate of stamp duty charged on non-residential property from 2 per cent to 6 per cent introduced in *Budget* 2018. The measure is expected to yield €376 million in 2018; however, there may be questions over the assumptions underpinning these estimates for the medium term (Box F).

Excise duties are forecast to grow at a slower pace (1.5 per cent) in 2018 because some front-loading of tobacco payments is expected by the Department this year. This front-loading is believed to be linked to the anticipated implementation of plain packaging for tobacco products, which came into effect on 30th September 2017.[6] Figure 3.7 suggests that an increasing trend has followed in recent months of 2017, which is expected to slow in 2018. It also suggests that a spike in excise duty was also driven by similar expectations in 2016 (ultimately the move to plain packaging did not occur as originally anticipated).

Figure 3.7: Excise Duty Revenues 2011-2017
12-month moving sum, € million
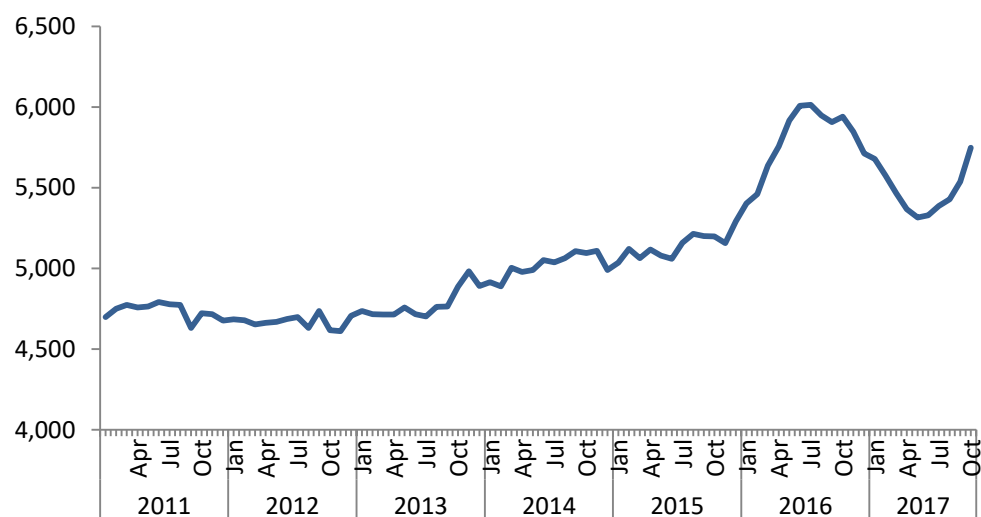
Sources: Department of Finance; and internal IFAC calculations.

Box F: Examining the Quality of Discretionary Tax Measures

Discretionary tax measures (policy-induced changes in taxation) are an important part of budgetary policy. Accurate costings of these are essential to determine the impact that policy changes have on budgetary outcomes and the Government's broader fiscal stance.

This box focuses on the quality of costings underpinning a number of discretionary measures introduced as part of *Budget 2017* and *Budget 2018*. It examines reductions in the Universal Social Charge (USC) in *Budget 2017* and several revenue-raising measures in *Budget 2018* including Capital Allowances on Intangible Assets, changes to non-residential Stamp Duties, and Compliance Measures.

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[6] It is worth noting that the tobacco products that were produced before that date – which were therefore unaffected by the implementation of the plain packaging – are allowed to be marketed for a period of one year (i.e., 30th September 2018).

There are questions over the assumptions underpinning some of the costings, particularly for some revenue-raising measures introduced as part of *Budget 2018*. In particular, it is unclear whether these costings are valid over the long-run, even though estimates of yields may be accurate for the short-run. In keeping with the spirit of the new budgetary framework, permanent expenditure increases should be funded by revenue-raising measures that can be considered sustainable over the long-run. While forecasting the underlying yields and costs from discretionary revenue measures can be challenging, it is important that the assumptions behind these estimates are well-founded, and that the behavioural responses are appropriately addressed.

1. Reduced USC: *Budget 2017*

The USC was first introduced in *Budget 2011* and replaced Income and Health Levies. This was intended to increase the tax yield as well as to broaden the tax base and to simplify the taxation structure.

Several budgets have introduced changes to the USC. One such change, which was introduced in *Budget 2017,* represented a cut amounting to an estimated impact of -€335 million in the level of receipts for 2017. However, receipts to date in 2017 have been weaker than expected, even after including the expected impact of the USC cut. In particular, the provisional figures of USC receipts to end-October for the PAYE and Schedule D components point at a shortfall of €95 million relative to expectations, with net receipts amounting to €2,737 million.[7] It is not clear whether the shortfall relative to expectations for 2017 thus far is due to (i) a weakness in economic conditions, or (ii) the result of mis-estimation or other factors. Given the strong labour market data, it would seem that the latter factor is more likely to account for any shortfall. If it is a result of mis-estimation, this could be due to either a mis-specification of the elasticity to income growth or, similarly, it could be due to a mis-estimation of the impact of previous cuts to the USC.[8]

Considering the large panel of administrative data containing information on individual income changes from previous years, it might have been expected that the accuracy of estimates could have been improved at an earlier stage. Recent joint research carried out by the ESRI and the Department for Finance suggested that the USC elasticity was actually lower than initially assumed.[9] It is worth noting that the calculations of USC receipts for 2017 are based on an earlier estimate of the sensitivity to income changes of 2.15, as opposed to the adjusted one, which is estimated at a much lower 1.2. A back-casting exercise shows how forecast USC revenue might vary depending on the sensitivity (or elasticity) used. Table F1 shows that applying the updated elasticity would yield USC receipts of the PAYE component that are €85 million lower for 2017 than if the earlier estimate of elasticity was to be used.

Table F1: Projected USC (PAYE) receipts in 2017 using different elasticity estimates
€ million

	Projected USC (PAYE) Revenue 2017
Using the ESRI and DoF elasticity of 1.2	3,163
Using the earlier DoF elasticity of 2.15	3,248

Sources: Department of Finance (DoF).

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[7] For 2017, the expected impact of USC reductions in *Budget 2017* was split between employees (PAYE) and self-employed (Schedule D) at €263 and €72 million, respectively. However, analysis carried out at a later stage suggested that the split should have been €311 and €24 million, respectively. PQ [23363/17] https://www.kildarestreet.com/wrans/?id=2017-05-18a.24 . While the total impact is the same (€335 million), there are important timing effects which may explain the shortfall in overall income tax (which includes USC) for the year-to-date. This reflects the fact that self-employed receipts are primarily received in November.

[8] Appendix E shows the most important factors influencing USC for *Budget 2018* forecasts.

[9] Acheson *et al* (2017).

2. Revenue-Raising Measures: *Budget 2018*

A number of questions arise in relation to the quality of several revenue-raising measures introduced in *Budget 2018*. In particular, it is worth asking whether or not the estimated yield in 2018 for stamp duty changes introduced in the Budget will be sustained over the long run.

- **Stamp Duty Rates Increase for Non-Residential Property**
  The stamp duty rate on non-residential property was increased from 2 to 6 per cent in *Budget 2018* and is estimated to bring in an additional €376 million in 2018. However, it is questionable that this measure will deliver the predicted gains for the subsequent years given that non-residential activity appears to have been higher than usual in recent years.

  A key part of forecasting the expected tax yield from a new measure is the starting point considered. However, it would appear that the assumptions underpinning the expected yield from changes to stamp duties on non-residential property introduced in *Budget 2018* were based solely on activity levels evident in 2016 and early-2017. Data from the professionals in the sector would suggest that part of the assumptions correspond to a highly exceptional period of activity that has taken place in recent years (Figure F1).[10] In addition, these activity levels may already have corrected to lower levels. Taken together, this suggests that the huge volumes of commercial property investment that took place in recent years are likely to fall to lower levels than may be assumed in budget calculations. While the *Budget 2018* forecasts may have imposed some downward judgement on forecast receipts based on actual tax collection data, this may not be enough to account for a sizeable downward correction in activity levels.

Figure F1: Irish Commercial Property Investment Turnover
€ billion
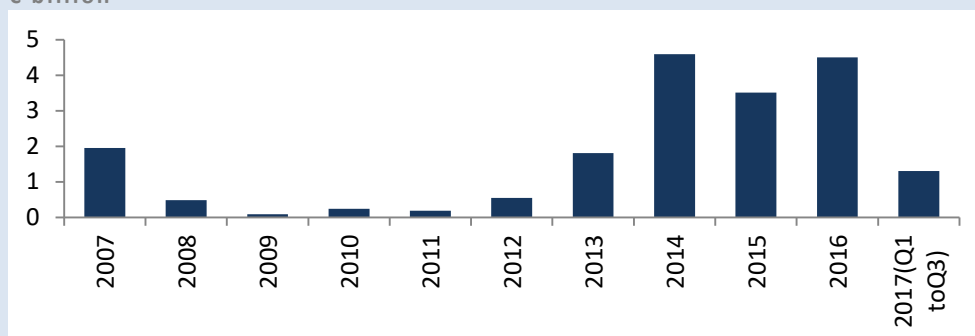
Source: CBRE Research.

- **Capital Allowances for Intangible Assets**
  Budget 2018 introduced an 80 per cent cap on the amount of capital allowances that can be used in a single year against income stemming from capital expenditure incurred on intangible assets (and other interest-related expenses). This cap, which applies for assets acquired after the day of the announcement of this measure, is estimated to generate a yield of €150 million in 2018. The estimated yield appears to be based on the expectation that the on-shoring seen in 2016 (€35 billion) and the first half of 2017 (€11 billion) will continue in 2018. The factors involving on-shoring activities are highly volatile given the nature of companies, the prediction of future behaviours and the amounts of expenditures involved, which implies that judgement plays an important role in the estimation of the expected yields.

  In any event, there may be some inconsistencies between the macro forecasts used by the

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[10] KPMG; CBRE Ireland; and Savills Ireland. Savills Ireland noted that with €1.3 billion traded in investments in the first 9 months of 2017, there would be at best €2.25 billion likely to trade in 2017 as a whole, versus €4.5 billion last year.

Department and the estimated yield of this budget measure. For example, an additional yield of €150 million on corporation tax for 2018 would require – at the 12.5 per cent corporate tax rate – €1.2 billion additional taxable profits. Given that up to 80 per cent of the capital allowance and related interest expense in a tax year is deductible against any relevant income, this would imply €6 billion of gross trading profits for the calendar year.[11] The €6 billion increase in gross trading profits roughly equates to a €6 billion increase in Gross Operating Surplus, equating to a €6 billion rise in nominal GDP for 2018. However, this would appear high in the context of an overall €12.7 billion nominal GDP increase forecast by the Department for 2018 (i.e., the €6 billion increase would represent almost half of the increase in nominal GDP forecast for 2018).

In addition, there are timing-related issues that are to be considered. In particular, if the 80 per cent limit is binding, any capital allowances that could not be claimed in a given year can be claimed in subsequent years. This shows that the measure does not reduce the overall capital allowances that can be claimed on intangible assets, but simply limits the amount that can be claimed in any one year. Instead of raising additional revenues for 2018 and all subsequent years, it may merely imply a shift in timing (i.e., bringing forward the timing of receipts rather than increasing the overall amount of receipts over the lifetime of the income-producing asset).

- **Compliance Measures**
  Budget 2018 notes that "improved compliance measures" will have an impact of +€100 million on the fiscal position for 2018. This amount is to be raised in three different areas: employment PAYE; e-Commerce and online business; tax avoidance and base erosion capacity.[12] There are difficulties involved in assessing the quality of estimates underpinning additional revenues from compliance measures and such estimates tend to be discounted. An additional document published with *Budget 2018* (Walsh *et al*, 2017) outlines the higher-than-stated receipts arising from compliance measures proposed in *Budget 2016* as a way of showing the relatively conservative projections estimated in the past. Nevertheless, the Department highlights the "difficulty [in separating] the impacts of such measures with other actions taken by Revenue, behavioural changes by taxpayer and general economic activity". In any case, the methodology behind the projections used is unclear, and only year 2018 is included as part of the package, leaving aside a sound medium-term forecast.[13]

From a methodological perspective, the inclusion of tax-raising compliance measures should be based on sound forecasting and on administrative initiatives. It is also important to apply the same forecasting discipline as for policy changes (i.e., specifying the precise initiative that is to be initiated, the resources needed to implement such measures, a realistic measure of the expected revenue outturn, including when the cash flows are to be received, etc.). Another important point is to factor in the analysis of costs that underpin the expected gains.

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[11] Applying gross profit margins (i.e., the ratio between gross profits and revenues) on the assets in the range of 10 to 25 per cent requires asset purchases of between €24 billion and €60 billion.

[12] The associated cost of this measure is €7 million.

[13] As an illustrative example of a detailed compliance plan, it is worth mentioning the Australian case. Taking the Australian *Budget 2012-2013* (Australian Department of Finance, 2012) as a reference, different points should be highlighted. Overall, it contains accurate details on the investment in tax compliance and their expected returns, not only for the very short term, but also for a time horizon comprising four years. These returns are disaggregated yearly and categorised according to the proposed policy decisions. Furthermore, they provide detail on the qualitative improvements expected from such policy decisions. In addition, the Budget includes compliance threats within the risk framework, placing it as one of the highest risks for 2012-2013. In general terms, the Australian case reflects an approach to compliance that substantially differs from what is considered in Irish Budget.

3.3.3 Expenditure 2018

Primary expenditure, excluding one-off items, is expected to grow by 4.7 per cent (€3.3 billion) in 2018. The largest increases are in compensation of employees (4 per cent, €0.8 billion), intermediate consumption (8 per cent, €0.8 billion) and gross fixed capital formation (16 per cent, €0.9 billion).

This increased expenditure includes carryover impacts of *Budget 2017* measures of €0.5 billion and the carryover impact of the original Lansdowne Road Agreement at €0.3 billion (DPER, 2017b). *Budget 2018* introduced a package of €1.1 billion of expenditure measures, with €0.9 billion allocated to current expenditure measures and an additional €0.2 billon increase in capital measures (Figure 3.8). The largest increase is in Social Protection (€0.34 billion), followed by Health at €0.24 billion.

Figure 3.8: *Budget 2018* Expenditure Measures
€ billions
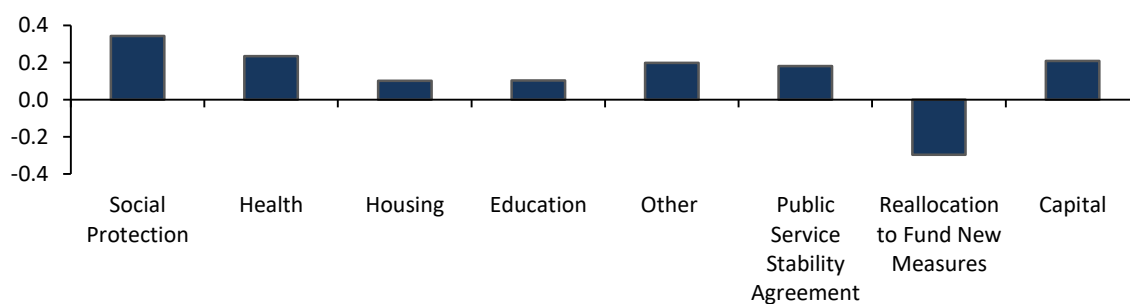
Sources: Department of Public Expenditure and Reform; and internal IFAC calculations.
Note: Re-allocation to Fund New Measures refers to resources from the Department of Employment and Social Protection due to lower unemployment, live register savings and a lower-than-anticipated carryover.

A recent review of government spending (*Spending Review 2017*, Department of Public Expenditure and Reform, 2017a) switched towards a more selective focus on spending areas from the previous approach which involved a comprehensive focus on all spending areas. A list of topics was drawn up in advance to inform what areas of spending would be reviewed. It is intended that this review and subsequent reviews will cover all government spending over the course of a three-year period to 2019. The approach is hoped to bring about more detailed analysis of spending areas and to emphasise the overall efficiency of government spending rather than incremental changes such as those contained in the annual budget.

The 2017 review comprised over twenty papers (more than in previous reviews), yet most of these were undertaken by DPER and there is scope for deepening the analysis involved in the 2018 round. In particular, while there was some improvement in focus on underlying drivers in some papers, more review papers could move from analysis of past trends towards integrating strategic aims; examining in more depth the underlying drivers of expenditure; projecting realistic spending needs in future; and formulating clear recommendations for future expenditure.

3.4 Medium-Term Forecasts 2019-2021

3.4.1 General Government Balance 2019-2021

Turning to the medium term, *Budget 2018* forecasts show an improving general government balance. A deficit of 0.2 per cent of GNI* is projected in 2019, turning to a small surplus in 2020 and increasing to 1.3 per cent of GNI* in 2021 (Table 3.2). Total revenues are expected to grow in the medium term (2019-2021) at an average rate of 3.9 per cent. However, primary expenditure shows lower growth at an average of 3 per cent per annum, slowing down each year. Combined with continued relatively strong revenue growth in later years, and falling interest expenditure, this leads to the improving general government balance.

Table 3.2: General Government Forecasts 2019-2021
€ Billions

	2019	2020	2021
General government balance	-0.3	0.8	2.9
General government balance, % GNI*	-0.2	0.4	1.3
Primary balance, % GNI*	2.5	2.9	3.5
Total Revenue	81.6	84.8	88.4
Total Revenue, % growth y/y	3.6	3.9	4.3
Total Expenditure	81.9	84.0	85.5
Total Expenditure, % growth y/y	3.3	2.5	1.9
Primary Expenditure,% growth y/y	3.7	2.9	2.4

Sources: Department of Finance; and internal IFAC calculations.

These improvements in the general government balance may not be realistic, as they assume that some of the estimated available fiscal space is unused. Forecasts that do not use the estimated fiscal space available in later years (2019–2021) or do not make an explicit commitment not to use this space are not credible.[14] The previously stated Government policy was to use all available fiscal space and it may be expected that the expenditure projections will therefore increase, while revenues may be reduced due to tax cuts.[15] This would exert downward pressure on the general government balance currently planned for. Moreover, a consistent pattern of upward revisions to expenditure ceilings has been observed in recent years, which could be expected to continue (Box I in IFAC, 2017b). While a policy of using some fiscal space for allocations to the Rainy Day Fund has

[14]*Budget 2018* forecasts would appear to imply an additional unused fiscal space in 2019, 2020 and 2021 of just over €1 billion per annum, separate to the Rainy Day Fund allocations.

[15] *Budget 2017* noted that: "the medium-term fiscal projections outlined here reflect the Government's stated policy intention to use of available fiscal space". It also stated that forecasts would be updated to reflect changes in estimates of the available fiscal space: "aggregate expenditure forecasts now include the planned level of Government expenditure out to 2021…based on the current economic forecasts and the existing estimates of available fiscal space. As we move forward, the economic forecasts will vary and estimates of fiscal space will change as the relevant economic indicators used in the calculation change. As this happens, the fiscal forecasts for both revenue and expenditure will change too."

been proposed, the amounts do not actually materially impact on fiscal space (they do not represent expenditure and so do not reduce available space). Furthermore, the proposed allocations have already been scaled back (Box A, Chapter 1).

The Council welcomes the inclusion of the alternative presentation of the Exchequer position.[16] This provides useful further detail on the expected changes to revenues expected from difference sources in the medium term, rather than the previous high-level estimates. This increases transparency around the medium-term forecasts, which are an important factor for fiscal policy in the medium term.

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[16] Table 10 in the Economic and Fiscal Outlook, *Budget 2018.*

3.4.2 Revenue 2019-2021

For the period 2019-2021, total general government revenues are projected to represent an average of 39.3 per cent of GNI* (Table 3.3), slightly below the 39.6 per cent expected for 2017 and 2018. This implies an average yearly growth of 3.9 per cent over the medium term, primarily driven by strong forecast receipts of current taxes on income and wealth (expected to increase by €3.4 billion over the projection horizon) and taxes on production and imports (projected to grow by €2 billion).

Table 3.3: General Government Revenue Forecasts 2019–2021
€ billion, unless stated otherwise

	2019	2020	2021
General Government Revenue, % GNI*	39.3	39.2	39.4
General Government Revenue, % GDP	25.9	25.8	25.9
General Government Revenue, % GNP	32.7	32.7	32.8
General Government Revenue	**81.6**	**84.8**	**88.4**
Taxes on production and imports	27.0	27.9	29.0
Current taxes on income, wealth	34.2	35.8	37.6
Capital taxes	0.4	0.4	0.4
Social Contributions	13.6	14.2	14.7
Property income	0.9	0.8	0.8
Other	5.6	5.7	5.9

Sources: Department of Finance; and internal IFAC calculations.

As illustrated in Figure 3.9, **general government revenue** is forecast to grow at a slower pace than Exchequer tax revenue. This is largely the result of the decreasing revenues from non-tax receipts and capital resources shown in Figure 3.11.

Figure 3.9: General Government and Tax Revenue Growth Forecasts
Year-on-year percentage growth
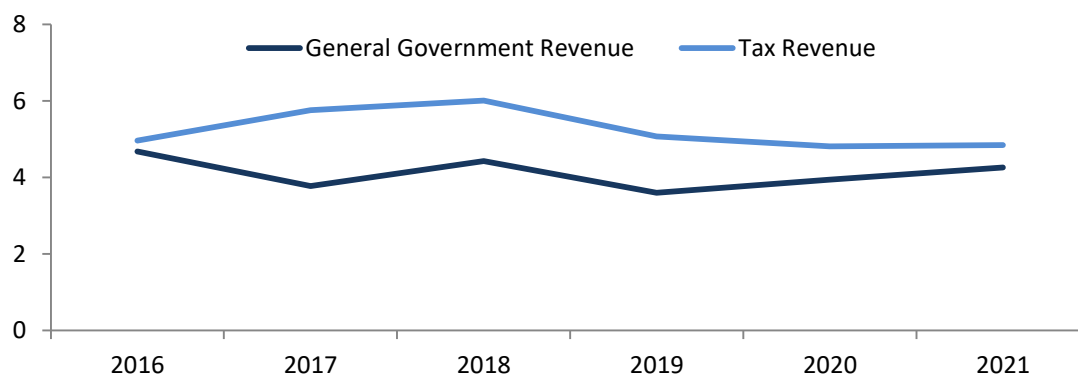
Sources: Department of Finance; and internal IFAC calculations.

Exchequer tax revenue is projected to grow year-on-year, although at slower pace than in 2018, averaging at 4.9 per cent per annum. Among the main tax heads, strong income tax, VAT and corporation tax receipts are forecast (Table 3.4).

**Table 3.4: Exchequer Tax Revenue Forecasts 2019-2021**
€ billion

	2019	2020	2021
Tax Revenue	**56.4**	**59.1**	**62.0**
Income tax	22.5	23.7	25.1
VAT	15.0	15.8	16.6
Corporation tax	8.9	9.2	9.6
Excise duties	6.0	6.2	6.3
Other	4.0	4.2	4.4

Source: Department of Finance.

Income tax is projected to reach €25.1 billion (€4.9 billion increase since 2017) by 2021 following strong employment growth of 1.8 per cent on average. The robust consumer-spending prospects, projected to grow at 4 per cent per annum in nominal terms over this period, supports strong VAT receipts projections (amounting to €16.6 billion by 2021). The most volatile component of Exchequer tax revenue – corporation tax – is expected to yield €9.6 billion receipts in 2021 (€1.6 billion higher than the estimate for 2017). Figure 3.10 shows the evolution of the proportion of Exchequer tax revenue accounted for by corporation tax over time. Along the projection horizon, the highest point is expected to be reached in 2018, with corporation tax receipts representing 15.8 per cent of total Exchequer tax receipts. Whereas income tax and VAT estimations appear in line with growth in the macroeconomic drivers, predicting corporation tax is more difficult given the high degree of uncertainty and volatility in this tax head.

Figure 3.10: Corporation Tax Receipts as a Share of Revenues
% Total Exchequer Tax Receipts
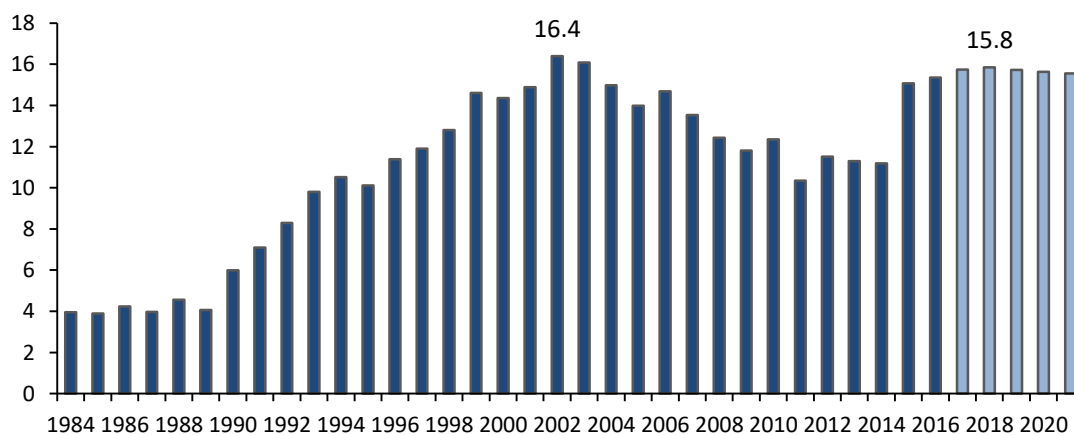
Sources: Department of Finance; and internal IFAC calculations.

The key factors influencing the forecasts of tax revenue over the medium term (2018-2021) are shown in Appendix D. Revenue growth is largely driven by the expected performance of macro drivers for all tax heads, especially PAYE. In addition, there is a downward policy impact for USC and PAYE expected as a result of discretionary revenue-reducing measures. One-off items will have a positive impact over 2019-2021, especially for VAT receipts, and to a lesser extent, for excise duties and corporation tax.

In terms of **non-tax revenue**, the yield is expected to decrease over the 2019-2021 period, as shown in Figure 3.11, with projected yields being reduced by €400 million over this period. The explanation behind these trends arises from the assumption of lower Central Bank surplus income, as compared to 2018 (when the Central Bank surplus is projected to increase due to realised gains arising from the disposal of the Government's floating rate notes).[17] **Capital resources** are projected to decrease from €1.2 billion in 2019 to approximately €0.9 billion in 2020 and 2021 (Figure 3.11). As compared to previous years, when capital resources were boosted through financial transactions related to the State's investments in the financial sector, the projections show lower financial transactions related to the State's support to the financial sector following recent sales.[18] Although there remain some assets which the State may sell, these have not been included in the forecasts given that a decision on disposal has yet to be made, as noted in the Fiscal Risk Matrix (Table 3.7). However, if these assets were to be sold, revenues from this source would increase. It is worth noting that, although capital resources are relevant in terms of debt analysis, they are neutral from a deficit perspective.

Figure 3.11: Non-Tax Revenue and Capital Resources
€ billion
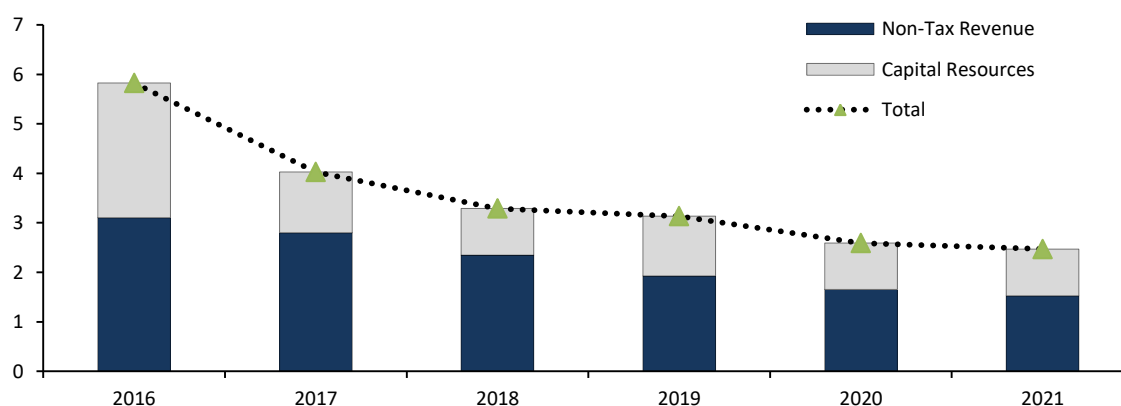
Sources: Department of Finance; and internal IFAC calculations.
Note: Capital Resources for 2017 excludes the sale of AIB shares for €3,433 million.

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[17] It is assumed that the floating rate notes issued to recapitalise IBRC will be sold according to the minimum disposal timeline. This change would be neutral in the general government accounts although it would have an impact on Exchequer liquidity.

[18] See Barnes and Smyth (2013) for an analysis of the Government's balance sheet, including an illustrative example on the winding-up of IBRC.

3.4.3 Expenditure 2019-2021

Expenditure is forecast in *Budget 2018* to increase over the medium term at a moderate pace, and to be consistent with over-compliance with the fiscal rules (Chapter 4). General government primary expenditure began to rise after 2014 and is projected to continue to grow at an average 3 per cent per annum over the medium term (2019-2021), but slowing in later years (Figure 3.12).[19] This represents a fall, as a share of GNI*, from 36.8 per cent in 2019 to 35.8 per cent in 2021 (Table 3.5).

Figure 3.12: Growth in Primary Expenditure (excluding one-offs)
Percentage change (year-on-year)
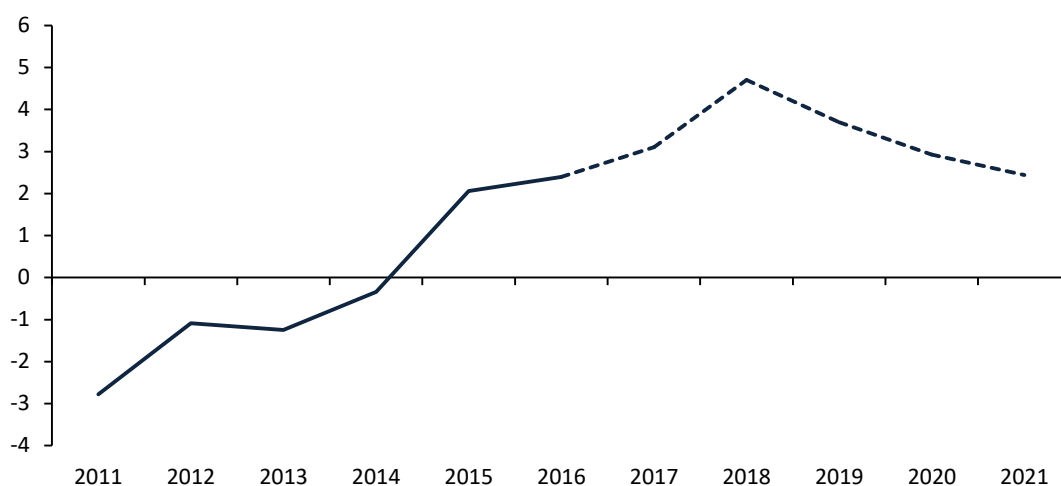
Sources: CSO; Department of Finance; and internal IFAC calculations.
Note: Primary expenditure equals total expenditure less interest repayments on government debt and one-offs. One-offs relate to those identified by the Council as applicable.

Table 3.5: General Government Expenditure Forecasts (2019-2021)
Percentage growth year-on-year, unless stated otherwise

	2019	2020	2021
General Government Expenditure	3.3	2.5	1.9
Primary Expenditure	3.7	2.9	2.4
Primary Expenditure, % of GNI*	36.8	36.4	35.8
Compensation of Employees	2.5	2.1	2.2
Intermediate Consumption	1.1	1.5	0.0
Social Payments	0.7	1.6	1.7
Interest Expenditure	-1.5	-3.1	-6.5
Subsidies	2.4	0.3	-1.2
Gross Fixed Capital Formation	18.8	5.0	2.5
Capital Transfers	11.8	2.8	-0.7
Other	1.0	1.8	0.8
Resources to be Allocated (€ billions)	0.5	1.2	1.9

Sources: Department of Finance; and internal IFAC calculations.
Note: Primary Expenditure equals total expenditure less interest repayments on government debt.

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[19] Stripping out expenditure in relation to interest payments and excluding one-off expenditure items. One-offs relate to those identified by the Council as applicable.

The expected fall in primary expenditure growth reflects slower growth across almost all components (Table 3.5).[20] The only component forecast to grow at a relatively steady rate is compensation of employees (rising by 2.2 per cent per annum on average). Capital spending (Gross Fixed Capital Formation) growth is forecast to moderate after reaching comparatively high ratios of GNI*, revenue and primary expenditure (Box G). Growth in intermediate consumption spending is forecast to be zero in 2021.This forecast, given expected inflation of 1.9 per cent, may not be especially realistic. Although, some €3.6 billion still remains to be allocated within the general government expenditure forecast, so some of this may be allocated to intermediate consumption. This decrease in the growth of expenditure on intermediate consumption and overall expenditure growth coincides with a substantial improvement in the general government balance to 1.3 per cent of GNI* in 2021, an increase of 0.9 percentage points from the projected surplus in 2020.

Spending Scenario Under Minimum Compliance

If the unallocated fiscal space in the years 2019–2021 were to be used, then the forecast debt level would be €7 billion higher (2½ percentage points of GNI*) by 2021, and the government's budget balance would remain in deficit.[21] Figure 3.13 highlights this scenario using the Council's Fiscal Feedbacks model. Whereas the budget deficit rises to a surplus 1.3 per cent of GNI* in 2021 in the *Budget 2018* baseline plans, the full use of fiscal space would imply a continued deficit of 0.3 per cent of GNI* as of 2021. This would imply a slower path for debt reduction for subsequent years.

Figure 3.13: Full Use of Fiscal Space Scenario (2019–2021)
Percentage of GNI*, general government basis

A. Budget Balance   B. Gross Debt
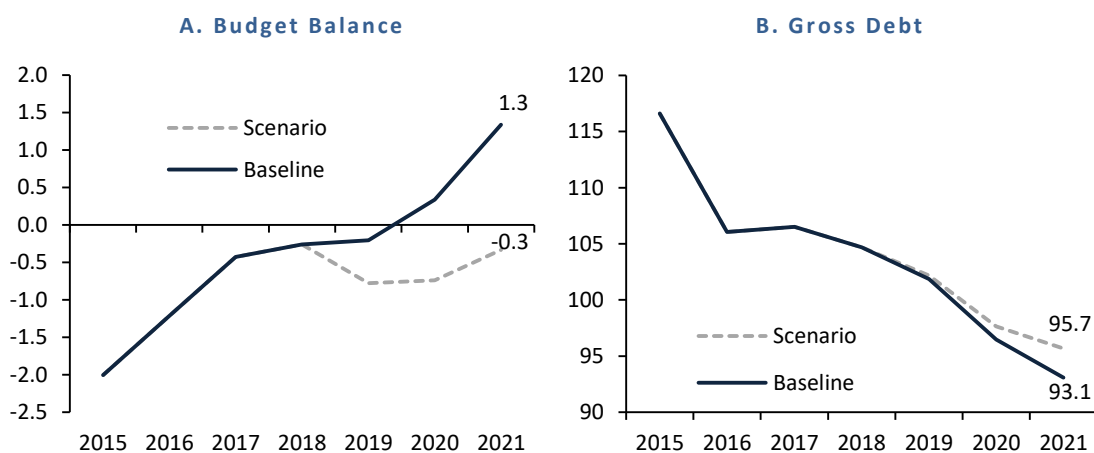
Sources: Department of Finance; and internal IFAC calculations.
Note: The grey dashed line shows the path of the general government balance and general government debt (both as a percentage of GNI*) assuming the estimated fiscal space available under the spending rule (Expenditure Benchmark) for later years as estimated in Budget 2018 is used.

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[20] The largest areas of growth include gross fixed capital formation and compensation of employees following the Public Service Stability Agreement, increasing by €1.7 billion and €1.5 billion respectively.

[21] *Budget 2018* forecasts would appear to imply an additional unused fiscal space in 2019, 2020 and 2021 of just over €1 billion per annum, separate to the Rainy Day Fund allocations.

Interest Expenditure

Interest payments on government debt also form an important part of expenditure over the medium term. The stock and maturity profile of debt, along with interest rates, will determine this expenditure. Figure 3.14 shows the National Treasury Management Agency (NTMA) maturity profile of Ireland's long-term and marketable debt as at October 2017.[22]

Figure 3.14: Maturity Profile of Ireland's Long-Term Marketable and Official Debt as at October 2017
€ billions
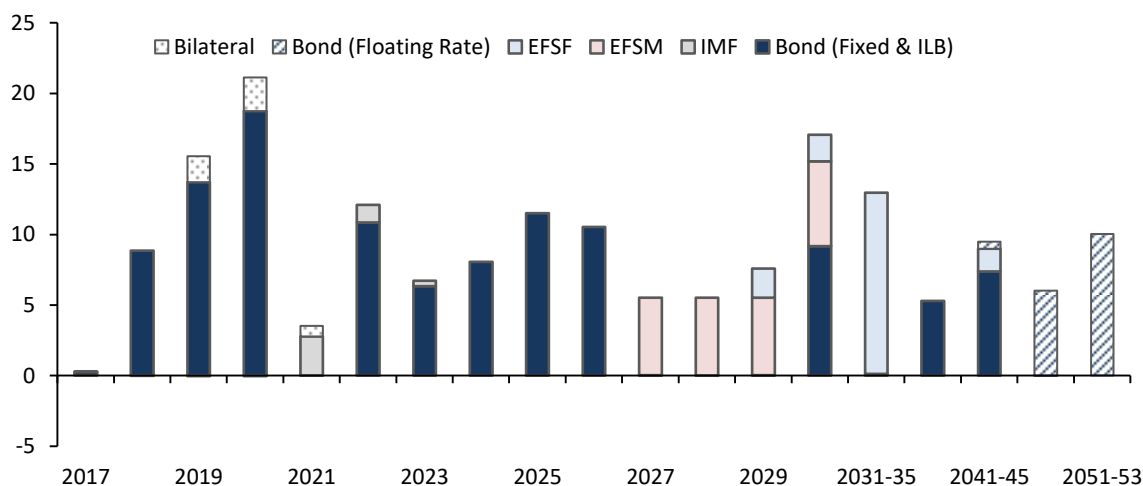
Source: NTMA.
Note: Data are adjusted to provide an indicative profile given the seven-year extension of the EFSM loans, to bring the weighted average maturity from 12.5 years to 19.5 years. Ireland is not expected to refinance these loans before 2027. Therefore, the indicative maturity of the EFSM loans has been placed in the years 2027-2031, but may be subject to change. Data are those for end September, adjusted for redemption of bonds on 19 October 2017.

Interest costs on government debt have declined in recent years and this is projected to continue over the forecast period (2018-2021). Figure 3.15 shows the improvement in forecast and actual interest costs due to low interest rates globally; agreed reductions in interest rates on official borrowing; expansionary monetary policy by the ECB, including the Public Sector Purchase Programme; and the early repayment of IMF loans and other debt restructuring. *Budget 2018* has once again seen a fall in expected interest rates over the forecast period (2018-2021).

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[22] This profile has been adjusted to take account of the extensions of the European Financial Stabilisation Mechanism (EFSM) loans which have been agreed. Although some of the EFSM loans have yet to be refinanced, these data provide an indicative profile of maturity, including this extension.

Figure 3.15: National Debt Cash Interest Projections
€ Billions
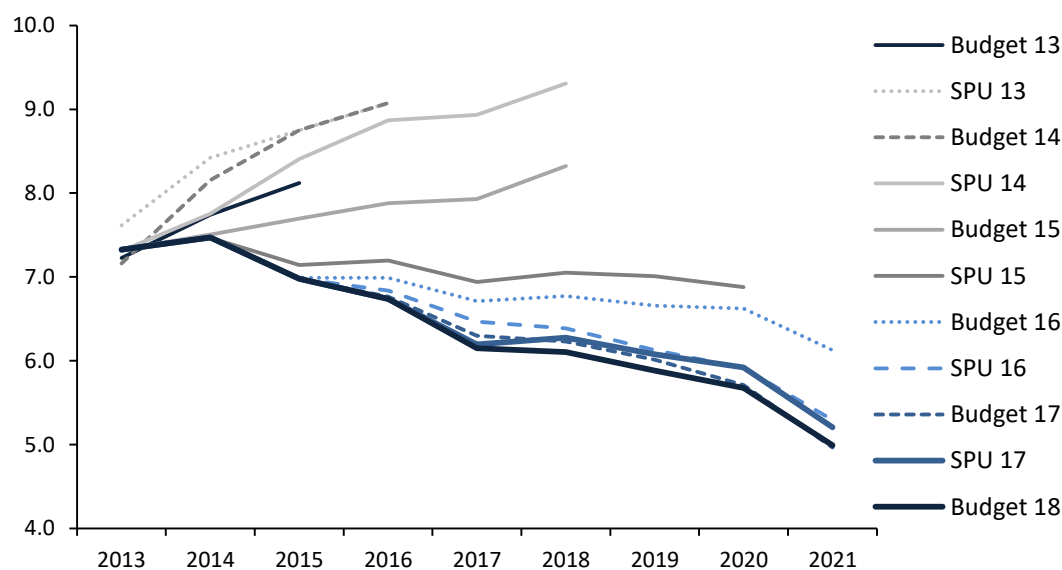
Sources: Department of Finance; and internal IFAC calculations.

Interest-rate shocks pose less of a risk to the public finances following recent maturity extensions and interest-rate reductions. With high debt levels, however, there are still risks that self-reinforcing fears in bond markets might take hold; and although there are substantial maturities to be rolled over during 2018-2020. However, such risks are mitigated somewhat by substantial Exchequer cash buffers maintained by the NTMA. As noted in the *November 2016 FAR* (IFAC 2016c), risks may arise from external shocks, while developments in relation to international monetary policy could negatively impact Irish borrowing costs.

General Government Debt

Figure 3.16 shows the evolution of general government debt as planned in *Budget 2018.* The debt-to-GDP ratio has fallen rapidly since 2012, but this is due in large part to the distorted 2015 growth rate (the GDP revision leading to a difference of 19.2 per cent in the gross debt-to-GDP ratio) and the liquidation of the IBRC, which led to lower liabilities being measured on the government's balance sheet (in 2011 this lead to increased liabilities of €20.9 billion; stripping out these liabilities, gross debt-to-GDP ratio would have been on average 4 per cent lower annually). The Government is planning to target a debt-to-GDP ratio of 55 per cent (Chapter 1).

Using the more informative alternative ratio of net debt-to-GNI*, it can be seen that the government debt burden has fallen at a more moderate pace since 2012 and is expected to fall to 93 per cent in 2017. The government debt burden is expected to still remain high in the medium term by international and historical standards (see Box H).

Figure 3.16: General Government Debt
Per cent
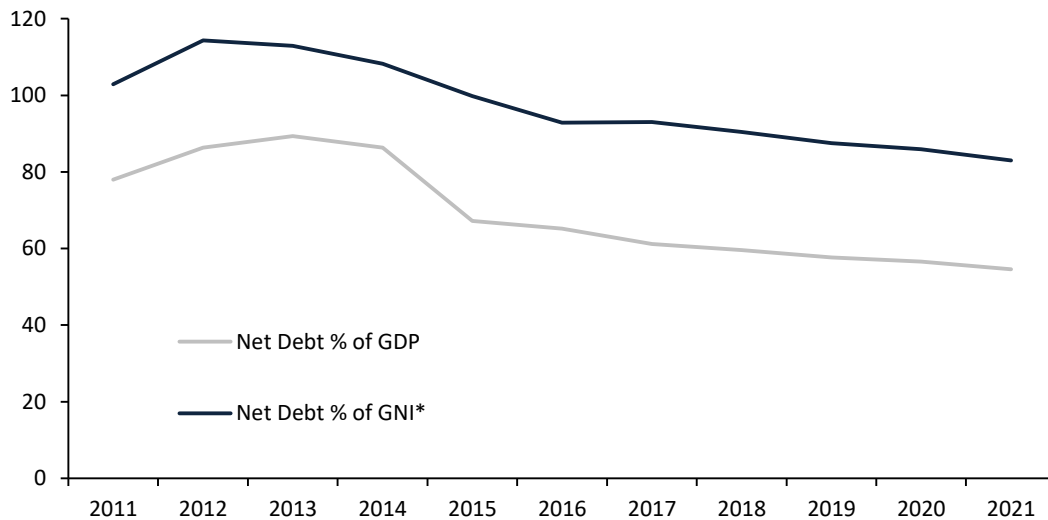
Sources: CSO; Department of Finance; and internal IFAC calculations.
Note: Data for the period 2017-2021 are projections as per *Budget 2018.*

The Stand-Still Scenario for Expenditure

The Council views an estimate of the cost of maintaining today's level of public services and benefits in real terms in future years as an important input into the expenditure planning process. Producing such a scenario would enrich the evidence base for budgetary decisions. The Council's "Stand-Still" expenditure scenario provides an example of such an exercise.

The Stand-Still approach is an illustrative exercise and should not be seen as an alternative expenditure forecast to that outlined in *Budget 2018*. The exercise outlines the cost of maintaining today's level of public services and benefits in real terms, given demographic costs and price changes. It is important to note that the Council is not suggesting automatic or semi-automatic indexation. Instead, the scenario provides information as an input into the policy decision process through which the ultimate expenditure forecasts are produced. The Stand-Still approach does not consider possible efficiency gains or Government policy changes that could lead to expenditure savings over the timeframe. Rather, the scenario illustrates the cost of maintaining today's level of public services in the absence of such efficiency measures and/or policy changes.

The Council sees the Stand-Still approach as a useful basis for forecasting and is not suggesting the adoption of indexation of any kind; however, indexation has been proposed as an option for pensions by the Government. At the *National Economic Dialogue* in June 2017 it was indicated that the government would like to "to index increases in the state of pension to the cost of living as an automatic minimum increase every year so that the real value and purchasing power is

protected".[23] Increasing the state pension in line with the Budget forecasts of inflation would lead to an additional increase in expenditure of €0.4 billion over the period 2017-2021 solely due to increases in cost of living. This is a crude estimate given current inflation forecasts and does not include any potential increase to other age-related payments such as the living alone allowance. Should inflation forecasts increase, or should other age-related payments be included, the cost of such a policy approach could be considerably higher.

In constructing the medium-term Stand-Still scenario, government expenditure is split into five headline components: health; education; social payments (including social welfare pensions); national debt interest; and other. The methodology used in each case is described in Box E of the *June 2016 FAR* (IFAC, 2016b), though in the case of health expenditure it should be noted that a similar approach to that of the Department of Public Expenditure and Reform's estimates of demographic pressures is now built into the model. To estimate demographic pressures on health spending, the age-related costs associated with acute services, Primary Care Reimbursement Service (PCRS), Nursing Home Support Scheme (NHSS) and older persons' services are modelled separately. The model uses detailed data from the Hospital In-Patient Enquiry Scheme (HIPE) to produce estimates of expenditure pressures. Pay rates are expected to rise in line with the Public Service Stability Agreement (2018–2020).

Table 3.6 provides a comparison between the fiscal space allocated to current expenditure (including pre-committed amounts) implicit in *Budget 2018* and the Council's Stand-Still scenario for current expenditure.

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[23] Available at:
https://www.taoiseach.gov.ie/eng/News/Taoiseach's_Speeches/Speech_by_the_Taoiseach_Mr_Leo_Varadkar_TD_at_the_Opening_of_the_National_Economic_Dialogue_Wednesday_28_June_2017.html

Table 3.6 Comparison of Estimated Stand-Still Current Expenditure and Allocated Fiscal Space

€ billion (increases unless stated)

	2019	2020	2021	Total (2019-2021)
Gross Voted Current Spending Increase - IFAC Stand-Still (A)	1.31	1.46	1.76	4.53
of which: Demographics	0.54	0.61	0.64	1.79
Prices	0.77	0.85	1.11	2.74
Budget 2018 Pre-Committed Gross Voted Current Expenditure (B)	0.90	0.82	0.71	2.43
of which: Demographics	0.49	0.48	0.48	1.45
Public Service Stability Agreement	0.37	0.34	0.23	0.94
Other	0.04	0.00	0.00	0.04
Amount of Net Fiscal Space Needed to Stand-Still C=(A-B)	0.41	0.64	1.05	2.10
Net Fiscal Space Allocated to Current Expenditure (*Budget 2018/SES 2017*) (D)	0.95	1.02	0.98	2.95
Difference Between Net Fiscal Space Needed to Stand-Still and Net Fiscal Space Allocated to Current Expenditure Increases E=(D-C)	0.54	0.38	-0.07	0.85

Sources: Department of Finance; Department of Public Expenditure and Reform, and internal IFAC calculations.
Note: (A) IFAC stand-still gross voted current spending is attained using a bottom-up approach based on the latest expenditure estimates for 2017, a cohort component demographics model and the latest macroeconomic and inflation forecasts from *Budget 2018*. (B) *Budget 2018* pre-committed spending takes the demographics and pre-committed spending figures as in *Budget 2018*. The net fiscal space allocated to current expenditure (D) takes the fiscal space as outlined in *SES 2017*.

The IFAC Stand-Still scenario shows the estimated increases in current spending if demographic pressures were fully accommodated and if spending moved in line with the inflation forecasts in *Budget 2018* by the Department of Finance. In this scenario, gross voted current spending would increase by €4.5 billion over the period 2019-2021.

For the same period (2019-2021), the Government has pre-committed €2.4 billion for the cost of: (i) public sector pay arrangements under the Public Service Stability Agreement (2018-2020); (ii) some estimated demographic pressures; and (iii) covering other pre-committed spending measures.[24]

Comparing total pre-committed expenditure increases (before any indicative allocations of fiscal space are considered) with the Stand-Still estimates implies that €2.1 billion of the available fiscal space would be required to fully account for demographic pressures and the additional costs of maintaining real services and benefits. *Budget 2018* indicatively allocates some €3 billion of fiscal space to current spending over the same period (2019-2021). This implies – in the absence of policy changes, or changes to the macroeconomic spending drivers – the fiscal space currently budgeted for expenditure increases in 2019-2021 would fully accommodate estimated demographic pressures and the cost of maintaining real public services and benefits.

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[24] This related to a pre-committed EU programme funding covered under the Rural Development Fund.

Budgetary plans can be made more robust if they are founded on a better understanding of the drivers of expenditure and how these are expected to evolve over the medium term. The *Mid-Year Expenditure Report 2016* noted progress of work in developing a methodology to "separately model the evolution of volume/demand and price impact" on public expenditure. This approach would provide a useful guide for future spending pressures. If combined with detailed spending reviews, it could provide a valuable input to future medium-term expenditure forecasts and improve the basis on which achieving fiscal aims is assessed.

Investment Expenditure

Investment expenditure is expected to increase substantially over the forecast period (2018-2021), with additional resources which had previously been indicated for the Rainy Day Fund now allocated to capital expenditure. Gross fixed capital formation is projected to grow at an average annual rate of 10.6 per cent out to 2021. Following a period of reduced public investment growth, Ireland will move from relatively low levels of public investment to levels that are among the highest in the EU. Box G discusses plans for public investment spending.

Box G: Plans for Public Investment Spending

This box looks at the Government's plans for public investment spending. Public investment is set to ramp up quite rapidly to levels among the highest in the EU in coming years, while still complying with the fiscal rules. The Government has also indicated that a value of 3 per cent of an appropriate measure of national income (e.g., GNI*) might be considered a reasonable target for the long-term level of public capital spending for Ireland. A target of this form would be a sensible approach to ensuring that investment spending is sustained over the course of the cycle. If adhered to, this approach could help to prevent forced cuts to public investment in downturns and excessive investment expansions in booms.
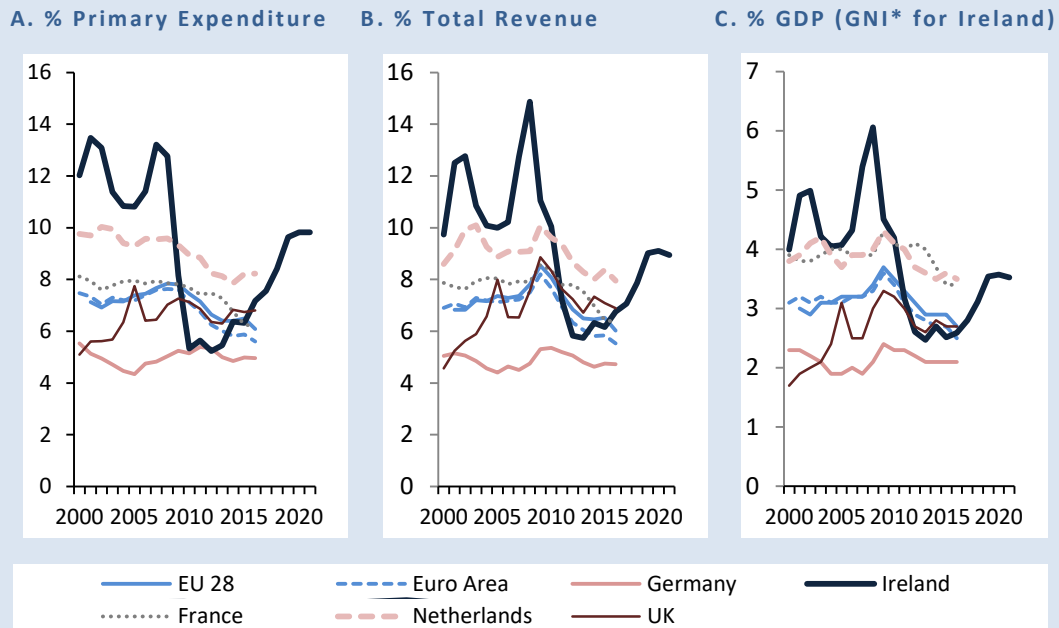
Concerns have been expressed at the manner in which high public investment levels in Ireland were reduced to very low levels as the public finances underwent a sharp correction in recent years. However, *Budget 2018* plans show that annual public investment levels in Ireland will move from relatively low levels to levels that will be among the highest in the EU in a relatively short period of time.

Figure G1 shows the evolution of public investment in Ireland since 2000. Investment levels are shown as a share of (A) total government primary expenditure (i.e., total spending excluding interest costs); (B) total government revenue; and (C) GDP (with GNI* used for Ireland). On each measure, the procyclical nature of investment spending is evident. During the early 2000s and up to the end of the property/credit bubble period, investment spending was far above levels in other EU Member States, such as Germany and the UK. Efforts during the downturn to correct a large deficit then saw capital spending approximately halved.

Having been scaled back to a low base, public investment levels are expected to ramp up quite rapidly again, rising to levels that are among the highest in the EU under current plans. For instance, by 2021, public investment is planned to rise to 9.8 per cent of primary spending; 8.9 per cent of total revenue; and 3.5 per cent of GNI*. Across all measures, this would be higher than present levels for countries such as France, the Netherlands, Germany and the UK as well as for the EU and Euro Area aggregates. Importantly, this is possible while still complying with the fiscal rules in later years.

Figure G1: Annual Public Investment Spending
Percentage of respective denominator, general government basis

A. % Primary Expenditure   **B. % Total Revenue**   **C. % GDP (GNI* for Ireland)**

Legend: EU 28 — Euro Area — Germany — Ireland — France — Netherlands — UK

Sources: Eurostat; CSO; Department of Finance (*Budget 2018*); and internal IFAC calculations.

With public investment levels set to return to relatively high levels soon, efforts should be made to prevent this category of spending from following a procyclical pattern yet again in future years. The *Review of the Capital Plan 2016–2021* (Department of Public Expenditure and Reform, 2017c) notes that a value of 3 per cent of an "appropriate measure of national income" might be considered an appropriate target for the long-term level of public capital spending for Ireland. This is informed by the fact that Irish public investment levels averaged approximately 3 per cent of GNI* over the period 1995–2015 – a level similar to the EU-15 average over the same time.

A commitment to stick to a specified level of public investment as a share of GNI* would be a sensible basis for fiscal policy over the medium term.[25] If adhered to, this approach could help to prevent forced cuts to public investment in downturns and excessive expansions in investment during booms.

If a targeted level of public investment had been followed in the previous boom–bust cycle, this would have limited the procyclical increases in investment levels observed during the mid-2000s. It would also have helped to prevent the sharp cuts to investment observed in the subsequent downturn and recovery. Figure G2 illustrates how a 3 per cent of GNI* target for public investment might have operated over the period 2000-2017 if adhered to. As shown, levels of investment would have been lower than actually observed in the pre-crisis period, and higher in the post-crisis period. The cumulative gap between targeted investment and actual investment would have been of the order of €3.7 billion in the 2012-2017 period (though endogeneity of the path for GNI* is clearly an issue here). Smoothing government investment spending can also help to provide greater certainty regarding future infrastructure projects. This, in turn, can help to make technology investments in the sector more viable, thus driving productivity gains.

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[25] One argument in favour of targeting of this sort is set out by Portes and Wren Lewis (2015), for example. The argument follows that an optimal way to prevent public investment being squeezed in times of austerity is to have an explicit public investment target as a share of some measure of overall economic activity. Such a target could also operate well in the context of a system of fiscal rules that includes targets for the overall deficit (or structural deficit as in the *SGP*).

Figure G2: Illustrative Public Investment Path
Gross fixed capital formation (€ billions), general government basis
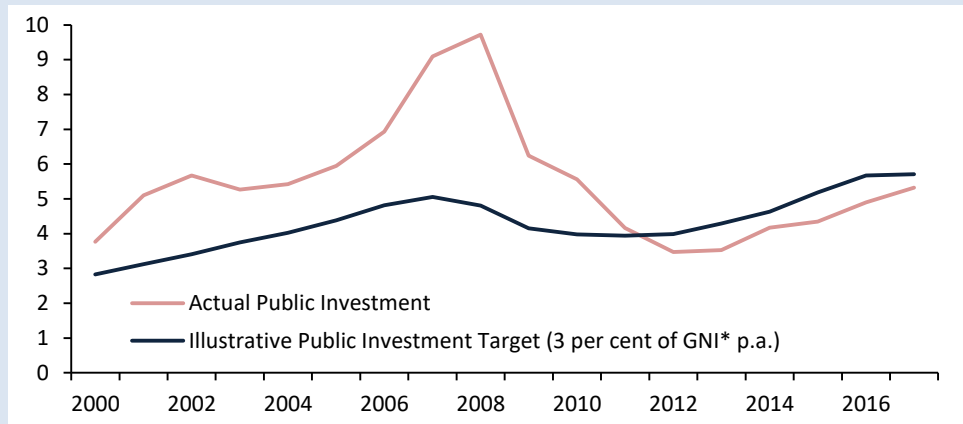
Sources: CSO; Department of Finance (*Budget 2018*); and internal IFAC calculations.

Much of the domestic debate concerning the need for additional investment has focused on the benefits of this to the productive capacity of the economy. However, not all public investment will necessarily boost the productive capacity of the economy and there is an inevitable trade-off with debt sustainability considerations especially when public debt is already high.

Public investment has been shown to have, on average, a more positive impact on economic growth than other types of government spending (Bénétrix and Lane, 2009; Hall, 2010). Benefits may also be more pronounced when there is economic slack, and when monetary conditions are more accommodative (Abiad *et al,* 2015). Debt sustainability concerns can reduce the capacity to pursue this without negatively impacting on creditworthiness. Furthermore, due to the open nature of the Irish economy, net leakages of income have been shown to lessen the positive effects of fiscal policy over the medium term (Cronin and McQuinn, 2014). Estimates using the ESRI's large-scale HERMES macroeconomic model suggest that a €1 billion increase in government investment can lead to an increase in real GDP of 0.1 per cent in the long run (Bergin *et al*, 2009).

While public investment can lead to positive economic gains, all public investment projects should still be assessed rigorously. In particular, evaluations should assess the quality of the investment proposed, its efficiency and the method of financing intended. Warner (2014) finds that the impact of investment on long-term economic activity can be limited where project appraisal, selection and management procedures are weak. This is one of the areas identified in the recent IMF *Public Investment Management Assessment* of Ireland (IMF, 2017) as in need of improvement in Ireland.

The short- and long-term fiscal and macroeconomic impacts of any investments should also be considered. In particular, plans should be cautious of aggravating boom–bust cycles.

3.5 Risks

While Budget 2018 has seen improvements in both the macroeconomic and fiscal outlook, substantial risks to the public finances remain. As shown in Figures 3.17 and 3.18, a shock to GNI* growth of 1.5 percentage points relative to Budget 2018 forecasts each year during 2018 to 2021 would result in the general government balance being over 4 percentage points of GNI* lower by 2021. All else being equal, this means that the public finances would remain in deficit out to 2021 as compared to a central scenario where they rise to a surplus of 1.3 per cent of GNI*. In the same scenario, the currently high gross government debt-to-revenue ratio would rise above current levels, in the absence of corrective policy action.

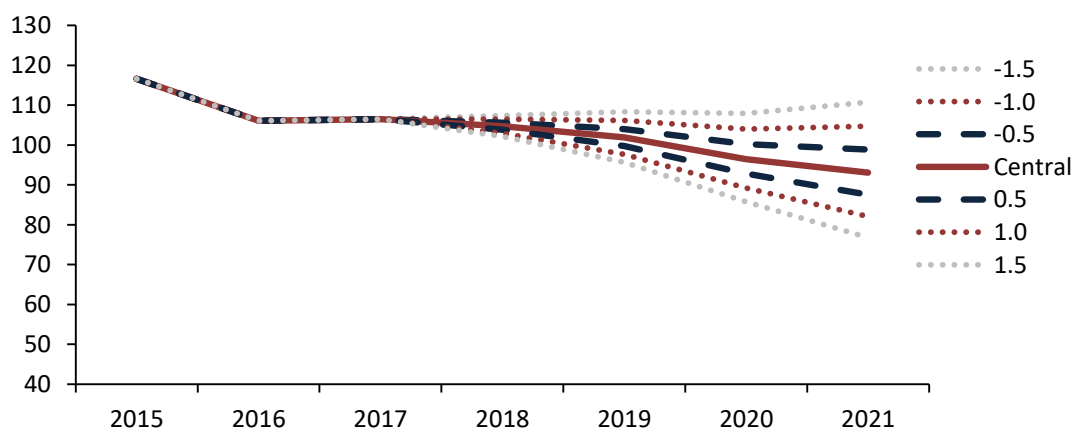### Figure 3.17: General government balance Paths
% GNI*
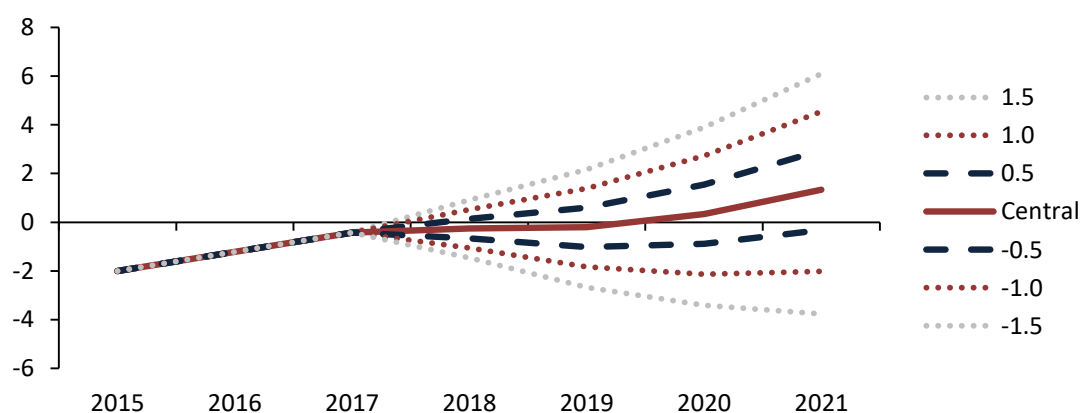
Sources: CSO; Department of Finance; and internal IFAC calculations.
Note: Using the Fiscal Feedbacks Model, the lines depict how far the budget balance would be pushed away from the Budget 2018 forecast under different shocks to growth in each year. The solid red line ("Central") corresponds to the latest official forecast.

Figure 3.18: Gross Debt Paths
% GNI*, General Government Basis

Sources: CSO; Department of Finance; and internal IFAC calculations.
Note: Using the Fiscal Feedbacks Model, the lines depict how far the debt-to-revenue ratio would be pushed away from the baseline scenario under different shocks to growth in each year. Changes in EDP debt instrument assets for forecast years are assumed to be in line with projected changes in cash balances.

Box H: Ireland's Public Debt Burden

This box examines Ireland's nominal GDP growth and the interest costs associated with public debt: two of the key drivers of debt dynamics. The international and historical experiences of selected EU countries provide context for assessing the future path of public debt. The high volatility of nominal GDP growth and the effective interest rate on public debt in Ireland suggest that a prudent debt target would be lower than that of other larger economies.

Irish Government Debt in Historical Terms

Taking a long-term perspective on Ireland's public debt burden reveals three periods where debt has risen above the *SGP* limit of 60 per cent of GDP (Figure H1). During the 1950s, the balance of payments crisis was a contributing factor; in the late 1970s during a period of investment a shock occurred due to the oil crisis, although the fiscal position improved in the late 1980s, the early 1990s saw a deterioration in the fiscal position due to external demand conditions, especially in the UK; while the most recent collapse in the late 2000s followed the bursting of the property/credit bubble, and saw losses in cyclical and property-related revenues while costly banking-sector support measures were also incurred. When scaled against an appropriate measure of national income, debt is currently higher than at any period in the history of the State. Government plans suggest a steady pace of reduction in coming years, though debt forecasts remain above 90 per cent of GNI* by 2021.

Figure H1: Long-Run Perspective on Ireland's Debt Ratio
Gross debt as share of GDP and GNI*
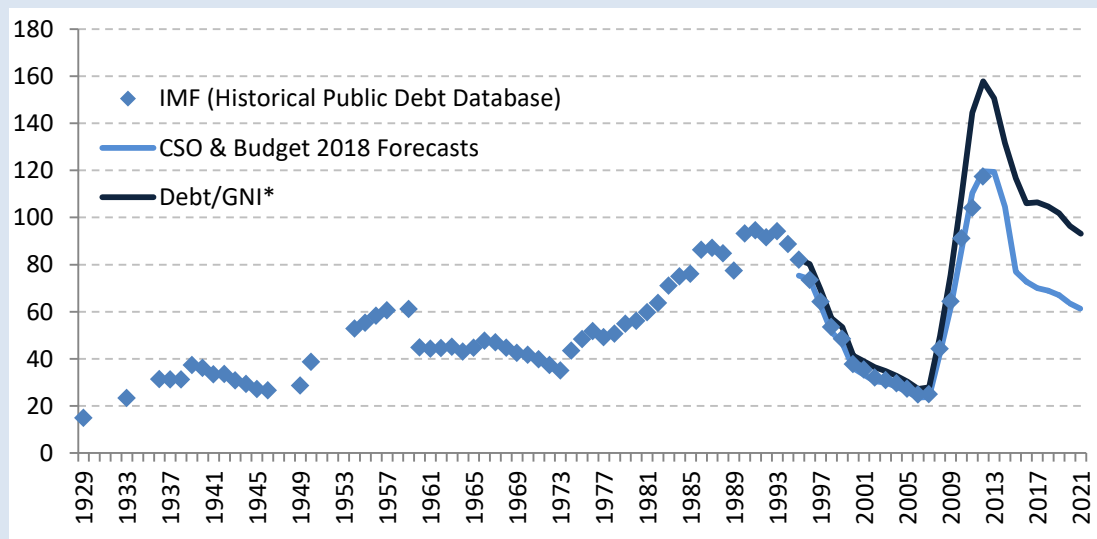
Sources: CSO, IMF and Department of Finance.
Note: IMF Historical Public Debt Database begins in 1929. For 2017-2021, *Budget 2018* forecasts are used.

Relative Volatility of Irish Debt Dynamics

Central to how debt levels evolve are three factors: growth (g_t); the average interest costs on debt (i_t) and the primary (i.e., non-interest) budget balance that a government runs (PB_t). These factors when coupled with existing debt levels (D_{t-1}) plus any other "stock-flow" (SF_t) changes that take place[26] will drive the evolution of Irish debt levels in coming years. The role of these factors can be elaborated using the standard "debt snowball" equation:

$$\Delta D_t = \left(D_{t-1} * \frac{i_t - g_t}{1 + g_t} \right) - PB_t + SF_t$$

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[26] Examples include changes in holdings of debt-corresponding assets, fluctuations in domestic-currency values of foreign-currency funding, and asset disposals that reduce gross debt.

While the primary balance run by a government is a key consideration, it is worth examining the dynamics that are (to a larger extent) outside of its control. The interest-growth differential ($i_t - g_t$) can be analysed in order to understand how debt levels might evolve in future.

Figure H2 shows distributions of the interest-growth differentials for Ireland and selected other European countries for 1991-2016. A differential below (above) zero is more (less) favourable. Ireland's distribution is shown to be more favourable on average compared to other countries in the sample. Looking ahead with *Budget 2018* forecasts for 2017-2021, these measures remain in the favourable area of the distribution – that is, below zero – ranging between -1.6 and -2 percentage points and averaging -1.7 percentage points. The average sits at around the 60th percentile of outturns, approximately 1.3 percentage points above the median of -3 percentage points.

Figure H2: Ireland's Debt Dynamics: More Favourable, But More Volatile
Interest-growth differentials in Ireland and selected European countries, frequency
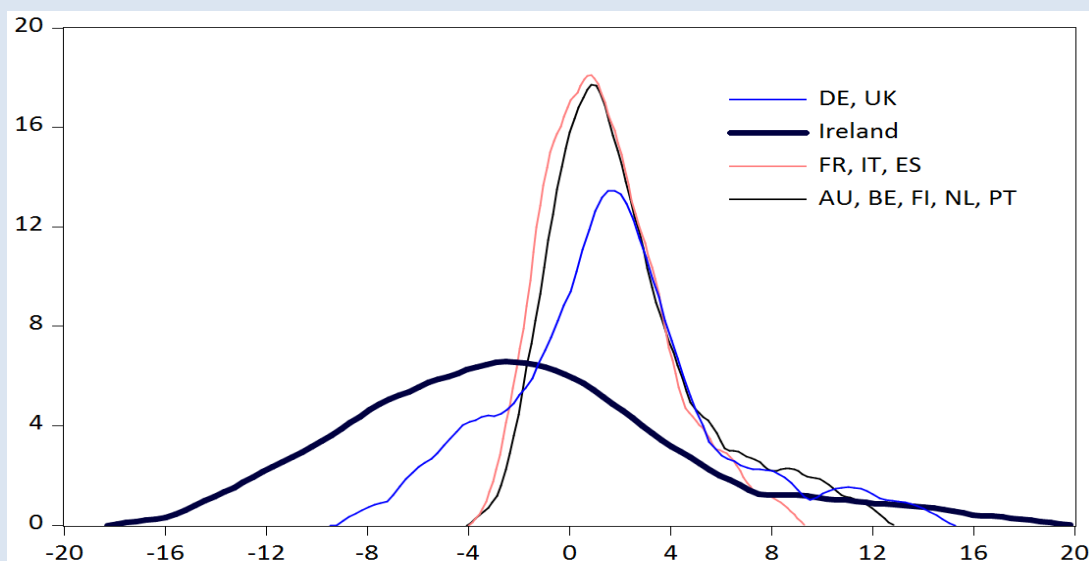
Sources: Eurostat; IMF; OECD; CSO; and Department of Finance (*Budget 2018* forecasts).
Note: Annual data, 1991-2016 (to 2021 for Ireland). A differential below (above) zero is more (less) favourable.
DE Germany, FR France, IT Italy, ES Spain, AU Austria, BE Belgium, FI Finland, NL Netherlands, PT Portugal.

An important factor to consider is that Ireland enjoyed strong convergence growth during the sample period, particularly during the 1990s and early 2000s. Moreover, the volatility of this measure of debt dynamics has been much greater for Ireland, as witnessed by the wider base of the distribution (this remains the case with the extremely favourable outlier observation for 2015 of – 31 percentage points excluded from the analysis). Table H1 below shows the inter-quartile range of the various countries included in the sample, for which Ireland's is the widest at nearly 8 percentage points. While the distributions elsewhere in Europe are less favourable on average, their variability is much lower – the average of their ranges is 3.5 percentage points.

Table H1: Ireland's Broad Historical Range of Debt Dynamics
Inter-Quartile Range of Interest-Growth Differentials

	AU	BE	DE	ES	FI	FR	IRL	IT	NL	PT	UK
25th Percentile	0.3	0.4	-1.3	-2.4	-0.7	0.2	**-6.6**	1.2	-0.4	-0.3	-1.9
75th Percentile	2.4	4.8	3.1	3.4	2.4	2.1	**1.3**	3.6	3.9	2.7	1.9
Range	2.2	4.4	4.4	5.8	3.1	1.9	**7.9**	2.4	4.4	2.9	3.9

Sources: Eurostat; IMF; OECD; and CSO.
Note: Annual data, 1991–2016.

An Appropriate Debt Ceiling for Ireland

On balance, the potential may be limited for Ireland's interest-growth differentials to continue as favourably in future as they have been in recent decades. While 94 per cent of end-2016 gross debt was financed at fixed interest rates (C&AG, 2017), risks to economic growth remain manifold (as discussed in Section 2.4). Indeed, debt rollovers may become costlier for the Irish Government if global long-term interest rates rise faster than currently anticipated, in particular as the ECB and central banks worldwide withdraw monetary stimulus measures.

These substantive downside risks over the medium term may add to the challenge of gradually reducing debt to safer levels. As analysed by the Council in Box A of the previous *FAR* (IFAC, 2017b), a 45 per cent debt-to-GDP ratio should not necessarily be considered a low or prudent debt burden. Rather, the ratio needs to be considered alongside a number of other factors, including long-term spending pressures for areas such as health and pensions. The greater volatility of Irish interest-growth differentials, in combination with the elevated debt-to-GNI* ratios forecast to 2021, suggest a prudent ceiling for Ireland's public debt should be below 45 per cent of GDP.

Table 3.7 (below) shows the fiscal risks identified in *Budget 2018* along with the Department of Finance's assessments of relative likelihoods and impacts. The Council provides an assessment of each of the risks, and three additional risks, as assessed by the Council, have also been added to the table.

Table 3.7: Assessing *Budget 2018* Fiscal Risk Matrix

	Likelihood	Impact	IFAC Assessment
EU Climate Change Targets	H	H	Ireland is unlikely to meet its 2020 emissions targets without purchasing more allowances, which could mean a cost of between €60 million and €120 million to the State. In the longer term (based on estimates to 2030 from Curtin, 2016), a failure to meet later targets in emissions and renewables could lead to additional costs in the region of €2.7 to €5.5 billion. This suggests for the forecast horizon, a high probability and relatively lower impact is appropriate.
Budgetary Pressures	M	H	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. Repeated in year spending increases may create expectations which add to these pressures. As outlined in Box I of the *June 2017 Fiscal Assessment Report* expenditure ceilings have been subject to frequent revisions, weakening their role as an incentive for expenditure management by departments (IFAC, 2017b). The addition of in-year spending measures exacerbates this problem.
Unanticipated Compositional Effects of a "Hard Brexit" (IFAC Risk)	M	H	The central scenario in *Budget 2018* is for a hard Brexit, but there is a risk that the impacts of a hard Brexit on the public finances could be starker than is estimated (i.e., over and above traditional impacts and the direct effects on the EU budget contribution and bond market risk premia). Unemployment impacts are modelled as similar to those for a regular trading partner, but the UK export market tends to attract more labour-intensive industries (e.g., tourism, agri-foods). This could mean greater pressures on unemployment expenditure compared to a standard trading partner demand shock. VAT receipts could be more negatively impacted given the relatively lower average incomes in these sectors, though incomes taxes less so.
Corporation Tax Concentration Risks	H	M	The volatility and concentration of Corporation Tax receipts continues to be a source of potential fiscal risk. Given the scale of volatility in this tax head, there is a high degree of uncertainty around the future trajectory of revenue growth. The increased proportion of tax revenue accounted for by Corporation Tax and the high concentration of revenue among the Top Ten payers makes this source of revenue particularly exposed to "idiosyncratic shocks". 2016 net receipts were €7.4 billion, with 37 per cent of this related to the Top Ten payers (€2.8 billion). Uncertainty about future US economic and fiscal policy adds to this risk, in addition to risks around tax policy in the EU and the UK. This would suggest that the associated risks could have a relatively higher impact.
EU Renewable Energy Targets	H	M	Ireland is currently falling short of its 2020 renewable energy target (to have 16 per cent of Gross Final Energy Consumption supplied by renewable power in 2020) by 2-3 percentage points and is unlikely to meet the target. Curtin (2016) estimates a cost to the Exchequer of between €168 and €490 million for a shortfall of 1.2-3.5 per cent. As noted above a failure to meet later targets in both emissions and renewable could lead to additional costs in the region of €2.7 to €5.5 billion. Therefore, in the medium term, an assessment of high probability with medium impact may be deemed more appropriate.
Sharper-Than-Expected Activity Growth in Tax Rich Sectors (IFAC Risk)	M	M	The pace of growth of activity in the construction sector may also have unintended impacts on the economy. If supply were to rapidly increase to meet any pent-up demand, there could be a substantial upswing in revenues from this source, considering the tax-rich nature of housing output.
Reliance on Transient Revenues (IFAC Risk)	M	M	A shift to a reliance on transactions-based taxes such as stamp duties could – if repeated – reduce the stability of tax revenues. Such revenues can prove transient/cyclical. If they are used to support long-lasting expenditure measures, pressures could fall on other resources in times when these revenues are lower.

	Likelihood	Impact	IFAC Assessment
Changes to Tax 'Drivers'	M	M	Changes to the macroeconomic tax drivers, which are used for tax forecasting, may have considerable impact on estimates and receipts. Changes to the elasticity of tax drivers which determine the response of revenues may also pose a risk to estimates, receipts and estimates of the impact of discretionary measures. Updating the USC elasticity to 1.2 gives a decrease of €85 million in estimated PAYE-related USC revenue in comparison to when the old elasticity is used.
Tax Forecast and Payment Timeline Asymmetry	M	M	Both the estimation of revenue forecasts and the impact of tax changes remain a risk to fiscal policy. 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 (Box F).
Litigation Risk	M	M	This risk refers to an adverse or unexpected outcome of litigation against the State, which leads to increased expenditure. This could lead to pressure on expenditure projections should it occur. The IMF (2016) note that, although infrequent, legal cases can pose large fiscal risk, with average compensation of some 8 per cent of GDP and up to 15 per cent in extreme cases. [27] Applying this to GNI*, would imply litigation costs in the region of €15 billion to €29 billion.
EU Budget Contribution	M	M	Should national income grow more than expected the EU budget contribution will increase. GDP increased by €67.5 billion in 2015 following the revision of GDP growth from 7.8 to 26.3 per cent in July 2016 due to distortions from foreign-owned multinational enterprises and the on-shoring of intellectual property products. Ireland's EU budget contribution increased by an average of €98 million from 2014 to 2016, with an increase of €344 million in 2016. Additionally, there is uncertainty about budget contributions following the exit of Britain from the EU. However, given the relatively marginal effect that national income growth rates might have on this, the Council does not consider this as likely to have a substantial impact on the public finances.
Dividend Payments	L	M	The Budget identifies risks in relation to the lower-than-expected payment of bank dividends to the State. These are a function of ongoing business performance and outlook, and regulatory requirements, and are subject to bank board and supervisory control over which the State has no control. If some of these assets are sold, then associated revenue streams could fall.
Receipts from Resolution of Financial Sector Crisis	L	M	The Budget does not incorporate any assumed proceeds in relation to the State's disposal of shareholdings in a number of financial institutions, nor from the termination of NAMA or windup of the Credit Union Restructuring Board. This is due to the difficulty in projecting market conditions, the timing of disposals and any realised surplus funds. At end 2016 ISIF total bank investments in AIB and Bank of Ireland amounted to €12.7 billion. Based on current share prices, the State's holdings in PTSB would appear to be valued at below €1 billion. These represent an upside risk to the baseline scenario, which will depend on prevailing market conditions at the time of sale.
Contingent Liabilities	L	M	While declining, contingent liabilities remain a risk to public finances should any associated amounts suddenly have to be met with increased expenditure. Contingent liabilities have fallen by 93 per cent since 2011 to a level of €10.3 billion in 2016, with guarantees falling from 105.6 per cent of GNI* in 2011 to 2.8 per cent of GNI* in 2016.
Bond Market Conditions	L	M	The long maturities and relatively fixed nature of debt should insulate the public finances from a typical shock to interest rates on sovereign borrowings. The proportion of gross national debt at fixed interest rates for end-June 2017 was at 94 per cent (C&AG, 2017), while *Budget 2018* estimates 2018 funding requirements of c.€11 billion, in the absence reduced cash balances. However, at high debt levels, risks remain that external shocks such as a harder-than-expected Brexit could lead to self-reinforcing fears in bond markets.

Sources: Department of Finance; and internal IFAC assessment.
Note: Likelihood and impacts from *Budget 2018*: H= High; M = Medium; L = Low.

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[27] Although these averages were affected by compensation payments for currency deposits frozen in many Central and Eastern European countries after the collapse of the Soviet Union and the former Yugoslavia.