# Stand-Still Scenario for Government Spending in the Medium Term, 2019–2023

May 2018

Irish Fiscal Advisory Council

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# 1. Summary

**This note updates the Irish Fiscal Advisory Council's (IFAC's) estimates of government spending based on a "Stand-Still" Scenario: an estimate of the cost of maintaining today's level of public services and benefits in real terms over the medium term.** The IFAC Stand-Still Scenario uses the latest available information for demographics, expenditure, and macroeconomic forecasts in order to produce estimates of expenditure over the period 2019–2021. The Council considers that estimates produced in this scenario could form an important input into the expenditure planning process; one which can enrich the evidence base for budgetary decisions. These estimates are then extended mechanically to 2023 in order to produce a five-year-ahead scenario.

**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 Council notes the work being undertaken by the Department of Public Expenditure and Reform (DPER) on expenditure modelling noted in the Mid-Year Expenditure Report 2016, which will "separately model the evolution of volume/demand and price impact" on public expenditure. This analysis could be a valuable input for informing budgetary plans.

**The level of non-interest spending and the fiscal space budgeted for under current plans are sufficient to accommodate the Stand-Still estimates over the period 2019–2021.** Allowing for both demographic and price pressures yields a similar estimate of non-interest spending to the budget plans up to 2021, in the absence of policy changes, or changes to macro drivers. Comparing the fiscal space allocated to current expenditure (including pre-committed amounts) implicit in *SPU 2018* and the IFAC Stand-Still Scenario estimates would suggest that the estimated demographic pressures and the cost of maintaining public services and benefits in real terms could be fully accommodated.

## 2. Overview of Methodology

**The Stand-Still approach is an illustrative exercise that estimates the cost of maintaining today's level of public services and benefits in real terms, given demographic costs and price changes.[1] It should not be seen as an alternative expenditure forecast to that outlined in the *Stability Programme Update (SPU) 2018* (Department of Finance, 2018).** It is important to note that, with the Stand-Still exercise, 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 plans 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 Stand-Still is based on: (1) a cohort-component method for estimating demographic changes; and (2) a macro-simulation (cell-based) modelling approach for estimating changes in expenditure based on the demographic assumptions in (1) and other macro drivers.[2]** Broadly, the second step involves the two component parts. Firstly, the expenditure items are projected forward taking account of volume/demand pressures. For most expenditure items, this involves accounting for demographic changes, as discussed below. Secondly, these expenditure projections are adjusted for price pressures to allow for changes in the cost of providing public services. Appendices A and B discuss some approaches to selecting appropriate deflators for expenditure projections, as well as providing an initial examination of their historical validity.

**In the Stand-Still Scenario, Government spending is split into five headline components: health, education, social payments (including social welfare pensions), national debt interest, and other.** Pay and non-pay expenditure are modelled separately. In all cases, pay rates are expected to rise in line with the Public Service Stability Agreement (2018–2020). Thereafter, public sector pay is

[1] The carryover impact of *Budget 2018* expenditure measures is estimated at €0.3 billion for 2019. These impacts would be additional to the estimated costs shown in the IFAC Stand-Still Scenario.

[2] This note outlines the methodology currently (April 2018) used in constructing the Stand-Still Scenario. In the iterative process of improving and extending the model, further changes may be made to this methodology. Any such changes will be included in future notes.

assumed to grow in line with non-agricultural wages. Non-pay expenditure is modelled based on the underlying price and volume drivers.

**In order to estimate demographic/volume 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. Price pressures are estimated using the GNP deflator.

**Education spending is modelled separately for primary, secondary and tertiary education.** In the case of education, the volume driver of expenditure is the expected demand –i.e. the demographic change in the relevant age cohort – which reflects the population of potential students. The pupil-teacher ratio is seen as a policy decision and, thus, it is kept constant at its current level. Prices of non-pay expenditure are expected to grow in line with the GNP deflator.

**The volume and price pressures in relation to social protection spending are assessed by separately modelling four broad social protection components: old-age payments, child-related payments, unemployment benefits and other expenditure.**

i. Old-age payments: the volume driver is assumed to be the change in the population aged over 65 (and rising appropriately with the State Pension age). Changes in HICP drive the price effect.

ii. Child-related payments: these are assumed to grow in line with the change in population aged under 17. Price pressures are estimated using HICP.

iii. Unemployment benefits are more directly linked to macroeconomic dynamics than demographics. The approach employs an assumed conversion rate to translate changes in the unemployment rate to movements in the Live Register so as to determine volume pressures. An average implied cost per individual is then computed and grown in line with HICP.

iv. Other payments are assumed to grow in line with the change in total population and HICP: These include disability payments, back to education allowances and other social payments.[3]

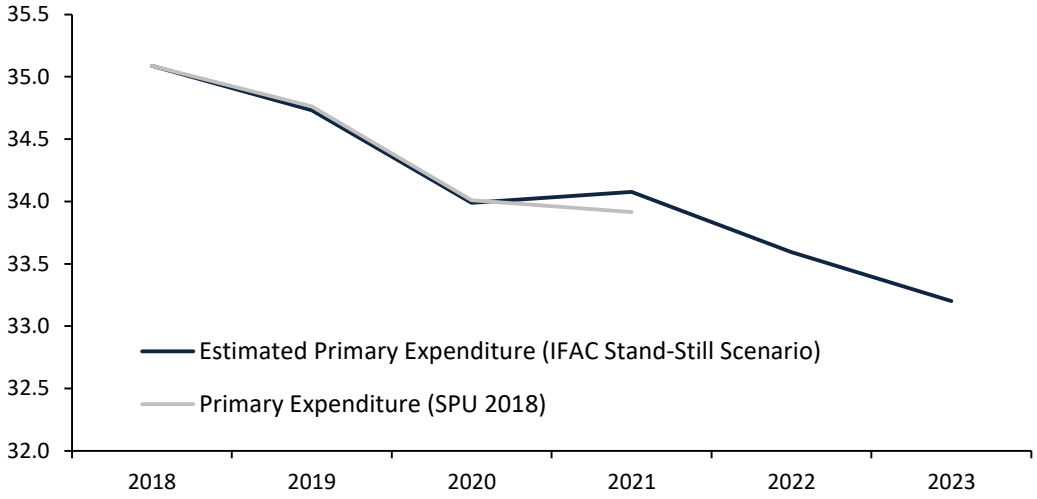
**Capital spending is assumed to evolve in line with the Government's existing plans.** As capital expenditure is less demand-driven than some current services, the Stand-Still Scenario uses the capital expenditure plans set out in the latest official projections by the Department of Public Expenditure (for example, the SPU, Budget or Capital Plan). Any government decisions in relation to capital spending between official projection publications are also taken into account.

[3] Recent work by the Department of Public Expenditure (Callaghan, 2017) has sought to examine trends in disability allowance expenditure and to determine its drivers.

# 3. IFAC Stand-Still Scenario for Non-Interest Government Spending

**The Stand-Still Scenario estimates can be used to examine spending pressures related to price changes and volumes (e.g., demographics).** Figure 1 shows the IFAC estimates of non-interest government spending from IFAC's Stand-Still Scenario. These estimates are shown, as a percentage of GNI*, alongside the latest *SPU 2018* projections.

**Figure 1: Non-Interest Spending**
Percentage of GNI*, general government basis




*Sources:* CSO; Department of Finance; HIPE; and internal IFAC calculations.
*Note:* Primary expenditure is total general government expenditure less interest costs.

***SPU 2018* non-interest spending plans are broadly in line with the Stand-Still estimates when projected price changes and demographics changes are accounted for.** The IFAC Stand-Still estimate of non-interest expenditure suggests that the *SPU 2018* expenditure plans could allow for the cost of both price and demographics pressures to be fully accommodated up to 2020, with a slight divergence in 2021. *SPU 2018* plans show non-interest spending as a per cent of GNI* falling to 33.9 per cent in 2021. Non-interest spending is planned to be 0.2 percentage points of GNI* lower than the IFAC Stand-Still scenario estimate. Extending the Stand-Still Scenario mechanically beyond the *SPU 2018* forecast period (2019–2021) shows non-interest spending as a share of GNI* falling further in the medium-term, to 33.2 per cent by 2023.[4]

[4] This fall partly reflects higher growth in the underlying real economy than the population.

# 4. The Stand-Still Scenario, Current Allocations and Fiscal Space

**In the Stand-Still Scenario, gross voted current spending would increase by €4.6 billion over the period 2019–2021.** For the same period (2019–2021), the Government has pre-committed €2.25 billion for the cost of: (i) public sector pay arrangements under the Public Service Stability Agreement (2018–2020) (which is accounted for in the Stand-Still Scenario, along with additional wage pressures for 2021); (ii) some estimated demographic pressures; and (iii) other pre-committed spending measures.[5] Table 1 and Figure 2 provide a comparison between the fiscal space allocated to current expenditure implicit in *SPU 2018* (including pre-committed amounts) and the current expenditure estimates under the IFAC Stand-Still Scenario.

**Table 1 Comparison of Estimated Stand-Still Current Expenditure and Allocated Fiscal Space**
€ billions (increases unless stated)

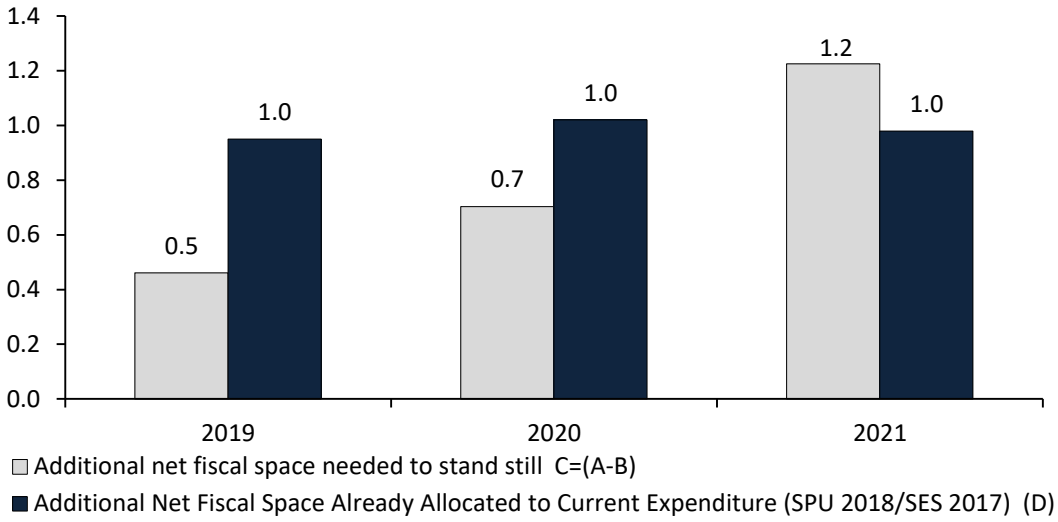
| | 2019 | 2020 | 2021 | Total (2019–2021) |
|---|---|---|---|---|
| **Total (IFAC Stand-Still Scenario) (A)** | 1.28 | 1.47 | 1.88 | 4.64 |
| of which: Demographics | 0.55 | 0.67 | 0.67 | 1.89 |
| of which: Prices | 0.74 | 0.80 | 1.21 | 2.75 |
| **Total (Pre-Committed Increases in Budget *2018*) (B)** | 0.84 | 0.77 | 0.66 | 2.27 |
| of which: Demographics | 0.43 | 0.43 | 0.43 | 1.29 |
| of which: Public Service Stability Agreement | 0.37 | 0.34 | 0.23 | 0.94 |
| of which: Other | 0.04 | 0.00 | 0.00 | 0.04 |
| **Additional Net Fiscal Space Needed to Stand-Still C=(A-B)** | 0.44 | 0.70 | 1.22 | 2.37 |
| **Additional Net Fiscal Space Already Allocated to Current Expenditure (*SPU 2018*/*SES 2017*) (D)** | 0.95 | 1.02 | 0.98 | 2.95 |
| **Excess(+)/Shortfall(-) Allocation Relative to Stand-Still estimates E=(D-C)** | 0.51 | 0.32 | -0.24 | 0.58 |

*Sources:* Department of Finance; Department of Public Expenditure and Reform, HIPE; 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 2018, a cohort component demographics model and the latest macroeconomic and inflation forecasts from *SPU 2018*. (B) *SPU 2018* pre-committed spending takes the demographics and pre-committed spending figures as in *SPU 2018*. The net fiscal space allocated to current expenditure (D) takes the fiscal space as outlined in *SES 2017*. The carryover impact of Budget 2018 expenditure measures is estimated at €0.3 billion for 2019. These impacts would be additional to the estimated costs shown in the IFAC Stand-Still Scenario.

[5] This related to a pre-committed EU programme funding covered under the Rural Development Fund. These measures are not included in the Stand-Still Scenario.

**The fiscal space currently budgeted for expenditure increases overall in 2019–2021 could fully accommodate estimated demographic and price pressures.** Comparing total pre-committed expenditure increases (before any indicative allocations of fiscal space are considered) with the Stand-Still estimates implies that €2.4 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. In addition to amounts set aside for pre-committed spending, *SPU 2018* already includes an indicative allocation of some €3 billion of net fiscal space to current spending over the same period (2019–2021). This implies that – in the absence of policy changes, or changes to the macroeconomic spending drivers – the fiscal space currently budgeted for expenditure increases over the period 2019–2021 could fully accommodate estimated demographic pressures and the cost of maintaining real public services and benefits.

**Figure 2: Fiscal Space Needed to Stand Still**
€ billions




*Sources:* CSO; Department of Finance; HIPE; and internal IFAC calculations.
*Notes:* The additional net fiscal space needed to Stand-Still shows amounts over and above pre-committed expenditure increases that IFAC estimates would be required to meet the stand-still costs (item C in Table 1).

# 5. The Stand-Still Scenario and Medium-Term Expenditure Management

**The Stand-Still Scenario can be extended on a mechanical basis beyond the SPU forecast period (2019–2021).** Extending the Stand-Still Scenario to the medium term suggests gross voted current spending pressures could increase by €8 billion over the period 2019–2023. *SPU 2018* provides forecasts to 2021. Although not formally required, the Department had previously published five-year-ahead forecasts. Medium-term forecasts are key for setting the public finances on a sustainable path. As previously noted, the Council would welcome a return to forecasting on this horizon (IFAC, 2017b).

**Table 2: Stand-Still Current Expenditure over the Medium Term (2019–2023)**
**€ billion (increases unless stated)**

| | 2019 | 2020 | 2021 | 2022 | 2023 | Total (2019–2023) |
|---|---|---|---|---|---|---|
| **Total (IFAC Stand-Still Scenario)** | 1.28 | 1.47 | 1.88 | 1.68 | 1.77 | 8.11 |
| of which: Demographics | 0.55 | 0.67 | 0.67 | 0.44 | 0.47 | 2.79 |
| of which: Prices | 0.74 | 0.80 | 1.21 | 1.26 | 1.31 | 5.31 |

*Sources:* CSO; Department of Finance; HIPE; and internal IFAC calculations.
*Note:* Beyond 2021 the scenario is extended mechanically holding macroeconomic and inflation forecasts constant as in 2021.

**Budgetary plans could be made more robust if they were 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* (Department of Public Expenditure and Reform, 2016) noted progress of work in developing an approach to "separately model the evolution of volume/demand and price impact" on public expenditure.[6] This 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 can be assessed. As illustrated, volume and prices may be expected to play a considerable role in determining expenditure pressures over the medium term. Therefore, understanding how these drivers of expenditure interact is an important factor for medium term expenditure management. Using a "stand-still" approach to model the expected evolution of these pressures over time could provide a valuable input to inform expenditure planning and management.

[6] With ongoing work as part of Spending Reviews, e.g., DPER (2017).

# Appendix A: Expenditure Projections and Deflators

This Appendix examines the approach to determining the adequate deflators to apply in expenditure projections. Deflators are used in IFAC's Stand-Still Scenario to estimate the cost of maintaining today's level of public services and benefits in real terms in future years.

The Stand-Still Scenario projections are estimated in a two-stage approach. Firstly, the base year expenditure is projected forward in line with demographic changes in the specific cohort it supports, using a cohort-component approach. Secondly, price pressures are incorporated using the chosen deflator to determine the cost of maintaining the level of public services or benefits in real terms.

Deflators are applied in expenditure projections to take account of potential price pressures. The choice between deflators depends on a number of factors. The errors in projections can be examined using the Root-Mean-Square-Error (RMSE). While the RMSE is useful as a performance measure, some deflators will clearly be more relevant than others (e.g., wages for pay expenditure) and historical performance may not be an accurate predictor of future performance (e.g. following recent distortions in GDP, the GDP deflator may no longer be useful as a predictor of price pressures). Such factors must be considered in determining the appropriate deflator to apply in projecting future expenditure.

The deflators currently used in the Stand-Still Scenario include:

- HICP
- CPI
- GNP Deflator
- Non-Agricultural Wages

These deflators were selected on an *a priori* basis with reference to the policy in question. For example, HICP was selected as the deflator for Child Benefit as the benefit may be largely spent on goods and services covered by HICP. These deflators are then further assessed as in Appendix B.

# Appendix B: Assessing the Appropriate Deflators

This Appendix provides an assessment of the deflators used in the Stand-Still Scenario. It models historical expenditure items using actual demographics/volume data and various choices of deflators. The difference with actual historical expenditure is then examined to assess the relative accuracy of each deflator.

Projections are undertaken in two ways, namely on a one-year ahead (t+1) basis and on a long-run cumulative basis. Both approaches are built on the projection methods undertaken in the Stand-Still Scenario (as outlined above).

### Data

Historical gross expenditure data covering the period 1996–2016 are taken from the Department of Public Expenditure and Reform's databank. For demographic changes, the CSO estimates of population per single year of age are used. A range of deflators are currently used in the Stand-Still Scenario as the price drivers for different expenditure items (Table B.1). The data on the deflators is gleaned from a number of sources. Some deflators are not available as far back as the expenditure data, in which case availability of the deflator determines the sample period for projections.

**Table B.1: Deflators used in the Stand-Still Scenario**

| | Source | Sample Period |
|---|---|---|
| **HICP** | OECD | 1996–2016 |
| **CPI** | CSO | 1996–2016 |
| **GDP Deflator** | CSO | 1996–2016 |
| **GNP Deflator** | CSO | 1996–2016 |
| **Non-Agricultural Wage** | CSO | 2000–2016 |

*Sources:* CSO; OECD; Department of Public Expenditure; and internal IFAC calculations.

### Deflators and Performance

In order to assess the performance of the deflators, each one was applied individually in turn to the expenditure items. This approach can be described by the equation:

$$Expenditure_{t+1} = Expenditure_t * (1 + \sum_t^T \Delta Demographics_{t+1}) * (1 + \sum_t^T \Delta Deflator_{t+1})$$

Where year "t" is the base year. In the cumulative case the base year is the earliest year for which data is available. For the one-year ahead (t+1) projections, the base year is the current year.

To determine the most appropriate deflator, the t+1 projection was compared to the actual outturn and the RMSE was calculated. The lower the RMSE, the better the performance of the deflator. In years where major policy changes were identified, those years were excluded from the calculation. Table B.2 provides an example of the RMSEs calculated for the State Pension. On both the full sample basis and excluding selected years, HICP and CPI have the lowest RMSEs.[7]

**Table B.2: State Pension Errors in Projections**
Root Mean Squared Error (RMSE) per cent

| | Full Sample (1996–2016) | Adjusted sample excluding major policy changes (excl. 2006/2007) |
|---|---|---|
| **HICP** | 5.3 | 3.1 |
| **CPI** | 5.3 | 3.1 |
| **GDP Deflator** | 5.6 | 3.3 |
| **GNP Deflator** | 6.2 | 3.8 |

*Sources:* CSO; OECD; Department of Public Expenditure; and internal IFAC calculations.
*Note:* Projections are based on the t+1 method, increasing expenditure by the change in demographics and the deflator in year t+1. Errors are determined by the difference between actual outturn and the deflator based projection.

Table B.3 shows the best performing deflators on the basis of RMSEs for selected expenditure items. The RMSEs are shown both on the basis of the full sample and the sample with exclusions. While there would be an element of

[7] In this case years 2006 and 2007 were excluded, examining the deviation data it was found that there were considerable deviations for all deflator projections in these years, with deviations of between 10 and 20 per cent. The budget documentation indicated changes to the rates of payment in these years; as such the RMSE is calculated excluding these years of policy change.

policy change in most years, this analysis only excludes larger changes which are easily identifiable. This approach is taken in order to get some view of a no-policy change difference in projections.[8]

### Table B.3: Best Performing Deflators for Selected Expenditure Items

RMSE per cent, one-year-ahead basis

| | Best Performer Full Sample (1996–2016)[9] | | Excluded years | Best Performer Sample with Exclusions | |
|---|---|---|---|---|---|
| **State Pension** | HICP/CPI | 5.3 | 2006/2007 | HICP/CPI | 3.1 |
| **Child Benefit** | GNP Deflator | 10.7 | 2001/2002 | GNP Deflator | 8.8 |
| **Jobseekers Allowance** | HICP | 18.3 | 2009/2010 | HICP/CPI | 15.0/14.9 |
| **Education Primary – Non- Pay** | GNP Deflator/CPI | 12.4/12.3 | - | - | - |
| **Education Primary – Pay** | Non-Agri Wages | 4.8 | 2013 | Non-Agri Wages | 4.2 |
| **Education Secondary – Non- Pay** | GNP Deflator/CPI | 12.6/12.5 | - | - | - |
| **Education Secondary - Pay** | Non-Agri Wages | 12.2 | 2006/2013 | Non-Agri Wages | 4.5 |
| **Education Tertiary – Non-Pay** | HICP | 13.0 | - | - | - |
| **Education Tertiary – Pay** | Non-Agri Wages | 10.5 | 2013 | Non-Agri Wages | 5.2 |

*Sources:* CSO, OCED, Department of Public Expenditure; and internal IFAC calculations.
*Note:* Samples are adjusted to exclude considerable policy changes in some cases. Pay related expenditure projections cover a shorter sample of 2000–2016 due to (non-)availability of non-agricultural wage data.

While assessing the historical errors for various deflators might suggest that one deflator should be chosen over another, other factors should also be considered. For example, in the case of Child Benefit, the GNP deflator performs best in terms of RMSE. However, one could argue that HICP would be a more

[8] Changes were explored if the deviation was larger than 10 per cent in either direction (with some as large of 45 per cent), if a considerable policy change could be identified in budget documentation this year was than excluded. In some cases no policy change was easily identifiable in documentation and so the observation was not excluded. This exercise could be carried out more comprehensively if all policy changes were taken account of. However, this would require more detailed information about each of the estimates.

[9] Except in the case of pay expenditure where the sample is restricted to 2000–2016 for all deflators due to the availability of non-agricultural wage data and to allow comparability across projections.

appropriate deflator to apply as the benefit would be largely spent on goods and services covered by HICP.

The long-term projection performance can also be assessed by producing cumulative projections. This is examined by using the actual expenditure in the base year and then applying the impact of demographic or demand changes and price changes cumulatively. In these cases, divergences from actual expenditure may be considerably larger due to policy changes throughout the sample period, especially where substantial policy changes occurred early in the sample.[10] However, it does give a sense of how expenditure may have evolved on a no-policy change basis. The performance of these cumulative projections could also be considered when choosing the appropriate deflator. Table B.4 examines deflator performance on a cumulative basis. It shows the deflators which produce the lowest cumulative deviation (or error) in the final year of projection (2016).

### Table B.4: Long-term Performance of Cumulative Deflator Projections

**Percentage deviation relative to actual expenditure**

| | Sample Period | Lowest Cumulative Deviation in Final Year | |
|---|---|---|---|
| **State Pension** | 1996–2016 | GDP deflator | 1.0 |
| **Child Benefit** | 1997–2016 | GNP Deflator | 57.1 |
| **Jobseekers Allowance** | 1996–2016 | GNP Deflator | 27.0 |
| **Education Primary – Non- Pay** | 1996–2016 | GNP Deflator | 22.3 |
| **Education Primary – Pay** | 2000–2016 | Non-Agri Wages | 28.6 |
| **Education Secondary – Non-Pay** | 1996–2016 | GNP Deflator | 41.3 |
| **Education Secondary - Pay** | 2000–2016 | Non-Agri Wages | 59.3 |
| **Education Tertiary – Non-Pay** | 1996–2016 | GNP Deflator | 45.5 |
| **Education Tertiary – Pay** | 2000–2016 | Non-Agri Wages | 34.1 |

*Sources:* CSO, OCED, Department of Public Expenditure; and internal IFAC calculations.
*Note:* Deviation is actual expenditure minus projections. Samples are adjusted to exclude considerable policy changes in some cases. Pay related expenditure projections cover a shorter sample of 2000–2016 due to availability of non-agri wage data.

The performance of deflators on a cumulative basis in some cases differs from the performance on a t+1 basis. Taking State Pensions, for example, the GDP

[10] Policy changes such as these may have occurred for a number of reasons, for example rate increases, decisions to increase or extend provision, new programmes funded under an expenditure line item, etc.

deflator performs better on a cumulative basis whereas HICP/CPI would perform better on a one-year-ahead basis. However, due to recent distortions, the GDP deflator may not necessarily be a good predictor of price pressures going forward. As such, the GNP deflator may be considered a better alternative. The deflators currently used for expenditure are outlined in Section 2 and in Appendix A.

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